

Curriculum Vitae of George K. Nikas

Dipl. Eng. (M.Sc.), D.I.C., Ph.D.

	Page
Summary	2
General information	3
Education	3
Professional activity	3
Employment and related activity	3
Supervision of postgraduate students	4
Peer reviewing papers for scientific journals and conferences	4
Peer reviewing research grant applications	5
Peer reviewing books and book proposals	5
Book editing	5
Other	6
Membership of professional societies	6
Distinctions and awards	6
Research activity and consultancy	7
Funded research	7
Publications	8
Peer reviewed archival transactions	8
Invited papers (reviewed)	10
Invited book chapters	10
Reviewed conference proceedings	10
Theses	11
Book	11
Technical reports	12
Invited presentations and lectures	13
Research interests and expertise	13
Computing skills and compiled engineering software	13
Languages spoken and written	14
Citations	14
Citations in scientific journals	15
Citations in scientific conference proceedings	30
Citations in scientific theses	36
Citations in scientific books	44
References	45

Summary

Title and full name: Dr George K. Nikas

Place and year of birth: Greece, 1969

Citizenship: Greek from birth and British by naturalization since 2001.

Address: London, England; **E-mail:** george.nikas94@alumni.imperial.ac.uk ; **website:** www.tribology.me.uk

Education

- **Diploma in Mechanical Engineering** (5-year diploma, 64 courses); National Technical University of Athens, School of Mechanical Engineering; Athens, Greece, 1994.
- **Diploma of the Imperial College (D.I.C.) in Tribology**; Imperial College London, Mechanical Engineering Department; London, England, 1999.
- **Doctor of Philosophy (Ph.D.)** in Tribology and Contact Mechanics; Imperial College London, Mechanical Engineering Department, Tribology Group; London, England, 1999.

Professional activity

- **Mechanical Engineer** licensed by the Technical Chamber of Greece since 1995.
- **Consultant, Research Assistant** and **Research Associate**; Imperial College London, Mechanical Engineering Department, Tribology Group, 1996-2007.
- **Grantee of the Jacob Wallenberg Foundation** – Royal Swedish Academy of Engineering Sciences. Imperial College London, Mechanical Engineering Department, Tribology Group; 2007-2008.
- **Academic Visitor**. Imperial College London, Mechanical Engineering Dept., Tribology Group; 2007-2013.
- **Director**. KADMOS Engineering Ltd (UK company registration number: 09139353), 2014-.

Membership of professional societies

Member of: **American Society of Mechanical Engineers** (2005-2017); **Society of Tribologists and Lubrication Engineers** (USA) (2005-2017); **Society of Automotive Engineers** (USA) (2005-2013); **ASM International** (USA) (2018-); **Technical Chamber of Greece** (1995-); **Hellenic Association of Mechanical and Electrical Engineers** (1995-).

Research activity and related data

- **Publications:** 41 articles; 2 theses; 3 book chapters; 1 edited book; 8 technical reports. Main author in 93% (51/55) and sole author in 65% (36/55) of those publications.
- **Citations:** 1129 total citations by 641 (non-self) documents.
- **h-index** = 19 (19 publications have received at least 19 non-self citations each).
- **Associate Editor** of the ASME Journal of Tribology (2009-2016) and **editorial board member** of 5 other engineering journals.
- **Reviewer** in 50 scientific journals and 2 international conferences having submitted 808 reviews to date.
- **Reviewer** for Elsevier (2 books and 1 book proposal to date).
- **International reviewer** for the Czech Science Foundation (4 research grant proposals) and the Swiss National Science Foundation (1 research grant proposal).
- **External member** of the Greek Ministry of Education committee for the assessment of academic staff and University departments.
- **Co-supervisor** of doctoral students at Imperial College London, Mech. Eng. Dept. (1996-2004).
- **Webmaster** of the Tribology Group website, Imperial College London, 1998-2011.

Distinctions

- Ranked 1st among the 47 graduates with same speciality (Mechanical Design) in the School of Mechanical Engineering, National Technical University of Athens, Greece, 1994.
- Mechanical Engineering Diploma thesis nominated for the annual award of the Technical Chamber of Greece, 1996 (19 nominations for 333 theses).
- Recipient of a Jacob Wallenberg Foundation award from the Royal Swedish Academy of Engineering Sciences with a grant of 100,000 SEK (\$15,000 USD) for research in materials science, 2007.
- Associate Editor and Editorial Board member in 6 scientific journals. Reviewer in 50 scientific journals. Reviewer of scientific books for Elsevier. Other appointments listed under “Research activity” above.
- Contributed journal articles, book chapters, edited book and lectures by invitation.
- Biographical profile included in 14 Marquis Who’s Who books since 2003, including “Who’s Who in Science and Engineering”, “Who’s Who of Emerging Leaders” and “Who’s Who in the World”.
- 11 awards for excellence and for graduating top in class in all Elementary and High School years (1975-1987). 2 awards from the Mayor of Athens (Greece) for graduating top in High School. Standard-bearer.

General information

Full name: George K. Nikas **Title:** Dr

Year of birth: 1969 **Place of birth:** Greece

Citizenship: Greek from birth and British by naturalization in 2001.

Home address
London, England

Last employer
Mechanical Engineering Department
Imperial College London
Exhibition Road, London, SW7 2AZ
England

Telephone and facsimile:

E-mail: george.nikas94@alumni.imperial.ac.uk

Website: www.tribology.me.uk

Education

- **Doctor of Philosophy (Ph.D.)** (specialized in Tribology); Imperial College London, Mechanical Engineering Department, Tribology Group; London, England, 1999. Supervised by Dr R. Sayles and Dr E. Ioannides.
- **Diploma of the Imperial College (D.I.C.) in Tribology**; Imperial College London, Mechanical Engineering Department; London, England, 1999.
- **Diploma in Mechanical Engineering (Dipl. Eng. (M.Sc. equivalent))**; 5-year diploma, 64 courses); National Technical University of Athens, School of Mechanical Engineering; Athens, Greece, 1994.

George Nikas is a professional, chartered Mechanical Engineer, licensed by the Technical Chamber of Greece (membership number: 71969). Greece is member of the European Union.

Professional activity

◆ Employment and related experience

- **Consultant**; Imperial College London, Mechanical Engineering Department, Tribology Group; 1996.
- **Research Assistant**; Imperial College London, Mechanical Engineering Department, Tribology Group; 1997-1999.
- **Imperial College Consultant**; IC Consultants Ltd. (a wholly owned subsidiary of Imperial College London); Imperial College London, Mechanical Engineering Department, Tribology Group; 2000-2002.
- **Research Associate**; Imperial College London, Mechanical Engineering Department, Tribology Group; 1999-2004 and 2005-2007.
- **Grantee of the Jacob Wallenberg Foundation – Royal Swedish Academy of Engineering Sciences**. Imperial College London, Mechanical Engineering Department, Tribology Group; 2007-2008.
- **Academic Visitor**. Imperial College London, Mechanical Engineering Department, Tribology Group; 2007-2013.
- **Director**. KADMOS Engineering Ltd (UK company registration number: 09139353), 2014-.
- **Associate Editor** of the **Journal of Tribology** (American Society of Mechanical Engineers), 2009-2016.
- **Editorial Board member** of **ISRN Tribology** (Hindawi), 2012-2014.
- **Editorial Board member** of **Conference Papers in Science** (Mechanical Engineering section) (Hindawi), 2012-2015.
- **Editorial Board member** of **The Scientific World Journal** – Mechanical Engineering section (Hindawi), 2013-2016.
- **Editorial Board member** of the **International Scholarly Research Notices** – Mechanical Engineering section (Hindawi), 2014-2017.

- **Editorial Board member** of **Strojniški vestnik - Journal of Mechanical Engineering** (University of Ljubljana, Slovenia), 2015-.
- **Reviewer** in 50 scientific journals since 2000. **Reviewer of scientific books** for Elsevier. **Reviewer of scientific projects** for the Czech Science Foundation (Czech Republic) and the Swiss National Science Foundation (Switzerland). **Reviewer** for the Greek Ministry of Education for academic staff and departments of Greek Universities.

◆ Supervision of postgraduate students

Dr Nikas has co-supervised postgraduate students in the Mechanical Engineering Department of Imperial College London. For example:

- Atul S. Rana: “A tribological study of elastomeric reciprocating seals for hydraulic actuators”, Ph.D. in Tribology, started in 1999 and awarded in 2005.
- Ismail S. Z. Jalisi: “A numerical method for the simulation of rough elastomeric contact”, Ph.D. in Tribology, started in 1998 and awarded in 2003.
- Constantine Tsourinakis: “Numerical solution of the 1-D Euler equations using total variation diminishing schemes”, 12-month M.Sc. in Mechanical Engineering, awarded in 1995.

◆ Peer reviewing papers for scientific journals and conferences

Dr Nikas has served as Associate Editor of the Journal of Tribology (American Society of Mechanical Engineers), 2009-2016 and Editorial Board member of ISRN Tribology (2012-2014), Conference Papers in Science (2012-2015), The Scientific World Journal (2013-2016), International Scholarly Research Notices (2014-2017) and Strojniški vestnik - Journal of Mechanical Engineering (2015-). Since 2000, he has submitted 808 reviews of new and revised papers to the following 50 journals and 2 conferences.

Journal	Reviews
Journal of Tribology (American Society of Mechanical Engineers, USA) * 83 papers reviewed as Reviewer and 222 papers reviewed as Associate Editor.	305*
Tribology International (Elsevier)	95
Tribology Transactions (Society of Tribologists and Lubrication Engineers, USA)	73
Journal of Engineering Tribology (Institution of Mechanical Engineers, UK)	64
Journal of Mechanical Engineering Science (Institution of Mechanical Engineers, UK)	33
Journal of Automobile Engineering (Institution of Mechanical Engineers, UK)	27
Journal of Aerospace Engineering (Institution of Mechanical Engineers, UK)	22
Journal of Power and Energy (Institution of Mechanical Engineers, UK)	17
Strojniški vestnik - Journal of Mechanical Engineering (University of Ljubljana, Slovenia)	16
ISRN Tribology (International Scholarly Research Network)	16
The Scientific World Journal – Mechanical Engineering section (Hindawi) * 15 papers reviewed as Reviewer and 1 paper reviewed as Associate Editor.	16*
Lubricants (MDPI)	13
Journal of Process Mechanical Engineering (Institution of Mechanical Engineers, UK)	10
Wear (Elsevier)	10
Journal of Materials: Design and Applications (Institution of Mechanical Engineers, UK)	7
Tribology Letters (Springer)	7
Materials (MDPI)	7
Metals (MDPI)	6
Defence Technology (Elsevier)	5
Conference Papers in Science (Hindawi)	5
Entropy (MDPI)	4
Machining Science and Technology (Taylor & Francis)	4
International Scholarly Research Notices (Hindawi) * 3 papers reviewed as Associate Editor.	3*
International Journal of Materials and Product Technology (Inderscience Publishers)	3

Applied Mathematical Modelling (Elsevier)	3
Mechanics of Materials (Elsevier)	3
Applied Sciences (MDPI)	3
Water (MDPI)	2
International Journal of Vehicle Design (Inderscience Publishers)	2
Tribology in Industry (Serbian Tribology Society)	2
Energies (MDPI)	2
Journal of Microelectromechanical Systems (Institute of Electrical and Electronics Engineers, USA)	2
International Journal of Computer Applications in Technology (Inderscience Publishers)	1
Recent Patents on Mechanical Engineering (Bentham Science Publishers)	1
Scientific Research and Essays (Academic Journals)	1
TriboTest (Wiley)	1
International Journal of Mechanical Sciences (Elsevier, UK)	1
Journal of Applied Mathematics (Hindawi)	1
Archives of Mechanics (Polish Academy of Sciences)	1
International Journal of Surface Science and Engineering (Inderscience Publishers)	1
Meccanica (Springer)	1
Journal of Mechanical Design (American Society of Mechanical Engineers, USA)	1
Journal of Zhejiang University – SCIENCE A (Applied Physics & Engineering) (Springer)	1
International Journal of Manufacturing Technology and Management (Inderscience Publishers)	1
International Journal of Mechanisms and Robotic Systems (Inderscience Publishers)	1
World Review of Science, Technology and Sustainable Development (Inderscience Publishers)	1
Technologies (MDPI)	1
Mathematical and Computational Applications (MDPI)	1
Nanomaterials (MDPI)	1
Lubrication Science (Wiley)	1

Conferences	Reviews
20 th International Conference on Wear of Materials, 12-16 April 2015, Toronto, Canada	2
2 nd International Conference on Advanced Tribology, 3-5 December 2008, Singapore (review of a conference paper considered for submission to the Journal <i>Tribology International</i>)	1

◆ Peer reviewing research grant applications

Upon invitation, Dr Nikas has acted as external peer reviewer for 4 research grant applications submitted to the Czech Science Foundation (Czech Republic) during 2007-2009 and 1 application submitted to the Swiss National Science Foundation (Switzerland) in 2017.

◆ Peer reviewing books and book proposals

Upon invitation from Elsevier, Dr Nikas has reviewed the following books and proposals.

- **Flitney R. K.** *Seals and Sealing Handbook* (5th ed.). Elsevier (Butterworth-Heinemann); Oxford, England, 2007. ISBN: 978-1856174619.
- **Astakhov V. P.** *Tribology of Metal Cutting*. Tribology and Interface Engineering Series No. 52 (Series ed.: B. J. Briscoe). Elsevier; Oxford, England, 2006. ISBN: 978-0-444-52881-0.
- **Sethuramiah A.** and **Kumar R.** *Modelling of Chemical Wear and Its Relevance to Practice*. Book proposal to Elsevier, 2013.

◆ **Book editing**

Upon invitation from Research Signpost (publishers of review books in physical sciences), Dr Nikas edited an 8-chapter review book on tribology for which he assembled and supervised a team of 19 distinguished contributors from the USA, UK, Sweden, and Israel. For more details, please see under heading “Book” in the Publications section of this CV.

◆ **Other**

- In cooperation with his father, Dr Nikas created the material of two- and three- day seminars on rolling bearing theory, technology, applications, mounting/dismounting, and damages. These comprise 5 PowerPoint files with a total of 538 slides and have been taught in Greece for many years by Dr Nikas’ father (former SKF Hellas General and Technical Manager), having educated thousands of engineers and technicians in industry and academia.
- Created and maintained the website of the Tribology Group in the Mechanical Engineering Department of Imperial College London from 1998 to 2011. In June 2006, he attended the CMS (Content Management System) course at Imperial College London and transformed the original website to its new format under the Oracle Portal CMS.
- Reviewer for the Greek Ministry of Education for academic staff and departments of Greek Universities (2013-).

Membership of professional societies

- Member of the **American Society of Mechanical Engineers** (USA), 2005-2017.
- Member of the **Society of Tribologists and Lubrication Engineers** (USA), 2005-2017.
- Member of the **Society of Automotive Engineers** (USA), 2005-2013.
- Member of **ASM International** (American Society for Metals) (USA), 2018-.
- Chartered member of the **Technical Chamber of Greece** (Greece) since 1995.
- Member of the **Hellenic Association of Mechanical and Electrical Engineers** (Greece) since 1995.

Distinctions and awards

- Ranked 1st with the highest grade among the 47 graduates with same speciality (Mechanical Design) in the School of Mechanical Engineering, National Technical University of Athens, Greece, 1994 (with certificate from the University).
- Mechanical Engineering Diploma thesis nominated for the annual award of the Technical Chamber of Greece, 1996 (19 nominations by the examiners of the Technical Chamber of Greece for a total of 333 theses).
- Recipient of a Jacob Wallenberg Foundation award in 2007 from the Royal Swedish Academy of Engineering Sciences with a grant of 100,000 SEK (about 7,400 GBP \cong 11,000 EURO \cong 15,000 USD) for research in materials science.
- Associate Editor of the **Journal of Tribology** (American Society of Mechanical Engineers), 2009-2016.
- Editorial Board member of **ISRN Tribology** (International Scholarly Research Network), 2012-2014.
- Editorial Board member of **Conference Papers in Science** (Hindawi), 2012-2015.
- Editorial Board member of **The Scientific World Journal** (Hindawi), 2013-2016.
- Editorial Board member of **International Scholarly Research Notices** (Hindawi), 2014-2017.
- Editorial Board member of **Strojniški vestnik - Journal of Mechanical Engineering** (University of Ljubljana, Slovenia), 2015-.
- Reviewer in 50 journals in science and engineering since 2000, reviewer of engineering books for Elsevier, external reviewer for research grants (Czech Science Foundation and Swiss National Science Foundation), and reviewer for the Greek Ministry of Education for academic staff and departments of Greek Universities (2013-).

- Biographical profile included by invitation in the books: “Marquis Who’s Who in Science and Engineering”, editions 7 (2003-2004), 8 (2005-2006), 10 (2008-2009), 11 (2010-2011) and 12 (2016-2017); “Marquis Who’s Who of Emerging Leaders”, 1st Ed. (2007); “Marquis Who’s Who in the World”, 26th to 33rd Ed. (2009 to 2016).
- 11 awards for excellence and for graduating top in class in all Elementary and High School years (1975-1987). 2 awards from the Mayor of Athens (Greece) for graduating top in High School during 1982-1985. Standard-bearer in both Elementary and High School (honour given to the top ranked student in school).
- For more information, please see under the following headings later in this CV: (a) [Invited papers](#), (b) [Invited book chapters](#), and (c) [Invited presentations and lectures](#).

Research activity and consultancy

At Imperial College London, Dr Nikas has been the sole researcher in 6 research projects under contract with industrial collaborators, 1 project for the EPSRC, 1 project for the European Union and 1 project funded by a grant awarded by the Royal Swedish Academy of Engineering Sciences. He is the author or co-author of 47 publications (2 theses in public libraries, 35 articles in refereed journals, 7 studies printed in the proceedings of international conferences and 3 book chapters). He has made 6 presentations in international conferences. In addition, he has authored 8 technical reports for the British industry, the British Department of Trade and Industry, the EPSRC, European Union, and the Royal Swedish Academy of Engineering Sciences. The funding attracted by Dr Nikas' research at Imperial College London (Mechanical Engineering Department - Tribology Group) was 680,000 GBP (1 million Euro or 1.3 million USD in 2007). Dr Nikas is also the editor of an 8-chapter tribology book with 11 authors, Associate Editor of the Journal of Tribology (American Society of Mechanical Engineers, 2009-2016), Editorial Board member of ISRN Tribology (International Scholarly Research Network, 2012-2014), Conference Papers in Science (Hindawi, 2012-2015), The Scientific World Journal (Hindawi, 2013-2016), International Scholarly Research Notices (Hindawi, 2014-2017) and Strojniški vestnik - Journal of Mechanical Engineering (University of Ljubljana, Slovenia, 2015-), reviewer in 50 journals in science and engineering since 2000, reviewer of engineering books for Elsevier, external reviewer for research grants (Czech Science Foundation and Swiss National Science Foundation), and reviewer for the Greek Ministry of Education for academic staff and departments of Greek Universities (2013-).

Funded research

1. **2007-2008** (12-month project, grant of £7,400); [Jacob Wallenberg Foundation grant awarded to Dr Nikas to continue his research on materials science](#). Sponsored by the Royal Swedish Academy of Engineering Science.
2. **2005-2007** (18-month project, cost £209,000 for Imperial College); Research Associate. Project: [FOREMOST: Fullerene-based opportunities for robust engineering: Making optimised surfaces for tribology](#). Involving 31 European companies and Universities. Funded by the European Union.
3. **2003-2004** (18-month project, cost £112,000); Research Associate. Project: [Research of fundamental sealing mechanisms needed for zero-leakage high-reliability rotary vane actuators](#). Collaborators: Smiths Aerospace Mechanical Systems (UK) and Busak+Shamban (UK). Sponsor: British Department of Trade and Industry.
4. **2000-2002** (18-month project, cost £51,000); Imperial College Consultant (ICON) and Research Associate. Project: [Traction modelling for a toroidal CVT](#). Collaborator: Torotrak (Development) Ltd (UK). Sponsor: British Department of Trade and Industry through the Foresight Vehicle LINK Programme LAMTRAK.
5. **1999-2001** (18-month project, cost £172,000); Research Associate. Project: [Determination of polymeric sealing principles for end user high reliability](#). Collaborators: Smiths Aerospace Actuation Systems – Cheltenham (UK), Smiths Aerospace Actuation Systems – Wolverhampton (UK), and Polymer Sealing Solutions Ltd (UK). Sponsor: British Department of Trade and Industry.

6. **1998-1999** (18-month project, cost £83,500); Research Assistant. Project: [Development of a contact fatigue model for Continuously Variable Transmissions](#). Collaborator: Torotrak (Development) Ltd (UK). Sponsor: British Department of Trade and Industry.
7. **1997-1998** (12-month project, cost £44,000); Research Assistant. Project: [A study of lubrication mechanisms using 2-phase fluids with porous bearing materials](#). Sponsor: Engineering and Physical Sciences Research Council; Grant GR/89658.
8. **1996** (3-month project); Consultant. Project: [Particle entrapment in an EHD contact of a ball rolling-sliding on a flat surface](#). Collaborator: SKF (The Netherlands).
9. **1996** (1-month project); Consultant. Project: [Trajectories of particles in sliding contacts](#). Collaborator: SKF (The Netherlands).

Publications (most recent in each category appear first)

- **Peer reviewed archival transactions**

1. **Nikas G. K.** Miscalculation of film thickness, friction and contact efficiency by ignoring tangential tractions in elastohydrodynamic contacts. *Tribology International* (Elsevier), 2017, **110**, 252-263. [Non-self citations: 1]
2. **Nikas G. K.** Particle extrusion in elastohydrodynamic line contacts: dynamic forces and energy consumption. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2017, **231**(10), 1320-1340.
3. **Nikas G. K.** Algebraic equations for the pile-up geometry in debris particle indentation of rolling elastohydrodynamic contacts. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2016, **138**(2), 021503-021503-14. [Non-self citations: 1]
4. **Nikas G. K.** Modelling dark and white layer formation on elastohydrodynamically lubricated steel surfaces by thermomechanical indentation or abrasion by metallic particles. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2015, **137**(3), 031504-031504-20. [Non-self citations: 3]
5. **Nikas G. K.**, Almond R. V., Burridge G. Experimental study of leakage and friction of rectangular, elastomeric, hydraulic seals for reciprocating motion from -54 to $+135$ °C and pressures from 3.4 to 34.5 MPa. *Tribology Transactions (STLE)*, 2014, **57**(5), 846-865. [Non-self citations: 18]
6. **Nikas G. K.** Strain-rate effects on the plastic indentation and abrasion of elastohydrodynamic contacts by debris particles. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2014, **228**(1), 22-45. [Non-self citations: 1]
7. **Nikas G. K.** Debris particle indentation and abrasion of machine-element contacts: an experimentally validated, thermoelastoplastic numerical model with micro-hardness and frictional heating effects. *Proceedings of the Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2013, **227**(6), 579-617. [Non-self citations: 2]
8. **Nikas G. K.** An experimentally validated numerical model of indentation and abrasion by debris particles in machine-element contacts considering micro-hardness effects. *Proceedings of the Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2012, **226**(5), 406-438. [Non-self citations: 7]
9. **Nikas G. K.** A state-of-the-art review on the effects of particulate contamination and related topics in machine-element contacts. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2010, **224**(5), 453-479. [Non-self citations: 40]
10. **Nikas G. K.** Eighty years of research on hydraulic reciprocating seals: review of tribological studies and related topics since the 1930s. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2010, **224**(1), 1-23. [Non-self citations: 92]
11. **Nikas G. K.** and Sayles R. S. Surface coatings and finite-element analysis of layered fretting contacts. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2009, **223**(2), 159-181. [Non-self citations: 7]
12. **Nikas G. K.** and Sayles R. S. Finite-element analysis of layered rolling contacts. *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2008, **222**(7), 865-886. [Non-self citations: 9]

13. Nikas G. K. Effects of operating conditions and friction on the entrapment of spherical debris particles in elliptical contacts. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2007, **221**(6), 727-741. [Non-self citations: 7]
14. Nikas G. K., Burrige G., Sayles R. S. Modelling and optimization of rotary vane seals. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2007, **221**(6), 699-715. [Non-self citations: 38]
15. Nikas G. K. A mechanistic model of spherical particle entrapment in elliptical contacts. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2006, **220**(6), 507-522. [Non-self citations: 15]
16. Nikas G. K., Sayles R. S. Modelling and optimisation of composite rectangular reciprocating seals. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2006, **220**(4), 395-412. [Non-self citations: 36]
17. Nikas G. K. Boussinesq-Cerruti functions and a simple technique for substantial acceleration of subsurface stress computations in elastic half-spaces. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2006, **220**(1), 19-28. [Non-self citations: 1]
18. Nikas G. K., Sayles R. S. Study of leakage and friction of flexible seals for steady motion via a numerical approximation method. *Tribology International* (Elsevier), 2006, **39**(9), 921-936. [Non-self citations: 95]
19. Nikas G. K., Sayles R. S. Computational model of tandem rectangular elastomeric seals for reciprocating motion. *Tribology International* (Elsevier), 2006, **39**(7), 622-634. [Non-self citations: 44]
20. Nikas G. K. Theoretical study of solid back-up rings for elastomeric seals in hydraulic actuators. *Tribology International* (Elsevier), 2004, **37**(9), 689-699. [Non-self citations: 48]
21. Nikas G. K., Sayles R. S. Nonlinear elasticity of rectangular elastomeric seals and its effect on elastohydrodynamic numerical analysis. *Tribology International* (Elsevier), 2004, **37**(8), 651-660. [Non-self citations: 93]
22. Nikas G. K. Transient elastohydrodynamic lubrication of rectangular elastomeric seals for linear hydraulic actuators. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2003, **217**(6), 461-473. [Non-self citations: 67]
23. Nikas G. K. Analytical study of the extrusion of rectangular elastomeric seals for linear hydraulic actuators. *Proc. Institution of Mechanical Engineers (IMEchE), Part J: Journal of Engineering Tribology*, 2003, **217**(5), 365-373. [Non-self citations: 35]
24. Nikas G. K. Elastohydrodynamics and mechanics of rectangular elastomeric seals for reciprocating piston rods. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2003, **125**(1), 60-69. [Non-self citations: 117]
25. Nikas G. K. Fatigue life and traction modelling of continuously variable transmissions. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2002, **124**(4), 689-698. [Non-self citations: 32]
26. Nikas G. K. Particle entrainment in elastohydrodynamic point contacts and related risks of oil starvation and surface indentation. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2002, **124**(3), 461-467. [Non-self citations: 28]
27. Nikas G. K. An advanced model to study the possible thermomechanical damage of lubricated sliding-rolling line contacts from soft particles. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2001, **123**(4), 828-841. [Non-self citations: 16]
28. Nikas G. K. Mathematical analysis of the entrapment of solid spherical particles in non-conformal contacts. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 2001, **123**(1), 83-93. [Non-self citations: 36]
29. Nikas G. K., Sayles, R. S., Ioannides, E. Thermoelastic distortion of EHD line contacts during the passage of soft debris particles. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 1999, **121**(2), 265-271. [Non-self citations: 8]
30. Nikas G. K., Ioannides E., Sayles R. S. Thermal modelling and effects from debris particles in sliding/rolling EHD line contacts - A possible local scuffing mode. *Trans. American Society of Mechanical Engineers (ASME), Journal of Tribology*, 1999, **121**(2), 272-281. [Non-self citations: 21]

-
31. **Nikas G. K.**, Sayles R. S., Ioannides E. [Effects of debris particles in sliding/rolling elastohydrodynamic contacts](#). *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 1998, **212**(5), 333-343. [Non-self citations: 56]
- **Invited papers (reviewed)**
32. **Nikas G. K.**, Sayles R. S. [A study of lubrication mechanisms using two-phase fluids with porous bearing materials](#). *Proc. Institution of Mechanical Engineers (IMechE), Part J: Journal of Engineering Tribology*, 2008, **222**(6), 771-783 (special issue on granular lubrication). [Non-self citations: 10]
33. **Nikas G. K.**, Sayles R. S. [Nonlinear elasticity of rectangular elastomeric seals and its effect on elastohydrodynamic numerical analysis](#). *Sealing Technology* (Elsevier), 2005, **2005**(3), 6-11. Featured article, based on a previous article of the authors and compiled by Mr R. Flitney, Editor of Sealing Technology. [Non-self citations: 24]
34. **Nikas G. K.** [Elastohydrodynamic lubrication - a qualitative approach to the problem](#). *Journal of the Hellenic Association of Mechanical and Electrical Engineers*, 1997, **302**, 61-62. Article in Greek, based on the author's Diploma thesis; invited and compiled by the Editor of the Journal.
- **Invited book chapters**
35. **Nikas G. K.** [Friction and wear of seals](#). *ASM Handbook Vol. 18 – Friction, Lubrication, and Wear Technology* (ed.: G. Totten). ASM International (American Society for Metals), Ohio, USA, 2017, pp. 957-968.
36. **Nikas G. K.** [Review of studies on the detrimental effects of solid contaminants in lubricated machine element contacts](#). First chapter (pp. 3-46) in the book *Reliability Engineering Advances* (ed.: G. I. Hayworth). Nova Science Publishers, New York, USA, 2009. ISBN: 978-1606923290. [Non-self citations: 1]
37. **Nikas G. K.** [Research on the tribology of hydraulic reciprocating seals](#). First chapter (pp. 11-56) in the book *Tribology Research Trends* (ed.: T. Hasegawa). Nova Science Publishers, New York, USA, 2008. ISBN: 978-1604569124. [Non-self citations: 7]
- **Reviewed conference proceedings**
38. Reddyhoff T., Underwood R. J., **Nikas G. K.**, Sayles R. S., Spikes H. A. [Thermal aspects of debris in EHL contacts](#). *Proc. 4th World Tribology Congress*, 6-11 September 2009, Kyoto, Japan, paper C1-222, p. 308.
39. **Nikas G. K.** [Fundamentals of sealing and tribology of hydraulic reciprocating seals](#). *Proc. of the 1-day seminar “Focus on Reciprocating Seals”* organised by the Tribology Group of the Institution of Mechanical Engineers (IMechE), London, England, 25 June 2008. (Invited by Professor Rob Dwyer-Joyce (Professor in Lubrication Engineering, University of Sheffield, England) on behalf of the IMechE.) [Non-self citations: 3]
40. Rana A., Sayles R., **Nikas G.**, Jalisi I. [An experimental technique for investigating the sealing principles of reciprocating elastomeric seals for use in linear hydraulic actuator assemblies](#). *Proc. 2nd World Tribology Congress*, 3-7 September 2001, Vienna, Austria, (proceedings on CD). [Non-self citations: 23]
41. **Nikas G. K.**, Sayles R. S., Ioannides E. [Effects of debris particles in sliding/rolling EHD contacts](#). *Proc. First World Tribology Congress*, 8-12 September 1997, London, England, p. 271 (abstract). [Non-self citations: 1]
42. **Nikas G. K.** [Load sharing and profile modification of spur gear teeth in the general case of any flank geometry](#). *Proc. International Conference on Gears*, 22-24 April 1996, Dresden, Germany, VDI Berichte **1230**, 923-935. [Non-self citations: 8]
43. Costopoulos Th., **Nikas G. K.** [Minimization of spur gear dynamic loading through the Generalized Theory of Gearing](#). *Proc. International Congress - Gear Transmissions 95*, 26-28 September 1995, Sofia, Bulgaria, vol. 1, 52-56. [Non-self citations: 1]
44. **Nikas G. K.**, Costopoulos Th. [Generalized Theory of Gearing and elastohydrodynamic lubrication of spur gears](#). *Proc. International Congress - Gear Transmissions 95*, 26-28 September 1995, Sofia, Bulgaria, vol. 1, 118-123.

- **Theses**

45. **Nikas G. K.** Theoretical modelling of the entrainment and thermomechanical effects of contamination particles in elastohydrodynamic contacts. Ph.D. and D.I.C. thesis; Imperial College London and Science Museum Library, also in the Mech. Eng. Dept. library and in the Tribology Group, Imperial College London, London SW7 2AZ, England, 1999. [Non-self citations: 8]
46. **Nikas G. K.** Elastohydrodynamic lubrication and minimization of the dynamic loading of spur gears. Mechanical Engineering Diploma thesis (in Greek, National Technical University of Athens, Greece), library of the Technical Chamber of Greece (23-25 Lekka Street, 10562 Athens, Greece), 1994.

- **Book**

47. Upon invitation from Research Signpost (publishers of review books in physical sciences), Dr Nikas edited an 8-chapter review book titled “Recent Developments in Wear Prevention, Friction and Lubrication” for which he assembled and supervised a team of 11 distinguished authors from the USA, UK, Sweden and Israel, and 9 reviewers as detailed below. [Non-self citations: 69]

<p>Book: Recent Developments in Wear Prevention, Friction and Lubrication 326 pages. Released in February 2010. ISBN: 978-81-308-0377-7. Publisher: Research Signpost (Kerala, India); www.reassign.com Editor: George K. Nikas</p>
<p>Chapter 1 (43 pages): The thin film approximation in hydrodynamic, including elastohydrodynamic, lubrication. Author: Professor Andras Szeri (Professor of Mechanical Engineering; Department of Mechanical Engineering, University of Delaware, USA).</p>
<p>Chapter 2 (92 pages): Rolling bearing life prediction, theory, and application. Author: Dr Erwin Zaretsky (Chief Engineer; NASA Glen Research Center, USA; also Adjunct Professor; Case Western Reserve University, Ohio, USA).</p>
<p>Chapter 3 (21 pages): Laser Surface Texturing and applications. Author: Professor Izhak Etsion (Yeshayahu Winograd Chair in Fluid Mechanics and Heat Transfer; Mechanical Engineering Department, Technion – Israel Institute of Technology, Israel).</p>
<p>Chapter 4 (38 pages): Unification of friction and wear. Author: Professor Michael Bryant (Accenture Endowed Professor of Manufacturing Systems Engineering; Mechanical Engineering Department, University of Texas at Austin, USA).</p>
<p>Chapter 5 (29 pages): Tribofilms – On the crucial importance of tribologically induced surface modifications. Authors: Professor Staffan Jacobson (Professor in Materials Science; Department of Engineering Sciences, Uppsala University, Sweden) and Professor Sture Hogmark (Professor in Materials Science and Tribology; Department of Engineering Sciences, Uppsala University, Sweden).</p>
<p>Chapter 6 (36 pages): Transient phenomena in elastohydrodynamic lubrication. Author: Dr Romeo Glovnea (Reader in Mechanical Engineering; School of Engineering and Design, University of Sussex, England).</p>
<p>Chapter 7 (16 pages): On the Stribeck curve. Authors: Professor Michael Khonsari (Dow Chemical Endowed Chair and Professor; Department of Mechanical Engineering, Louisiana State University, USA) and Dr E. R. Booser (Engineering Consultant; USA).</p>
<p>Chapter 8 (36 pages): Surface characterization, adhesion measurements and modeling of microelectromechanical systems. Authors: Dr Xiaojie Xue (Analog Devices Inc, USA) and Professor Andreas Polycarpou (Professor; Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign, USA).</p>

Chapter reviewers (in alphabetical order)

- **Professor George Adams** (Professor of Mechanical and Industrial Engineering; Department of Mechanical and Industrial Engineering, Northeastern University, USA).
- **Professor Liming Chang** (Professor of Mechanical Engineering; Department of Mechanical and Nuclear Engineering, The Pennsylvania State University, USA).
- **Professor Rob Dwyer-Joyce** (Professor of Lubrication Engineering; Head of the Mechanical Engineering Department, Tribology Group, Department of Mechanical Engineering, The University of Sheffield, England).
- **Professor Ian Hutchings** (GKN Professor of Manufacturing Engineering, Institute of Manufacturing; University of Cambridge, England).
- **Professor Emeritus Bo Jacobson** (Professor Emeritus; Machine Elements Division, Mechanical Engineering Department, Lund University, Sweden).
- **Dr George Nikas** (Research Associate; Tribology Group, Department of Mechanical Engineering, Imperial College London, England).
- **Professor Homer Rahnejat** (Professor of Dynamics; Dynamics Research Group, Department of Mechanical, Aeronautical and Manufacturing Engineering, Loughborough University, England).
- **Professor Richard Salant** (Georgia Power Distinguished Professor in Mechanical Engineering; Georgia Institute of Technology, The George W. Woodruff School of Mechanical Engineering, Georgia, USA).
- **Professor Ray Snidle** (Professor; Head of Tribology and Contact Mechanics Research Group, School of Engineering, Cardiff University, England).

- **Technical reports**

1. **Nikas G. K. Jacob Wallenberg Foundation grant for research and development in materials science.** 2008; Final report for the Jacob Wallenberg Foundation (Sweden) and the Royal Swedish Academy of Engineering Sciences. (23 pages, 9 figures, 5 appendices.)
2. **Nikas G. K. FOREMOST: Fullerene-based opportunities for robust engineering: Making optimised surfaces for tribology.** 2007; Technical report for the European Union sponsored project codenamed FOREMOST. Imperial College London, Mechanical Engineering Department, Tribology Group. (117 pages, 73 figures including 225 diagrams, 16 tables, 13 detailed equations, 7 appendices.)
3. **Nikas G. K. Research of fundamental sealing mechanisms needed for zero-leakage high-reliability rotary vane actuators.** 2004, Technical report for Smiths Aerospace Mechanical Systems (UK), Busak+Shamban (UK), and the British Department of Trade and Industry. Imperial College London, Mechanical Engineering Department, Tribology Group. (121 pages, 98 figures including 189 diagrams, 94 detailed equations.)
4. **Nikas G. K. Traction modelling for a toroidal CVT.** 2002; Technical report for Torotrak (Development) Ltd (UK) and the British Department of Trade and Industry. Imperial College London, Mechanical Engineering Department, Tribology Group. (77 pages, 29 figures, 46 detailed equations.)
5. **Nikas G. K. Determination of polymeric sealing principles for end user high reliability.** 2001; Technical report for Smiths Aerospace Actuation Systems - Cheltenham (UK), Smiths Aerospace Actuation Systems - Wolverhampton (UK), TISPP UK Ltd (UK), and the British Department of Trade and Industry. Imperial College London, Mechanical Engineering Department, Tribology Group. (124 pages, 60 figures, 94 detailed equations.)
6. **Nikas G. K. Development of a contact fatigue model for Continuously Variable Transmissions.** 1999; Technical report for Torotrak (Development) Ltd (UK). IC Consultants Ltd., London, England. (88 pages, 19 figures, 86 detailed equations.)
7. **Nikas G. K. A study of lubrication mechanisms using 2-phase fluids with porous bearing materials.** 1998; Technical report for the EPSRC (project Grant GR/K 89658). Imperial College London, Mechanical Engineering Department, Tribology Group.
8. **Nikas G. K. Particle entrapment in an EHD contact of a ball rolling/sliding on a flat surface.** 1996; Technical report for SKF (The Netherlands). Imperial College London, Mechanical Engineering Department, Tribology Group. (79 pages, 56 figures, 103 detailed equations.)

Invited presentations and lectures

1. **Nikas G. K. Fundamentals of sealing and tribology of hydraulic reciprocating seals.** Invited lecture at the 1-day seminar “*Focus on Reciprocating Seals*”, organised by the Tribology Group of the Institution of Mechanical Engineers (IMEchE), London, England, 25 June 2008. Invited by Professor Rob Dwyer-Joyce (Professor of Lubrication Engineering, University of Sheffield, England) on behalf of the IMechE.
2. **Nikas G. K. Theoretical modelling in Tribology: some real applications and solutions.** Invited presentation at SKF’s club house in Slottsviken (Gothenburg, Sweden) on 30 October 2007 as one of the Jacob Wallenberg Foundation and Royal Swedish Academy of Engineering Sciences awardees in 2007. Invited by Mr Tom Johnstone, President and Chief Executive Officer of the SKF Group. Audience: more than 20 technical and managerial staff of SKF.
3. **Nikas G. K. Determination of polymeric sealing principles for end-user high reliability.** Invited presentation at Busak+Shamban (Gloucestershire, England) on 24 April 2001. Invited by Mr Guy Burrige, Technical Manager (Aerospace) of Busak+Shamban. Audience: more than 20 technical and managerial staff of Busak+Shamban and Dowty Seals (UK).

Research interests and expertise

Dr Nikas' research interests are focused on mathematical analysis and computational modelling in the field of Tribology and Contact Mechanics, using analytical and numerical methods. Dr Nikas has been involved in research in the following areas.

- Mechanical and thermal effects of debris particles and oil particulate contamination.
- Elastohydrodynamics and mechanics of polymeric and composite seals, rolling bearings and spur gears.
- Elastohydrodynamics and contact fatigue of Infinitely Variable Transmissions.
- Finite element analysis of surface coatings.
- Hydrodynamics of thrust and journal bearings, including gas bearings.
- Contact fatigue and fatigue life calculation of machine elements.
- Elasticity, thermoelasticity, poroelasticity and rubber elasticity.
- Finite difference and finite element analysis. Analytical solution of differential equations.

Computing skills and compiled engineering software

A keen FORTRAN 77/90/95 programmer and computer enthusiast, going as far as programming in Assembly language for 8086 compatible processors and batch programming in DOS, Dr Nikas has 29 years of working experience with personal computers, past and present versions of Microsoft Windows (3.xx, 95/98, 2000, XP, 7, 10) and Office products (Word, Excel, PowerPoint, FrontPage, Microsoft Expression Web 4), graphics, numerical and statistical analysis software (e.g. Grapher, Surfer, DataFit), website development (created two academic web sites, one of which was the website of the Tribology Group at Imperial College London 1998-2011), and working experience of Finite Element Analysis commercial software (ADINA). He has developed many complex computer programs since the 1990s. Following is a list of the main programs developed with the FORTRAN 95 programming language. Most of these were distributed to industrial collaborators under contract with Imperial College London and were developed for the author’s research projects.

- Program **ROVAS** (version: 1.1.3; code length: 1421 lines). Transient, smooth elastohydrodynamic lubrication analysis, mechanics and performance analysis of composite seals (PTFE-elastomer-PTFE) of goalpost shape for rotary vane actuators. This also covers reciprocating polymeric seals in general. **Licensed users: Smiths Aerospace (UK) and Busak+Shamban (Trelleborg) (UK).**
- Program **SEAL** (version: 1.1.1; code length: 2549 lines). Transient, rough, elastohydrodynamic lubrication analysis, mechanics and performance analysis of rectangular, elastomeric, reciprocating seals and back-up rings. **Licensed users: Smiths Aerospace (UK) and Busak+Shamban (Trelleborg) (UK).**
- Program **TORO** (version: 2.2.3; code length: 2241 lines). Transient, rough elastohydrodynamic lubrication analysis, 3-dimensional stress and contact fatigue analysis of toroidal Infinitely Variable Transmissions. **Licensed user: Torotrak (Development) Ltd (UK).**

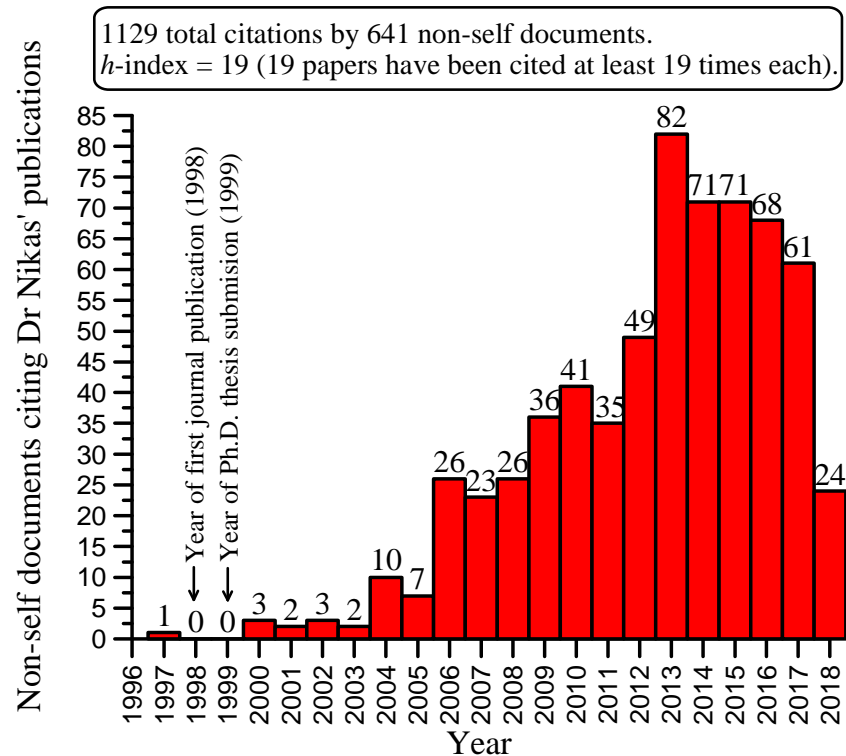
- Program **PhD** (version: 7.2.3; code length: 3911 lines). Thermoviscoplastic effects of solid contamination particles in rectangular elastohydrodynamic contacts. Three-dimensional subsurface elastic stress analysis; surface thermoviscoplastic displacements in concentrated contacts from squashed ductile debris particles; frictional heating and flash temperature analysis; particle entrapment analysis; formation of tribochemical layers. Program originally developed for the author's doctoral study.
- Program **ROSEAL** (version 1.1.1; code length: 970 lines). Rough thermoelastohydrodynamic lubrication analysis, solid mechanics, contact mechanics and performance analysis of rectangular-rounded, polymeric, hydraulic reciprocating seals.
- Program **ENTRAP** (version 1.0.1; code length: 774 lines). Analysis of solid spherical particle entrapment in lubricated elliptical contacts.
- Program **SKF** (version: 1.4.1; code length: 798 lines). Solid particle entrainment and entrapment analysis in elastohydrodynamic contacts. [Developed for SKF \(The Netherlands\)](#).
- Program **Vacuum** (version 1.7.1; code length: 433 lines). Vacuum calculations and optimization for single-hosed vacuum systems related to vacuum trucks and mobile vacuum equipment. [Developed for the author's private company \(KADMOS Engineering Ltd.\) and his collaboration with the vacuum-truck and vacuum-system manufacturer DISAB \(Sweden\)](#).
- Program **POROUS** (version 1.3.0; code length: 365 lines). Performance analysis of porous bearing materials saturated with oil containing small particles. Developed for Dr Nikas' EPSRC project in 1997.
- Program **LOAD** (version: 1.5.0; code length: 1055 lines). Calculation of the static load distribution and corresponding tooth flank modifications to minimize the dynamic loading of spur gears with general tooth flank geometries. Developed for the author's Mechanical Engineering Diploma thesis.
- Program **TRAJECTOR** (version: 1.0.0; code length: 262 lines). Computation of trajectories of solid particles trapped in bearing contacts. [Licensed user: SKF \(The Netherlands\)](#).
- Program **EHL** (version 1.0.0; code length: 366 lines). Solution of the elastohydrodynamic problem for line contacts and Newtonian fluids under steady-state conditions. Developed for the author's Mechanical Engineering Diploma thesis.

Languages spoken and written

Greek (native) and English (fluent). Dr Nikas is a London resident since 1994 and naturalised British Citizen since 2001.

Citations (non-self)

Dr Nikas has been cited in at least 641 scientific publications by independent researchers with at least 1129 total citations (citation numbers are quoted for each of Dr Nikas' publication earlier in this CV). His *h*-index is 19 (19 papers have been cited in at least 19 non-self publications each). The following figure summarizes this information.



- Citations (non-self) in scientific journals

1. **Nogi T.** Report on First World Tribology Congress. *Journal of Japanese Society of Tribologists*, 1997, **42**(11), 892-894.
2. **Kang Y. S., Sadeghi F., Ai X.** Debris effects on EHL contact. *Journal of Tribology*, 2000, **122**(4), 711-720.
3. **Miettinen J., Andersson P.** Acoustic emission of rolling bearings lubricated with contaminated grease. *Tribology International*, 2000, **33**(11), 777-787.
4. **Sjöström H., Wikström V.** Diamond-like carbon coatings in rolling contacts. *Journal of Engineering Tribology*, 2001, **215**(6), 545-561.
5. **Goldstein R. J., Eckert E. R. G., Ibele W. E., Patankar S. V., Simon T. W., Kuehn T. H., Strykowski P. J., Tamma K. K., Bar-Cohen A., Heberlein J. V. R., Davidson J. H., Bischof J., Kulacki F. A., Kortshagen U., Garrick S.** Heat Transfer – A review of 1999 literature. *International Journal of Heat and Mass Transfer*, 2001, **44**(19), 3579-3699.
6. **Sjöström H., Wikström V.** Diamond-like carbon coatings in rolling contacts. *VDI Berichte* (Germany), 2002, **1706**, 675-696.
7. **Olver A. V.** Gear lubrication – A review. *Journal of Engineering Tribology*, 2002, **215**(5), 255-267.
8. **Teo K.-M., Lafdi K.** Effect of thermal property variation on surface grooving. *Journal of Tribology*, 2002, **124**(2), 274-280.
9. **Shi D., Qin D., Xu W.** Meshing control of the double-enveloping hourglass worm gearing under the conditions of existing the error and the loads. *Mechanism and Machine Theory*, 2004, **39**(1), 61-74.
10. **Benitez F. G., Madrigal J. M., del Castillo J. M.** Infinitely variable transmission of ratcheting drive type based on one-way clutches. *Journal of Mechanical Design*, 2004, **126**(4), 673-682.
11. **Kang Y. S., Sadeghi F., Hoepflich M. R.** A Finite Element model for spherical debris denting in heavily loaded contacts. *Journal of Tribology*, 2004, **126**(1), 71-80.
12. **Liu X., Liu K., Jiao M., Wang W., Ding S.** Effects of nano-particles on the tribological and thermal properties of piston ring-cylinder liner. *Tsinghua Science and Technology* (ISSN 1007-0214), 2004, **9**(3), 286-289.

13. Lee S., Heuberger M., Rousset P., Spencer N. A tribological model for chocolate in the mouth: General implications for slurry-lubricated hard/soft sliding counterfaces. *Tribology Letters*, 2004, **16**(3), 239-249.
14. Andrei L., Walton D., Andrei G., Mereuta E. Influence of a non-standard geometry of plastic gear on sliding velocities. *The Annals of University "Dunarea De Jos" of Galati* (ISSN 1221-4590), Tribology, 2004, Fascicle VIII, 11-16.
15. Du L., Xu B., Dong S., Yang H., Wu Y. Current research developments of abrasive wear in lubricated condition containing a solid contaminant. *Lubrication Engineering* (Chinese; ISSN: 0254-0150), 2004, **4**, 39-42.
16. Shibata M. Trends of studies on rolling contact fatigue life and recent results. *JTEKT Engineering Journal* (English Ed.; ISSN: 1881-4093), 2004, **164E**, 8-13.
17. Flitney B. Review of features in Sealing Technology during the last year. *Sealing Technology*, 2005, **2005**(5), 6-11.
18. Zmitrowicz A. Wear debris: a review of properties and constitutive models. *Journal of Theoretical and Applied Mechanics*, 2005, **43**(1), 3-35.
19. Hernandez Battez A., Fernandez Rico J. E., Navas Arias A., Viesca Rodriguez J. L., Chou Rodriguez R., Diaz Fernandez J. M. The tribological behaviour of ZnO nanoparticles as an additive to PAO6. *Wear*, 2006, **261**(3-4), 256-263.
20. Akehurst S., Parker D. A., Schaaf S. CVT rolling traction drives – A review of research into their design, functionality, and modeling. *Journal of Mechanical Design*, 2006, **128**(5), 1165-1176.
21. Abouel-Kasem A. Lifetime estimation and design of elastomeric seals with reinforced metal end caps. *Sealing Technology*, 2006, **2006**(3), 5-9.
22. Sada T., Mikami T. Effect of lubricant film thickness on ball bearing life under contaminated lubrication (Part 2): Relationship between film thickness and dents formation. *Japanese Journal of Tribology*, 2006, **50**(1), 35-42.
23. Sada T., Mikami T. Effect of lubricant film thickness on ball bearing life under contaminated lubrication (Part 2): Relationship between film thickness and dents formation. *Journal of Japanese Society of Tribologists*, 2006, **50**(1), 62-67.
24. Sada T., Mikami T. Effect of lubricant film thickness on bearing life under contaminated lubrication. Part 2: Relationship between film thickness and dent formation. *JTEKT Engineering Journal* (English Ed.; ISSN: 1881-4093), 2006, **1001E**, 30-34.
25. Abouel-Kasem A. Numerical analysis of leakage rate for the selection of elastomeric sealing materials. *Sealing Technology*, 2006, **2006**(11), 7-11.
26. Liu K., Wang W., Zhang B., Jiao M.-H. Combined effect of the rough surface and particle morphology on the thermal property of the tribopair. *Journal of Hefei University of Technology (Natural Science)* (Chinese; ISSN: 1003-5060), 2006, **29**(11), 1341-1345.
27. Yoo J.-C., Yeo K.-M., Park T.-J., Kang B.-R. Analysis of check valve seal for CNG vehicle fuel supply line. *Journal of the Korean Society of Tribologists and Lubrication Engineers* (ISSN: 1229-4845), 2006, **22**(6), 329-334.
28. Yoo M.-H., Kwon J.-H., Lee T.-S. Computational and experimental investigation on U-type seal of hydraulic actuator. *Journal of the Korean Society of Precision Engineering* (ISSN: 1225-9071), 2006, **23**(12), 80-87.
29. Salant R. F., Maser N., Yang B. Numerical model of a reciprocating hydraulic rod seal. *Journal of Tribology*, 2007, **129**(1), 91-97.
30. Salant R. F. Progress towards a realistic numerical model for elastomer reciprocating seals. *Sealing Technology*, 2007, **2007**(1), 7-11.
31. Maru M. M., Castillo R. S., Padovese L. R. Study of solid contamination in ball bearings through vibration and wear analysis. *Tribology International*, 2007, **40**(3), 433-440.
32. Wang W., Liu K., Jiao M. Thermal and non-Newtonian analysis on mixed liquid-solid lubrication. *Tribology International*, 2007, **40**(7), 1067-1074.
33. Tang J., Yang W., Ding Y.-M., Li J., Zhang Y., Lu B.-T. Finite Element Analysis of rectangular rubber seals. *Lubrication Engineering, "Lubrication and Seal"* (Chinese; ISSN: 0254-0150), 2007, **32**(2), 36-39.
34. Hu Y., Zhang J.-F., Cui W.-C. Sealing ability research on movable rescue bell. *Chuan Bo Li Xue/Journal of Ship Mechanics* (ISSN: 1007-7294), 2007, **11**(2), 221-230.

35. **Volder M., Ceyskens F., Reynaerts D., Puers R.** A PDMS lipseal for hydraulic and pneumatic microactuators. *Journal of Micromechanics and Microengineering*, 2007, **17**(7), 1232-1237.
36. **Abu Jadayil W. M., Flugrad D. R.** Fatigue life investigation of solid and hollow rollers under pure normal loading. *TriboTest*, 2007, **13**(4), 165-181.
37. **Waikar R. A., Guo Y. B.** Residual stress evolution and mechanical state of hard machined components in sliding contact. *Tribology Transactions*, 2007, **50**(4), 531-539.
38. **Wennehorst B., Poll G.** Influence of lubricant contaminants on the service life and working properties of roller bearings. *Tribologie und Schmierungstechnik*, 2007, **54**(5), 11-17.
39. **Jin Z., Zhang J.** Modelling and calculating of composite seals for rotary vane actuator. *Chinese Hydraulics and Pneumatics* (ISSN: 1000-4858), 2007, **10**, 18-21.
40. **Du L.-Z., Xu B.-S., Yang H., Zhang W.-G.** Microstructure and wear resistance in sand containing oil lubrication of the high velocity arc sprayed 3Cr13 steel coating. *Heat Treatment of Metals* (Chinese; ISSN: 0254-6051), 2007, **32**(5), 10-13.
41. **Yoo M.-H., Lee T.-S., Do J.-S., Kwon J.-H.** Experimental investigation on the non-linearity of Nitrile Butadiene rubber. *Elastomer* (Korean; ISSN: 1226-8526), 2007, **42**(3), 159-167.
42. **Du L.-Z., Xu B.-S., Yang H., Zhang W.-G.** Tribological behaviour of supersonic plasma sprayed 12Co-WC coating in sand containing oil lubrication. *Materials Protection* (Chinese; ISSN: 1001-1560), 2007, **40**(10), 65-67.
43. **Jiang S.-Q., Duan M.-H.** The design of hydraulic and control system of transmission test platform. *Chinese Hydraulics & Pneumatics* (ISSN: 1000-4858), 2007, issue 10, 21-24.
44. **Wang J., Yuan J., Wang Q., Xue Z., Hong Y., Zhu P.** Experimental investigation of scuffing failure with four-ball machine. Part I: Micro particle additives. *Lubrication Engineering, "Lubrication and Seal"* (Chinese; ISSN: 0254-0150), 2007, **32**(11), 31-34.
45. **Li X., Guo F., Liu S., Gu L.** Measurement system of lubrication films under pure-spinning. *Lubrication Engineering* (Chinese; ISSN: 0254-0150), 2007, **32**(12), 100-102.
46. **Abu Jadayil W. M.** Relative fatigue life estimation of cylindrical hollow rollers in general pure rolling contact. *TriboTest*, 2008, **14**(1), 27-42.
47. **Shen X., Bogy D. B.** Contact force and frictional heating due to "large" particles in the head disk interface. *Journal of Tribology*, 2008, **130**(1), 011015.
48. **Antaluca E., Nélias D.** Contact fatigue analysis of a dented surface in a dry elastic-plastic circular point contact. *Tribology Letters*, 2008, **29**(2), 139-153.
49. **Yang B., Salant R.** A numerical model of a reciprocating rod seal with a secondary lip. *Tribology Transactions*, 2008, **51**(2), 119-127.
50. **Öngün Y., André M., Bartel D., Deters L.** An axisymmetric hydrodynamic interface element for finite-element computations of mixed lubrication in rubber seals. *Journal of Engineering Tribology*, 2008, **222**(3), 471-481.
51. **Yang B., Salant R. F.** Numerical model of a tandem reciprocating hydraulic rod seal. *Journal of Tribology*, 2008, **130**(3), 1-7.
52. **Aehurst S., Parker D. A., Schaaf S.** CVT roller traction drive – Evaluation of its design, functionality, and simulation studies. *Drive System Technique* (Chinese journal; ISSN: 1006-8244), 2008, **22**(3), 22-24.
53. **Diab Y., Ville F., Mahmoud H.** An experimental investigation in to rolling contact fatigue. *Tishreen University Journal for Research and Scientific Studies* (Syrian Journal), 2008, **30**(4), 143-154.
54. **Mongkolwongrojn M., Wongseedakaew K., Kennedy F. E.** Elastohydrodynamic lubrication of rough surfaces under oscillatory line contact with non-Newtonian lubricant. *Tribology Transactions*, 2008, **51**(5), 552-561.
55. **Křupka I., Vrbka M., Hartl M.** Effect of surface texturing on mixed lubricated non-conformal contacts. *Tribology International*, 2008, **41**(11), 1063-1073.
56. **Xie L., Kong J., Xiong H., Yang J., Wan X.** Research on the key technologies of rotary vane steering gear. *Ship & Ocean Engineering* (Chinese; ISSN: 1671-7953), 2008, **37**(4), 1-4.
57. **Grimble D. W., Theodossiades S., Rahnejat H., Wilby M.** Tribology of rough ultra-film contacts in drug delivery devices. *Journal of Mechanical Engineering Science*, 2008, **222**(11), 2209-2216.
58. **Shinkarenko A., Kligerman Y., Etsion I.** The effect of surface texturing in soft elasto-hydrodynamic lubrication. *Tribology International*, 2009, **42**(2), 284-292.

59. Yang B., Salant R. F. Soft EHL simulations of U-cup and step hydraulic rod seals. *Journal of Tribology*, 2009, **131**(2), 021501.
60. Shinkarenko A., Kligerman Y., Etsion I. The validity of linear elasticity in analyzing surface texturing effect for elastohydrodynamic lubrication. *Journal of Tribology*, 2009, **131**(2), 021503.
61. Yang B., Salant R. F. Numerical analysis compares the lubrication of U seal and step seal. *Sealing Technology*, 2009, **2009**(3), 7-11.
62. Stupkiewicz S., Marcinişzyn A. Elastohydrodynamic lubrication and finite configuration changes in reciprocating elastomeric seals. *Tribology International*, 2009, **42**(5), 615-627.
63. Thatte A., Salant R. F. Elastohydrodynamic analysis of an elastomeric hydraulic rod seal during fully transient operation. *Journal of Tribology*, 2009, **131**(3), 031501.
64. Stupkiewicz S. Finite element treatment of soft elastohydrodynamic lubrication problems in the finite deformation regime. *Computational Mechanics*, 2009, **44**(5), 605-619.
65. Shinkarenko A., Kligerman Y., Etsion I. The effect of elastomer surface texturing in soft elasto-hydrodynamic lubrication. *Tribology Letters*, 2009, **36**(2), 95-103.
66. Bryant M. D. Entropy and dissipative processes of friction and wear. *FME Transactions* (Faculty of Mechanical Engineering, Belgrade University, Serbia), (ISSN: 1451-2092), 2009, **37**, 55-60.
67. Kalyoncu M., Haydim M. Mathematical modelling and fuzzy logic based position control of an electrohydraulic servosystem with internal leakage. *Mechatronics*, 2009, **19**(6), 847-858.
68. Thatte A., Salant R. F. Transient EHL analysis of an elastomeric hydraulic seal. *Tribology International*, 2009, **42**(10), 1424-1432.
69. Wohlers A., Heipl O., Persson B. N. J., Scaraggi M., Murrenhoff H. Numerical and experimental investigation on O-ring-seals in dynamic applications. *International Journal of Fluid Power*, 2009, **10**(3), 51-59.
70. Shi P., Fu C., Niu W., Gao Y., Wei X. Effect of viscoelasticity and shape of butyl rubber seal rings on structural sealing performance. *Computer Aided Engineering* (Chinese; ISSN: 1006-871), 2009, **18**(4), 57-61.
71. Xie L., Kong J., Wan X. Numerical research on sealed reliability and mechanical efficiency of vane seals. *Lubrication Engineering* (Chinese; ISSN: 0254-0150), 2009, **34**(7), 54-57.
72. Podaru G., Ciortan S., Bîrsan I., Deleanu L. Particularities of rubber lip seals used for pneumatic linear drives. *The Annals of University "Dunarea De Jos" of Galati* (ISSN 1221-4590), Tribology, 2009, Fascicle VIII, issue 2, 162-167.
73. Yu M.-H., Lee T.-S. A study on the relationship between stress relaxation and performance of a lip seal. *Journal of the Korean Society for Precision Engineering*, 2009, **26**(11), 85-91.
74. Šamánek O., Zimmerman M., Svoboda P., Křupka I., Vrbka M. Influence of surface texturing on lubricant film formation and surface fatigue. *Engineering MECHANICS*, 2010, **174**(1), 27-36.
75. Bonny K., De Baets P., Quintelier J., Vleugels J., Jiang D., Van der Biest O., Lauwers B., Liu W. Surface finishing: impact on tribological characteristics of WC-Co hardmetals. *Tribology International*, 2010, **43**(1-2), 40-54.
76. Abu Jadayil W. M., Khraisat W. A. Predicting optimum hollowness of normally loaded cylindrical rollers using finite element analysis. *Materials Science and Technology*, 2010, **26**(2), 176-183.
77. Cui X., Dong Y.-L., Zhao K.-D. Calculation of leakage and friction of combined dynamic seals based on ADINA. *Huanan Ligong Daxue Xuebao / Journal of South China University of Technology (Natural Science)*, 2010, **38**(2), 95-100.
78. Abu Jadayil W. M., Jaber N. M. Numerical prediction of optimum hollowness and material of hollow rollers under combined loading. *Materials and Design*, 2010, **31**(3), 1490-1496.
79. Prokopovich P., Theodossiades S., Rahnejat H., Hodson D. Friction in ultra-thin conjunction of valve seals of pressurised metered dose inhalers. *Wear*, 2010, **268**(5-6), 845-852.
80. Halme J., Andersson P. Rolling contact fatigue and wear fundamentals for rolling bearing diagnostics – state of the art. *Journal of Engineering Tribology*, 2010, **224**(4), 377-393.
81. Zhang F., Zhang Q., Wang P. Efficiency reinforcement technology study for hydraulic reciprocating sealing based on TRIZ S-Field analysis. *Advanced Materials Research*, 2010, **97-101**, 4433-4436.

82. Sari M. R., Ville F., Haiahem A., Flamand L. Effect of lubricant contamination on friction and wear in an EHL sliding contact. *Mechanica*, 2010, **82**(2), 43-49.
83. Amiri M., Khonsari M. M. On the thermodynamics of friction and wear – A review. *Entropy*, 2010, **12**(5), 1021-1049.
84. Han H., Zhang Y., Zhong Z. Effect of particle transient motion on lubrication. *Industrial Lubrication and Tribology*, 2010, **62**(3), 126-135.
85. Heipl O., Wohlers A., Persson B. N. J., Scaraggi M., Murrenhoff H. Model creation of dynamic seals: An approach to the calculation of friction under mixed friction (Modellbildung dynamischer dichtungen - Ein ansatz zur berechnung der reibkraft unter mischreibung). *Olhydraulik und Pneumatik*, 2010, **54**(3), 76-80.
86. Vrbka M., Šamánek O., Šperka P., Návrat T., Křupka I., Hartl M. Effect of surface texturing on rolling contact fatigue within mixed lubricated non-conformal rolling/sliding contacts. *Tribology International*, 2010, **43**(8), 1457-1465.
87. Akbarzadeh S., Khonsari M. M. On the prediction of running-in behaviour in mixed-lubrication line contact. *Journal of Tribology*, 2010, **132**(3), 032102-1 – 032102-11.
88. Schmidt T., André M., Poll G. A transient 2D-finite-element approach for the simulation of mixed lubrication effects of reciprocating hydraulic rod seals. *Tribology International*, 2010, **43**(10), 1775-1785.
89. Yang L., Hals J., Moan T. Analysis of dynamic effects relevant for the wear damage in hydraulic machines for wave energy conversion. *Ocean Engineering*, 2010, **37**(13), 1089-1102.
90. Salant R. F., Yang B., Thatte A. Simulation of hydraulic seals. *Journal of Engineering Tribology*, 2010, **224**(9), 865-876.
91. Thatte A., Salant R. F. Visco-elastohydrodynamic model of a hydraulic rod seal during transient operation. *Journal of Tribology*, 2010, **132**(4), 041501-1 – 041501-13.
92. Pawlak Z., Kaldonski T., Urbaniak U. A hexagonal boron nitride-based model of porous bearings with reduced friction and increased load. *Journal of Engineering Tribology*, 2010, **224**(12), 1247-1253.
93. Fatu A., Crudu M., Hajjam M., Cananau S., Pascu A. Evaluation of the elastomer hyperelastic behaviour a U-cup hydraulic rod seal. *Hidraulica* (ISSN: 1453-7303), 2010, issue 3, 41-48.
94. Nagata Y., Glovnea R. Dielectric properties of grease lubricants. *ACTA TRIBOLOGICA* (ISSN: 1220-8434), 2010, **18**, 34-41.
95. Yang L., Moan T. Numerical modeling of wear damage in seals of a wave energy converter with hydraulic power take-off under random loads. *Tribology Transactions*, 2011, **54**(1), 44-56.
96. Jang J. Y., Khonsari M. M., Maki R. Three-dimensional thermohydrodynamic analysis of a wet clutch with consideration of grooved friction surfaces. *Journal of Tribology*, 2011, **133**(1), 011703-1 – 011703-12.
97. Zhang F. Y., Zhang H. C., Zheng H. Efficiency-reinforcement design of hydraulic reciprocating sealing driven by ideal solution. *Advanced Materials Research*, 2011, **189-193**, 416-419.
98. Qiu Y., Khonsari M. M. Experimental investigation of tribological performance of laser textured stainless steel rings. *Tribology International*, 2011, **44**(5), 635-644.
99. Leonard B. D., Patil P., Slack T. S., Sadeghi F., Shinde S., Mittelbach M. Fretting wear modeling of coated and uncoated surfaces using the finite-discrete element method. *Journal of Tribology*, 2011, **133**(2), 021601-1 – 021601-12.
100. Sugimura J. Researches on seals for energy saving and environment. *Journal of Japanese Society of Tribologists*, 2011, **56**(2), 105-111.
101. Vrbka M., Křupka I., Šamánek O., Svoboda P., Vaverka M., Hartl M. Effect of surface texturing on lubrication film formation and rolling contact fatigue within mixed lubricated non-conformal contacts. *Meccanica*, 2011, **46**(3), 491-498.
102. Alberdi A., Hatto P., Diaz B., Csillag S. Tribological behavior of nanocomposite coatings based on fullerene-like structures. *Vacuum*, 2011, **85**(12), 1087-1092.
103. Xie L. X., Kong J. Y., Qian L., Zhang G., Li G. F. Study on EHL film thickness of non-rectangular section vane seal. *Applied Mechanics and Materials*, 2011, **63-64**, 102-105.
104. Yang B., Salant R. F. Elastohydrodynamic lubrication simulation of O-ring and U-cup hydraulic seals. *Journal of Engineering Tribology*, 2011, **225**(7), 603-610.

105. Etsion I. Discussion of the paper: "Micro CNC surface texturing on polyoxymethylene (POM) and its tribological performance in lubricated sliding" (M.H. Cho and S. Park, *Tribology International*, 2011, **44**, 859–867). *Tribology International*, 2011, **44**(10), p. 1262.
106. Zhang F. Y., Zhang H. C., Zheng H. Study on efficiency-reinforcement design methods of elastomeric hydraulic reciprocating sealing. *Advanced Materials Research*, 2011, **295-297**, 113-116.
107. Olofsson J., Gerth J., Nyberg H., Wiklund U., Jacobson S. On the influence from micro topography of PVD coatings on friction behaviour, material transfer and tribofilm formation. *Wear*, 2011, **271**(9-10), 2046-2057.
108. Österle W., Dmitriev A. I. Functionality of conventional brake friction materials – Perceptions from findings observed at different length scales. *Wear*, 2011, **271**(9-10), 2198-2207.
109. Timm K., Myant C., Spikes H. A., Schneider M., Ladnorg T., Gruzne M. Cosmetic powder suspensions in compliant, fingerprintlike contacts. *Biointerfaces*, 2011, **6**(3), 126-134.
110. Sanders A. P., Brannon R. M. Assessment of the applicability of the Hertzian contact theory to edge-loaded prosthetic hip bearings. *Journal of Biomechanics*, 2011, **44**(16), 2802-2808.
111. Fatu A., Hajjam M. Numerical modelling of hydraulic seals by inverse lubrication theory. *Journal of Engineering Tribology*, 2011, **225**(12), 1159-1173.
112. Crudu M., Fătu A., Hajjam M., Pascu A., Cănanău S. Influence of certain parameters on the modelling of hydraulic "U" seals. *University Politehnica of Bucharest Scientific Bulletin, Series D*, 2011, **73**(4), 99-110.
113. Ben Jemaa M. C., Mnif R., Fehri K., Elleuch R. Design of a new tribometer for tribological and viscoelasticity studies of PTFE valve seats. *Tribology Letters*, 2012, **45**(1), 177-184.
114. Zhang F. Y., Zhang H. C., Zheng H. Efficiency-reinforcement design study for elastomeric hydraulic reciprocating seal based on function analysis. *Materials Science Forum*, 2012, **697-698**, 646-649.
115. Zaretsky E. V. Rolling bearing steels – a technical and historical perspective. *Materials Science and Technology*, 2012, **28**(1), 58-69.
116. Park T.-J., Lee J.-H. Sliding contact analysis between rubber seal, a spherical particle and steel surface. *Journal of the KSTLE (The Korean Society of Tribologists & Lubrication Engineers)*, 2012, **28**(1), 1-6.
117. Kango S., Singh D., Sharma R. K. Numerical investigation on the influence of surface texture on the performance of hydrodynamic journal bearing. *Meccanica*, 2012, **47**(2), 469-482.
118. Pan J., Xu S., Chen W., Wang X., Qian P., Hu Q. Accelerated aging test and study of storage life prediction of NBR o-ring. *Advanced Materials Research*, 2012, **415-417**, 184-190.
119. Sountaree R., Jesda P., Mongkol M. Effect of liquid-solid lubricant on mixed lubrication in line contact. *Applied Mechanics and Materials*, 2012, **148-149**, 778-784.
120. Pálfi L., Goda T., Váradi K., Garbay E., Bielsa J. M., Jiménez M.A. FE prediction of hysteretic component of rubber friction. *Advances in Tribology*, 2012, **2012**, article ID 807493.
121. Cravens S., Barrett R. M. Infra-through ultrasonic piezoelectric acoustic vector sensor particle rejection system. *Smart Materials Research*, 2012, **2012**, article ID 356190.
122. Khashaba M. I. M., Youssef M. M., Ali W. Y. Mechanism of action of lubricating greases dispersed by polymeric powders, graphite and molybdenum disulphide. *Tribologie und Schmierungstechnik (Expert Verlag)*, 2012, **59**(1), 46-50.
123. Thatte A., Salant R. F. Effects of multi-scale viscoelasticity of polymers on high-pressure, high-frequency, sealing dynamics. *Tribology International*, 2012, **52**(8), 75-86.
124. Zhang W., Yuan X., Zhang H., Ren J. Finite deformation of a class of rectangular rubber rings subjected to end axial loads. *Acta Mechanica Solida Sinica (AMSS Press, China)*, 2012, **25**(2), 144-151.
125. Mao J., Wang W., Liu Y. Experimental and theoretical investigation on the sealing performance of the combined seals for reciprocating rod. *Journal of Mechanical Science and Technology*, 2012, **26**(6), 1765-1772.
126. Mahmoud M. M. Manufacturing, testing, and modeling of copper foams. *Global Journal of Pure and Applied Science and Technology*, 2012, **2**(3), 5-13.
127. Yang A.-S., Wen C.-Y., Tseng C.-S., Weng M.-C. Parametric study of helix configuration in ribbed lip seal. *Tribology International*, 2012, **53**, 98-107.

128. **Bombard A. J. F., de Vicente J.** Thin-film rheology and tribology of magnetorheological fluids in isoviscous-EHL contacts. *Tribology Letters*, 2012, **47**(1), 149-162.
129. **Crudu M., Fatu A., Cananau S., Hajjam M., Pascu A., Cristescu C.** A numerical and experimental friction analysis of reciprocating hydraulic 'U' rod seals. *Journal of Engineering Tribology*, 2012, **226**(9), 785-794.
130. **Olofsson J., Jacobson S.** The influence of grain size and surface treatment on the tribofilm formation on alumina components. *Wear*, 2012, **292-293**, 17-24.
131. **More F., Sainsot P., le Chenadec Y., Lubrecht A. A.** Lubrication of 2D soft elastohydrodynamic contacts: Extension of the amplitude reduction theory. *Journal of Engineering Tribology*, 2012, **226**(9), 769-774.
132. **Wu Q., Suo S., Liao C., Huang W., Liu X.** Experimental study of reciprocating sealing performance of nitrile rubber O-ring. *Lubrication Engineering (Chinese)*, 2012, **37**(2), 29-33.
133. **Hasouna A. T., Samy A.-H. M., Ali W. Y.** Influence of solid lubricants on reducing friction and wear caused by sand contaminating greases. *Tribologie und Schmierungstechnik*, 2012, **59**(2), 42-47.
134. **Fox-Rabinovich G. S., Yamamoto K., Beake B. D., Gershman I. S., Kovalev A. I., Veldhuis S. C., Aguirre M. H., Dosbaeva G., Endrino J. L.** Hierarchical adaptive nanostructured PVD coatings for extreme tribological applications: the quest for nonequilibrium states and emergent behavior. *Science and Technology of Advanced Materials*, 2012, **13**(4), 1-26.
135. **Wang W., Liu X. J., Liu K.** FEM analysis of multibody interaction process in three body friction geometry with rough surface. *Tribology – Materials, Surfaces and Interfaces*, 2012, **6**(2), 59-66.
136. **Ouma A. B., Nam J., Seok L. H., Hawong J. S.** A study on the contact stresses of square ring under uniform squeeze rate and internal pressure by photoelastic experimental hybrid method. *Journal of Mechanical Science and Technology*, 2012, **26**(8), 2617-2626.
137. **Wiśniewska-Weinert H. M.** Composites with grapheme-like sulphide nanoparticles. *Open Access Library*, 2012, **9**(15), 1-184.
138. **Xie X.-P., Peng C.-L., Chen S.-L.** Numerical analysis of influence of solid particles on elastohydrodynamic line contacts under grease lubrication. *Huanan Ligong Daxue Xuebao / Journal of South China University of Technology (Natural Science)*, 2012, **40**(7), 51-56.
139. **Pinedo B., Conte M., Aguirrebeitia J., Igartua A.** Effect of misalignment on rod lip seal behaviour. *WIT Transactions on Engineering Sciences*, 2012, **76**, 151-161.
140. **Zhang F., Wang S., Zhang Q.** Two solutions comparison of seal performance of reciprocating rectangular seal. *Lubrication Engineering (Chinese; ISSN: 0254-0150)*, 2012, **37**(10), 26-29.
141. **Xie L., Kong J., Jiang G., Li G., Zhao L.** Optimization design of vane structure for a RVA. *Machinery Design & Manufacture (Chinese; ISSN: 1001-3997)*, 2012, issue 8, 200-201.
142. **Liette J., Dreyer J., Singh R.** Dynamic characterization of the rectangular piston seal in a disk-caliper braking system using analytical and experimental methods. *Journal of Automobile Engineering*, 2012, **226**(12), 1613-1629.
143. **Dobrzhinsky N., Krugly E., Kliucininkas L., Prasauskas T., Kireitseu M., Zerrath A., Martuzevicius D.** Characterization of desert road dust aerosol from provinces of Afghanistan and Iraq. *Aerosol and Air Quality Research*, 2012, **12**(6), 1209-1216.
144. **Jiang G., Zhao L., Kong J., Li G., Xie L.** Finite element analysis of vane seals. *Sensors and Transducers Journal*, 2012, **16** (November), 261-268.
145. **Zhang F., Zhang D., Zhang Q.** The numerical calculation for seal performance of reciprocating rectangular seal based on finite difference method. *Manufacturing Automation*, 2012, **21**, 65-68.
146. **Xie L., Kong J., Jiang G., Li G., Zhao L.** Study on the effects of the fillet of vane and vane seals to contact pressure. *Machine Tool & Hydraulics*, 2012, **4**(21) (in Chinese).
147. **Xie L., Kong J., Jiang G., Li G., Zhao L.** Effects of the initial interference of vane seals to sealed reliability. *Lubrication Engineering*, 2012, **37**(4) (in Chinese).
148. **Gao H., Li B., Du J.** Performance simulation of floating type spherical rotary vane steering gear for ship. *Machine Tool & Hydraulics*, 2012, **40**(24) (in Chinese).
149. **Guo F., Jia X., Suo S., Salant R. F., Wang Y.** A mixed lubrication model of a rotary lip seal using flow factors. *Tribology International*, 2013, **57**(1), 195-201.
150. **Li X., Peng G., Liu W.** Abrasion simulation of a reciprocating seal. *Advanced Materials Research*, 2013, **601**, 253-257.

151. Liao C., Huang W., Wang Y., Suo S., Liu Y. Fluid-solid interaction model for hydraulic reciprocating O-ring seals. *Chinese Journal of Mechanical Engineering*, 2013, **26**(1), 85-94.
152. Morris N., Rahmani R., Rahnejat H., King P. D., Fitzsimons B. The influence of piston ring geometry and topography on friction. *Journal of Engineering Tribology*, 2013, **227**(2), 141-153.
153. Grimble D. W., Theodossiades S., Rahnejat H., Wilby M. Thin film tribology of pharmaceutical elastomeric seals. *Applied Mathematical Modelling*, 2013, **37**(1-2), 406-419.
154. Wang Z., Jin X., Liu S., Keer L. M., Cao J., Wang Q. A new fast method for solving contact plasticity and its application in analysing elasto-plastic partial slip. *Mechanics of Materials*, 2013, **60**, 18-35.
155. Darji P. H., Vakharia D. P. Evaluation of contact width for elastic hollow cylinder and flat contact through experimental technique and extending the capabilities of Hertz equation. *International Journal of Surface Science and Engineering*, 2013, **7**(1), 27-50.
156. Myant C., Cann P. In contact observation of model synovial fluid lubricating mechanisms. *Tribology International*, 2013, **63**, 97-104.
157. Biboulet N., Houperit L., Lubrecht A. A., Hager C. Contact stress and rolling contact fatigue of indented contacts: Part II, rolling element bearing life calculation and experimental data of indent geometries. *Journal of Engineering Tribology*, 2013, **227**(4), 319-327.
158. Jang J., Fridrici V., Messaadi M., Kapsa P. Survival and factorial analysis of durability and friction coefficient of a solid lubricant under different working conditions. *Wear*, 2013, **302**(1-2), 998-1009.
159. Österle W., Dmitriev A. I., Orts-Gil, G., Schneider T., Ren H., Sun X. Verification of nanometre-scale modelling of tribofilm sliding behaviour. *Tribology International*, 2013, **62**, 155-162.
160. Narita Y., Yamanaka M., Kazama T., Osafune Y., Masuyama T. Simulation of rolling contact fatigue strength for traction drive elements. *Journal of Advanced Mechanical Design, Systems, and Manufacturing*, 2013, **7**(3), 432-447.
161. Zeng Z., Chen Y., Kang R. The effects of material degradation on sealing performances of O-rings. *Applied Mechanics and Materials*, 2013, **328**, 1004-1008.
162. Chen R., Peng G., Li X. Prediction of leakage based on the change of the surface topography. *Advanced Materials Research*, 2013, **712-715**, 399-402.
163. Fietkau P., Bertsche B. Influence of tribological and geometrical parameters on lubrication conditions and noise of gear transmissions. *Mechanism and Machine Theory*, 2013, **69**, 303-320.
164. Wang Z., Jin X., Keer L. M., Wang Q. Novel model for partial-slip contact involving a material with inhomogeneity. *Journal of Tribology*, 2013, **135**(4), 041401.
165. Etsion I. Modeling of surface texturing in hydrodynamic lubrication. *Friction*, 2013, **1**(3), 195-209.
166. Huang Y., Salant R. F. Simulation of the effects of a plunge-ground rod on hydraulic rod seal behaviour. *Tribology Transactions*, 2013, **56**(6), 986-996.
167. Li X., Peng G., Wang Q., Liu Y. A numerical analysis method of hydraulic seals for downhole equipments. *Advances in Mechanical Engineering*, 2013, **5**, article 151794.
168. Elhabib O. A., Ali W. Y. Developing the tribological properties of lithium greases to withstand abrasion of machine elements in dusty environment. *International Journal of Scientific and Engineering Research*, 2013, **4**(10), 1176-1181.
169. Koulocheris D., Stathis A., Costopoulos Th., Gyparakis G. Comparative study of the impact of corundum particle contaminants size on wear and fatigue life of grease lubricated ball bearings. *Modern Mechanical Engineering*, 2013, **3**, 161-170.
170. Shen Y., Zhang W.-Z., Niu D. Axial compression of a transversely isotropic incompressible rectangular rubber ring. *Advances in Theoretical and Applied Mechanics*, 2013, **6**(1), 27-32.
171. Li H., Yagi K., Sugimura J., Kajita S., Shinyoshi T. Role of wear particles in scuffing initiation. *Tribology Online*, 2013, **8**(5), 285-294.
172. Lisowski E., Hawryluk M. Modeling of hydraulic cylinder piston rod sealing. *Journal of KoNBiN*, 2013, **26**(1), 43-50.
173. Gao A., Zhang W., Yuan X. Finite deformation analysis of structures of two rectangular rubber rings subjected to axial loads. *Journal of Dalian Nationalities University*, 2013, **15**(3).

174. Wang Z., Xu Z., Liu Z., Jiang M. Research on leakage of the O-ring under the reciprocating linear sliding sealed based on ABAQUS. *Modern Manufacturing Engineering*, 2013, 9 (in Chinese).
175. Orts-Gill G., Natte K., Österle W. Multi-parametric reference nano-materials for toxicology: state of the art, future challenges and potential candidates. *RCS Advances*, 2013, 3, 18202-18215.
176. Li T., Guo X., Zhong Y., Jiang M. Influencing factors of low noise bearing greases. *Synthetic Lubricants* (Chinese), 2013, 40(1), 13-15.
177. Salant R. F., Huang Y. EHL simulation of the effects of the rod surface on hydraulic rod seal operation. *Hydraulika I Pneumatyka*, 2013, 3, 23-26.
178. Zhang F. Y., Li T., Zhang H. C. Study on the efficiency-reinforcement design for elastomeric hydraulic reciprocating sealing based on QFD/TRIZ. *Materials Science Forum*, 2014, 770, 312-315.
179. Yao J., Jiao Z., Ma D., Yan L. High-accuracy tracking control of hydraulic rotary actuators with modeling uncertainties. *IEEE/ASME Transactions on Mechatronics*, 2014, 19(2), 633-641.
180. Gong R., Chen Y., Che H., Zhu M. Multiscale simulation of sliding contacts between two rough sealing surfaces. *Journal of Engineering Tribology*, 2014, 228(3), 339-351.
181. Tan G.-B., Wang D.-G., Liu S.-H., Zhang S.-W. Probing tribological properties of waxy oil in pipeline pigging with fluorescence technique. *Tribology International*, 2014, 71, 26-37.
182. Wang W., Gu W., Liu K., Wang F., Tang Z. DEM simulation on the start-up dynamic process of a plain journal bearing lubricated by granular media. *Tribology Transactions*, 2014, 57(2), 198-205.
183. Österle W., Dmitriev A. I., Kloß H. Assessment of sliding friction of a nanostructured solid lubricant film by numerical simulation with the method of movable cellular automata (MCA). *Tribology Letters*, 2014, 54(3), 257-262.
184. Fox-Rabinovich G., Kovalev A., Aguirre M. H., Yamamoto K., Veldhuis S., Gershman I., Rashkovskiy A., Endrino J. L., Beake B., Dosbaeva G., Wainstein D., Yuan J., Bunting J. W. Evolution of self-organization in nano-structured PVD coatings under extreme tribological conditions. *Applied Surface Science*, 2014, 297, 22-32.
185. Koulocheris D., Stathis A., Costopoulos Th., Tsantiotis D. Experimental study of the impact of grease particle contaminants on wear and fatigue life of ball bearings. *Engineering Failure Analysis*, 2014, 39, 164-180.
186. Holmberg K., Laukkanen A., Turunen E., Laitinen T. Wear resistance optimisation of composite coatings by computational microstructural modelling. *Surface & Coatings Technology*, 2014, 247, 1-13.
187. Chiñas-Castillo F., Lara-Romero J., Jiménez-Jarquín J. F. Tribological characteristics of protected silver nanoparticles in oil. *Journal of Dispersion Science and Technology*, 2014, 35(12), 1665-1674.
188. Oswald F. B., Zaretsky E. V., Poplawski J. V. Relation between residual and hoop stresses and rolling bearing fatigue life. *Tribology Transactions*, 2014, 57(4), 749-765.
189. Petrach R. V., Schall D., Zou Q., Barber G., Gu R., Guessus L. Microstructural contact mechanics finite element modelling used to study the effect of coating induced residual stresses on bearing failure mechanisms. *SAE International Journal of Materials and Manufacturing*, 2014, 7(3), doi:10.4271/2014-01-1018.
190. Pinedo B., Aguirrebeitia J., Conte M., Igartua A. Tri-dimensional eccentricity model of a rod lip seal. *Tribology Transactions*, 2014, 78, 68-74.
191. Wang Z., Jiao Z., Wang C., Shang Y. Nonlinear leakage model of rotary vane actuator. *Journal of Beijing University of Aeronautics and Astronautics*, 2014, 40(4), 486-493.
192. Oswald F., Zaretsky E. V., Poplawski J. Effect of roller geometry on roller-bearing load-life relation. *Tribology Transactions*, 2014, 57(5), 928-938.
193. Yao J., Jiao Z., Ma D. Extended-state-observer-based output feedback nonlinear robust control of hydraulic systems with backstepping. *IEEE Transactions on Industrial Electronics*, 2014, 61(11), 6285-6293.
194. Wang C.-G., Xiao J., Liu H., Liu J., Gao X., Gai C.-H. Finite element analysis of sealing performance of Glyd-ring seals. *Journal of Wuhan Institute of Technology*, 2014, 36(2), 42-48.

195. El-Thalji I., Jantunen E. A descriptive model of wear evolution in rolling bearings. *Engineering Failure Analysis*, 2014, **45**, 204-224.
196. Fox-Rabinovich G. S., Gershman I. S., El Hakim M. A., Shalaby M. A., Krzanowski J. E., Veldhuis S. C. Tribofilm formation as a result of complex interaction at the tool/chip interface during cutting. *Lubricants*, 2014, **2**(3), 113-123.
197. Bhaumik S., Kumar S. R., Kumaraswamy A. Experimental investigation and FE modelling of contact mechanics phenomenon in reciprocating hydraulic U-seals for defence applications. *Applied Mechanics and Materials*, 2014, **592**, 1950-1954.
198. Rabaso P., Dassenoy F., Ville F., Diaby M., Vacher B., Le Mogne T., Belin M., Cavoret J. An investigation on the reduced ability of IF-MoS₂ nanoparticles to reduce friction and wear in the presence of dispersants. *Tribology Letters*, 2014, **55**(3), 503-516.
199. Stathis A., Costopoulos Th., Koulocheris D., Raptis K. The adverse effect of steel particle contaminants on fatigue life of grease lubricated ball bearings. *American Journal of Applied Sciences*, 2014, **11**(9), 1530-1541.
200. Zhang F., Li T., Hong B. Theories study on efficiency-reinforcement design for elastomeric hydraulic reciprocating seals. *Lubrication Engineering (Chinese)*, 2014, **39**(1), 29-32.
201. Yoshimura K., Suzuki N., Mizuta H. Oil film formation of reciprocating seals observed by interferometry. *Tribology Online*, 2014, **9**(3), 106-112.
202. Zhu W., Wang J., Lin P. Numerical analysis and optimal design for new automotive door sealing with variable cross-section. *Finite Elements in Analysis and Design*, 2014, **91**, 115-126.
203. Kim H., Kim R.-U., Chung K.-H., Ahn J.-H., Jeon H.G., Kim B.-J. Effect of test parameters on degradation of polyurethane elastomer for accelerated life testing. *Polymer Testing*, 2014, **40**, 13-23.
204. Chen L., Fu Q., Lin G. Study on the sealing properties of the sealing structure for the rotating chamber of a certain cased telescoped ammunition gun. *Computer Modelling & New Technologies*, 2014, **18**(3), 93-97.
205. Li G., Zhao Q., Guo B., Zhao S. Sealing leakage and friction characteristics of electro-hydraulic servo swing motor. *Lubrication Engineering (Chinese)*, 2014, **39**(6), 19-23.
206. Xu M., Zhao L., Du C., Li Y., Kang S., Tang C. Study of heat generating and pumping effect of reciprocating seals. *Lubrication Engineering (Chinese)*, 2014, **39**(9), 57-62.
207. Hu Z.-X., Jiang J.-H., Liu Q. The advantages and key technologies of direct drive volume rotary vane steering gear. *Chinese Hydraulics & Pneumatics*, 2014, issue 9, 1-11.
208. Amiri M., Modarres M. An entropy-based damage characterization. *Entropy*, 2014, **16**, 6434-6463.
209. He G., Tan Y., Hong W., Ning Z. Researching the sealing performance of the rectangular rubber seals based on the FEA. *Hydraulics Pneumatics & Seals (Chinese)*, 2014, issue 7, 35-37.
210. Senthil P. V., Mirudhuneika V. S., Shirrushti A. Predictive maintenance model development using life prediction methodology. *IRACST – Engineering Science and Technology: An International Journal*, 2014, **4**(3), 102-111.
211. Stathis A., Koulocheris D., Costopoulos T., Spitas V. The impact of particle contaminants' hardness on the wear mechanism of rolling element bearings. *International Journal of Mechanical and Electrical Engineering*, 2014, **1**(1), 10-19.
212. Liu Q., Wang Z., Lou Y., Suo Z. Elastic leak of a seal. *Extreme Mechanics Letters*, 2014, **1**, 54-61.
213. Kim H., Ye Y., Kim L. U., Chung K. H., An J. H., Jeon H. G. Accelerated life testing for polyurethane hydraulic reciprocating seal. *Journal of The Korean Society of Tribologists and Lubrication Engineers*, 2014, **10**, 175-176.
214. Je Y., Kim H., Kim L.-W., Chung K.-H., An J.-H., Jeon H.-G. Component and bench tests of polyurethane hydraulic reciprocating seal for accelerated life testing. *Journal of The Korean Society of Tribologists and Lubrication Engineers*, 2014, **30**(5), 271-277.
215. Xie L., Tian Z., Qian W., Chen S., Li L. Static seal design of a hydraulic rotary vane actuator. *Lubrication Engineering (Chinese)*, 2014, issue 11, 78-80.
216. Moosavian A., Najafi G., Ghobadian B., Agha Mirsalim S.M., Jafari S.M., Mehrabivaghar M. Experimental study of piston scuffing effect on engine performance parameters. *Journal of Simulation and Analysis of Novel Technologies in Mechanical Engineering (Iranian)*, 2014, **7**(1), 15-25.

217. Deaconescu T., Deaconescu A. Film thickness in coaxial sealing systems of hydraulic cylinder rods. *Journal of the Balkan Tribological Association*, 2014, **20**(3), 447-462.
218. Oswald F. B., Savage M., Zaretsky E. V. Space shuttle rudder/speed brake actuator – A case study. Probabilistic fatigue life and reliability analysis. *Tribology Transactions*, 2015, **58**(1), 186-196.
219. Li X., Peng G., Liu W., Li Z. Research on dynamic simulation method of leakage prediction of hydraulic system. *Journal of Mechanical Engineering Science*, 2015, **229**(4), 771-786.
220. Cui G., Li J., Wu G. Friction and wear behaviour of bronze matrix composites for seal in antiwear hydraulic oil. *Tribology Transactions*, 2015, **58**(1), 51-58.
221. Li S., Niu W., Li H., Fu S. Numerical analysis of leakage of elastomeric seals for reciprocating circular motion. *Tribology International*, 2015, **83**, 21-32.
222. Ji H., Nie S., Huang Y. An interval-fuzzy two-stage stochastic programming method for filter management of hydraulic systems. *Journal of Mechanical Engineering Science*, 2015, **229**(15), 2788-2809.
223. Han S., Jiao Z., Wang C., Shang Y. Fuzzy robust nonlinear control approach for electro-hydraulic flight motion simulator. *Chinese Journal of Aeronautics*, 2015, **28**(1), 294-304.
224. Urbaniak W., Kaldonski T., Hagner-Derengowska M., Kaldonski T. J., Madhani J. T., Kruszewski Z., Pawlak Z. Impregnated porous bearings textured with a pocket on sliding surfaces: comparison of h-boron nitride with graphite and molybdenum disulphide up to 150 °C. *Meccanica*, 2015, **50**(5), 1343-1349.
225. Gong R., Zhou C., Che H., Zhu M., Xu X. Analytical and experimental study on the sliding contact of the sealing ring in the wet clutch. *Journal of Automobile Engineering*, 2015, **229**(12), 1628-1637.
226. Xiao N., Khonsari M. M. Improving bearings thermal and tribological performance with built-in heat pipe. *Tribology Letters*, 2015, **57**(3), 31-42.
227. Kenneally B., Musimbi O. M., Wang J., Mooney M. A. Finite element analysis of vibratory roller response on layered soil systems. *Computers and Geotechnics*, 2015, **67**, 73-82.
228. Gao H., Li B., Fu X., Yang G. A strongly coupled fluid structure interaction solution for transient soft elastohydrodynamic lubrication problems in reciprocating rod seals based on a combined moving mesh method. *Journal of Tribology*, 2015, **137**(4), 041501 (13 pages).
229. Kazama T. Comparison of temperature measurements and thermal characteristics of hydraulic piston, vane, and gear pumps. *Mechanical Engineering Journal* (The Japan Society of Mechanical Engineers), 2015, **2**(3), paper 14-00542.
230. Tuominen J., Näkki J., Pajukoski H., Miettinen J., Peltola T., Vuoristo P. Wear and corrosion resistant laser coatings for hydraulic piston rods. *Journal of Laser Applications*, 2015, **27**(2), 022009-1 – 022009-12.
231. Xie L., Li L., Jiang G., Li G. Numerical study of the contact pressure of window-type vane seals: Part I. *Sealing Technology*, 2015, **2015**(3), 7-12.
232. Gong R., Zhang H., Che H.-J., Xu Y. Numerical simulation and comparative analysis of microscopic frictional behavior of composite sealing ring. *Acta Armamentarii*, 2015, **36**(3), 421-426.
233. Zhu A., Li P., Zhang Y., Chen W., Yuan X. Influence of particles on the loading capacity and the temperature rise of water film in ultra-high speed hybrid bearing. *Chinese Journal of Mechanical Engineering*, 2015, **28**(3), 541-548.
234. Li F., Chen H., Mao K. Computational simulation analysis for torus radius of edge contact in hip prostheses. *Acta of Bioengineering and Biomechanics*, 2015, **17**(3), 67-73.
235. Rodrigues A. C. P., Ribeiro P. J. N., Österle W., Azevedo C. R. F. Failure analysis as a tool to optimize the design of a ring on disc tribotest investigating the role of surface roughness. *Engineering Failure Analysis*, 2015, **56**, 131-141.
236. Bouchireb A., Sari M. R. Effect of solid particles on gear tooth failure. *Journal of Central South University*, 2015, **22**(5), 1667-1675.
237. Gupta P. K., Oswald F. B., Zaretsky E. V. Comparison of models for ball bearing dynamic capacity and life. *Tribology Transactions*, 2015, **58**(6), 1039-1053.
238. Xiong Q., Wang W., Jia W., Liu K. Experimental study on the interfacial characteristics in multi-body plane contact friction process. *Yingyong Lixue Xuebao/Chinese Journal of Applied Mechanics*, 2015, **32**(2), 226-232.

239. **Bhaumik S., Kumaraswamy A., Guruprasad S., Bhandari P.** Study of effect of seal profile on tribological characteristics of reciprocating hydraulic seals. *Tribology in Industry*, 2015, **37**(2), 264-274.
240. **Wang B., Wang C., Fu J.** Strength analysis of hydraulic rotary vane actuators based on ANSYS workbench. *Machine Tool & Hydraulics* (Chinese), 2015, issue 7, 168-171.
241. **Zhang F., Zhao L., Li J.** Effect of surface roughness on dynamic sealing performance of rectangular elastomeric seals. *Lubrication Engineering* (Chinese), 2015, issue 4, 30-34.
242. **Feng M., Chen X.** Study of a new supersonic plasma sprayed WC coating equipment. *Technical Supervision in Water Resources* (Chinese), 2015, issue 1, 27-29.
243. **Bhaumik S., Nyamagoudar V.** A review on tribological characteristics of reciprocating hydraulic seals. *International Journal of Applied Engineering Research*, 2015, **10**(9), 23479-23512.
244. **Abdel-Jaber G. T.** Tribological properties of epoxy composites filled by oil and reinforced by polyamide and polyester fibres. *International Journal of Mechanical and Mechatronics Engineering*, 2015, **15**(3), 119-130.
245. **Yuan S.-H., Xin Y., Wu W.** Investigation on automatic-power ratio change mechanism of cone-ring traction drive. *Beijing University of Technology* (Natural Science), 2015, **35**(5), 461-466.
246. **Ma W., Zhu Z. C., Peng Y. X., Chen G. A.** Tribological properties of a new kind of friction-promoting grease in sliding point contacts. *Transactions of the Canadian Society for Mechanical Engineering*, 2015, **39**(2), 221-237.
247. **Huang Y., Salant R. F.** Numerical analysis of a hydraulic rod seal: flooded Vs. starved conditions. *Tribology International*, 2015, **92**, 577-584.
248. **Wu C.-G., Suo S.-F., Huang L., Guo F.** Lip contact stress analysis of aircraft actuator VL seal. *Hydraulics Pneumatics & Seals*, 2015, issue 7, 18-21.
249. **Ouyang X.-P., Xue Z.-Q., Peng C., Zhou Q.-H., Yang H.-Y.** Performance analysis on VL seal in aircraft cylinder. *Journal of Zhejiang University (Engineering Science)*, 2015, **49**(9), 1755-1761.
250. **Huang X.-B., Wang Y.-Q.** The effects of solid-liquid two phase flow on thermal elastohydrodynamic lubrication of spur gears in running-in period. *Tribology* (Chinese), 2015, **35**(5), 574-582.
251. **Rezavoltani A., Khonsari M. M.** Reply to comment by Chung on "On the correlation between mechanical degradation of lubricating grease and entropy". *Tribology Letters*, 2015, **60**, article 14.
252. **Wang X., Wang Y., Zhao X., Li X.** Analysis and research of teeth thermodynamic coupling contact of gear transmission system. *Coupled Systems Mechanics*, 2015, **4**(3), 237-249.
253. **Bhaumik S., Kumaraswamy A., Guruprasad S., Bhandari P.** Investigation of friction in rectangular Nitrile-Butadiene Rubber (NBR) hydraulic rod seals for defence applications. *Journal of Mechanical Science and Technology*, 2015, **29**(11), 4793-4799.
254. **Alami A. H., Bilal H.** Modelling and verification of an acrylic adhesive as a hyperelastic material. *Advances in Materials and Processing Technologies*, 2015, **1**(1-2), 1-12.
255. **Jia X., Li K.** Research on sealing characteristics of sealing system utilizing spring energized seal ring. *Lubrication Engineering* (Chinese), 2015, **40**(12), 116-120.
256. **Meng X.-Q., Qi Y.-X., Fu M.** Theory study and numerical simulation on linear compressor offset of the cryogenic refrigerator. *Fluid Machinery* (Chinese), 2015, **43**(10), 21-26.
257. **Huang X., Wang Y., Liu Q., Dong N.** Elastohydrodynamic lubrication analysis of spur gear running-in considering effects of solid particles and time-variant effect. *Machine Design and Research* (Chinese), 2015, **31**(6), 39-43.
258. **Fu J., Shi N.** Contact and impact load analysis of hydraulic rotary vane actuators. *Modern Manufacturing Technology and Equipment* (Chinese), 2016, issue 1, 17-22.
259. **Peng C.-L., Wang C., Xiao M.** Effects of surface dent on film characteristic of point contact under grease lubricated. *Machinery Design & Manufacture* (Chinese), 2016, issue 2, 73-75.
260. **Huang L., Jia X., Guo F., Huang X., Zhang H.** Numerical simulation platform of rubber and plastic seal based on Matlab GUI. *Lubrication Engineering* (Chinese), 2016, **41**(2), 107-111.
261. **Wu C.-G., Suo S.-F., Zhang K.-H.** Aircraft actuator VL seal finite element analysis based on Abaqus. *Chinese Hydraulics & Pneumatics*, 2016, **0**(01), 60-65.

262. **Bhaumik S., Kumaraswamy A., Guruprasad S.** Enhancement of seal life through carbon composite back-up rings under shock loading conditions in defence applications. *Defence Technology*, 2016, **12**(1), 39-45.
263. **Urbaniak W., Kaldonski T., Kaldonski T. J., Pawlak Z.** Hexagonal boron nitride as a component of the iron porous bearing: friction on the porous sinters up to 150 °C. *Meccanica*, 2016, **51**(5), 1157-1165.
264. **Yan H., Zhao Y., Liu J., Jiang H.** Analyses toward the factors influencing the sealing clearance of a metal rubber seal and the derivation of a calculation formula. *Chinese Journal of Aeronautics*, 2016, **29**(1), 292-296.
265. **Strozzi A., Bertocchi E., Mantovani S., Giacopini M., Baldini A.** Analytical evaluation of the peak contact pressure in a rectangular elastomeric seal with rounded edges. *Journal of Strain Analysis*, 2016, **51**(4), 304-317.
266. **Ai X., Hager C.** Forensic analysis of surface indentations in rolling contact. *Journal of Tribology*, 2016, **138**(1), 011101 (11 pages).
267. **Goda T. J.** Effect of track roughness generated micro-hysteresis on rubber friction in case of (apparently) smooth surfaces. *Tribology International*, 2016, **93** (part A), 142-150.
268. **Shen M.-X., Peng X.-D., Meng X.-K., Zheng J.-P., Zhu M.-H.** Fretting wear behaviour of acrylonitrile-butadiene rubber (NBR) for mechanical seal applications. *Tribology International*, 2016, **93** (part A), 419-428.
269. **Tan G.-B., Liu S.-H., Wang D.-G., Zhang S.-W.** Measurement and analysis of wax-oil gel scraping process at contact area under pure sliding conditions. *Measurement: Journal of the International Measurement Confederation*, 2016, **80**, 29-43.
270. **Strubel V., Fillot N., Ville F., Cavoret J., Vergne P., Mondelin A., Maheo Y.** Particle entrapment in hybrid lubricated point contacts. *Tribology Transactions*, 2016, **59**(4), 768-779.
271. **Kumar R. V. R., Sagar V. V., Vishnuram P., Prasanth N. H.** Optimization of hydraulic oil seal in earth movers. *International Journal of Science and Research*, 2016, **5**(2), 2156-2162.
272. **Zhang X. A., Zhao Y., Ma K., Wang Q.** Friction behaviour and wear protection ability of selected base lubricants. *Friction*, 2016, **4**(1), 72-83.
273. **Gong R., Zhang H., Che H., Zhu M., Xu Y.** A microscale mesh numerical method for simulating tribological characteristics of sealing materials. *International Journal for Numerical Methods in Engineering*, 2016, **108**(10), 1159-1173.
274. **Ouyang X., Xue Z., Peng C., Guo S., Zhou Q., Yang H.** Analysis on aircraft cylinder seal property based on mixed lubrication theory. *Journal of Beijing University of Aeronautics and Astronautics*, 2016, **42**(2), 251-257.
275. **Morales Espejel G. E., Gabelli A.** Particle entrapment and indentation process in rolling bearings. *Journal of Engineering Tribology*, 2016, **230**(12), 1572-1587.
276. **Ramachadran R., Kozhukhova M., Sobolev K., Nosonovsky M.** Anti-icing superhydrophobic surfaces: controlling entropic molecular interactions to design novel icephobic concrete. *Entropy*, 2016, **18**(4), No. 132.
277. **Huang X.-B., Wang Y.-Q.** Transient thermal elasto-hydrodynamic lubrication of spur gears in running-in process considering solid particles and surface roughness. *Jisuan Lixue Xuebao/Chinese Journal of Computational Mechanics*, 2016, **33**(2), 238-244.
278. **Shin D.-C., Nam J.-H., Kim D.-W.** Experimental interior stress fields of a constantly squeezed O-ring modeling from hybrid transmission photoelasticity. *Experimental Techniques*, 2016, **40**(1), 59-72.
279. **Kovalev A. I., Rashkovskiy A. Y., Fox-Rabinovich G. S., Veldhuis S., Beake B. D.** Regularities of tribooxidation and damageability at the early stage of wear of single-layer (TiAlCrSiY)N and multilayer (TiAlCrSiY)N/(TiAlCr)N coatings in the case of high-speed cutting. *Protection of Metals and Physical Chemistry of Surfaces*, 2016, **52**(3), 517-525.
280. **Li X., Peng G.** Research on leakage prediction calculation method for static seal ring in underground equipments. *Journal of Mechanical Science and Technology*, 2016, **30**(6), 2635-2641.
281. **You J. C., Lin J. D., Xu D. F., Hao W. Y.** Contact analysis of silicone rubber rectangular ring in the automatic tighten assembly. *Manufacturing Technology*, 2016, **16**(3), 648-653.

282. Gong R., Zhang H., Xu Y., Che H., Zhang S. A simulation on the microscope wear state of composite sealing ring based on cellular automata method. *Automotive Engineering*, 2016, **38**(5), 626-631 and 645.
283. Li L., Zhang F., Tao J., Liu C. Analysis for fracture of O-ring in Hang hydraulic cylinder of TBM based on fracture mechanics. *China Mechanical Engineering*, 2016, **27**(12), 1563-1567.
284. Akbarzadeh S., Khonsari M. M. On the applicability of Miner's rule to adhesive wear. *Tribology Letters*, 2016, **63**(2), article 29.
285. Mitrovic R. M., Miskovic Z. Z., Djukic M. B., Bakic G. M. Statistical correlation between vibration characteristics, surface temperatures and service life of rolling bearings – artificially contaminated by open pit coal mine debris particles. *Procedia Structural Integrity*, 2016, **2**, 2338-2346.
286. Fox-Rabinovich G., Paiva J. M., Gershman I., Aramesh M., Cavelli D., Yamamoto K., Dosbaeva G., Veldhuis S. Control of self-organized criticality through adaptive behavior of nano-structured thin film coatings. *Entropy*, 2016, **18**(8), No. 290.
287. Yang B., Wang W., Liu K., Liu Y. Observation and analysis of micro-behavior characteristics and element contents during boundary layer evolution under powder particulate lubrication. *Tribology Letters*, 2016, **64**(1), paper 2.
288. Zhang X., Wang G., Xia P., Li H.-P., He M. Finite element analysis and experimental study on contact pressure of hydraulic support bud-shaped composite sealing ring. *Advances in Mechanical Engineering*, 2016, **8**(10), 1-9.
289. Wang X., Wang Y., Zhao X., Deng G., Meng X. Research and analysis of teeth thermodynamic coupling contact of warship power rear gear transmission system. *Journal of Theoretical and Computational Nanoscience*, 2016, **13**(7), 4347-4352.
290. Guo H., Zhang X., Li W., Gao X. Research and analysis of self-operated sealing of O-ring based on ABAQUS. *Journal of Shenyang Jianzhu University (Natural Science)*, 2016, **32**(5), 904-913.
291. Peng C.-L., Xie X.-P., Li G.-L., Li X.-L. Experiment on influence of impurity particles on wheel hub bearing grease. *Journal of Chang'an University (Natural Science Edition)*, 2016, **36**(3), 111-117.
292. Lin W., Huang W., Guo J., Zhang M. Reliability-based robust design for flange based on OSAM and SORM. *Journal of Computational Methods in Sciences and Engineering*, 2016, **16**(4), 943-953.
293. Bryant M. D. On constitutive relations for friction from thermodynamics and dynamics. *Journal of Tribology*, 2016, **138**(4), article 041603.
294. Huang X., Wang Y., Liu Q., Dong N. Influence of solid particles on transient thermal elastohydrodynamic lubrication of spur gears. *Journal of Hefei University of Technology (Natural Science)*, 2016, issue 11, 1456-1463.
295. Yang J., Suo S.-F., Wu C.-G. Parametric analysis of the reciprocating sealing structure for aircraft actuator. *Hydraulics Pneumatics & Seals*, 2016, **36**(8), 58-61.
296. Xu N., Dong Y.-L. A model on thermoelastohydrodynamic performances of a combined seal. *Machine Tool & Hydraulics*, 2016, No. 12, 1-6.
297. He X., Liao W., Wang G., Zhong L., Jiang L. Influences of edges bulge of texture on tribological performances of plunger-seal pair in fracturing pump. *Lubrication Engineering (Chinese)*, 2016, **41**(7), 96-101.
298. Huang X., Wang Y., Liu Q., Dong N. Influence of microscopic particle flow on thermal elastohydrodynamic lubrication of spur gear. *Journal of Mechanical Transmission*, 2016, No. 6, 23-26.
299. Verbelen F., Derammelaere S., Sergeant P., Stockman K. Half toroidal continuously variable transmission: trade-off between dynamics of ratio variation and efficiency. *Mechanism and Machine Theory*, 2017, **107**(1), 183-196.
300. Ng F., Harding J. A., Glass J. Improving hydraulic excavator performance through in line hydraulic oil contamination monitoring. *Mechanical Systems and Signal Processing*, 2017, **83**, 176-193.
301. Wang Z., Chen C., Liu Q., Lou Y., Suo Z. Extrusion, slide and rupture of an elastomeric seal. *Journal of the Mechanics and Physics of Solids*, 2017, **99**, 289-303.

302. Chang J., Wang W., Zhao M., Liu K. Experimental study and simulation analysis on friction behavior of a mechanical surface sliding on hard particles. *Journal of Engineering Tribology*, 2017, **231**(10), 1371-1379.
303. Zaretsky E.V., Branzai E.V. Rolling bearing service life based on probable cause for removal – a tutorial. *Tribology Transactions*, 2017, **60**(2), 300-312.
304. Strubel V., Fillot N., Ville F., Cavoret J., Vergne P., Mondelin A., Maheo Y. Particle entrapment in rolling element bearings: the effect of ellipticity, nature of materials, and sliding. *Tribology Transactions*, 2017, **60**(2), 373-382.
305. Sosnovskiy L. A., Sherbakov S. S. A model of mechanothermodynamic entropy in tribology. *Entropy*, 2017, **19**(3), No. 115.
306. Wu Y., Fu L., Chen X., Zhou X., Mao P., Ma H. Study of hydraulic mechanical erosion resistant coatings sprayed by supersonic plasma spraying. *Gongneng Cailiao/Journal of Functional Materials*, 2017, **48**(2), 02001-02004.
307. Solanki M. T., Vakharia D. Extending Hertz equation for an elastic contact between a layered cylindrical hollow roller and a flat plate through an experimental technique. *Industrial Lubrication and Tribology*, 2017, **69**(2), DOI: 10.1108/ILT-04-2016-0080.
308. Morris N., Mohammadpour M., Rahmani R., Rahnejat H. Optimisation of the piston compression ring for improved energy efficiency of high performance race engines. *Journal of Automobile Engineering*, 2017, **231**(13), 1806-1817.
309. Yu R., Chen W. Research progress and prospect of surface texturing in industrial tribology. *Journal of Mechanical Engineering (Chinese)*, 2017, **53**(3), 101-110.
310. Ma J., Xia Y., Feng X., Sun P. Study on lubrication of the leaf-surface wax of spruce from different regional. *Journal of Mechanical Engineering (Chinese)*, 2017, **53**(3), 130-137.
311. Zhou J.-Q., Yang Z.-J., Zhou L.-Q. The effect of axial vibration on glyd-ring seal leakage. *Computer Simulation (Chinese)*, 2017, **34**(2), 293-298.
312. Xia Y., Zhang H., Luo C., Jin Y., Zheng L., Yu H. Sealing performance research of DAS composition seal ring. *Journal of Central South University (Science and Technology) (Chinese)*, 2017, **48**(1), 91-98.
313. Zhao D., Lv Y., Zhang Q. Simulation analysis of shock absorber lip seal. *International Journal of Recent Trends in Engineering & Research*, 2017, **3**(3), 253-259.
314. Chang Z., Jia Q., Yuan X., Chen Y. Main failure mode of oil-air lubricated rolling bearing installed in high-speed machining. *Tribology International*, 2017, **112**, 68-74.
315. Bhagat M. K., Kumar P. Estimation and correlation developed for viscosity of lubricating oil using Fourier transform infrared spectroscopy. *International Journal of Science and Research*, 2017, **6**(4), 784-789.
316. Zhou C., Yin S., Zhao J., Yao Q., Dong W.-T., Li P. New type sealing structure design for hydraulic reciprocating plunger pump. *Chinese Hydraulics & Pneumatics*, 2017, issue 5, 55-61.
317. Eman A., Nabhan A., Nouby M., Abd El Jaber G. T. Influence of adding contaminants particles to lithium grease on the frictional coefficient. *Journal of the Egyptian Society of Tribology – EGTRIB*, 2017, **14**(1).
318. Rudas J. S., Gomez L. M., Toro A., Gutiérrez J. M., Corz A. Wear rate and entropy generation sources in a Ti6Al4V – WC/10Co sliding pair. *Journal of Tribology*, 2017, **139**(6), 061608.
319. Zhang G., Chen G., Zhao W., Yan X., Zhang Y. An experimental test on a cryogenic high-speed hydrodynamic non-contact mechanical seal. *Tribology Letters*, 2017, **65**(3), article 80.
320. Philpot K., Glovnea R. Dynamic and tribological analysis of a toroidal continuously variable transmissions. *Journal of Engineering Tribology*, 2017, **231**(4), 453-460.
321. Huang M.-H., Pan Q., Li Y.-B., Ma P.-D., Ma J. Theoretical investigation of the viscous damping coefficient of hydraulic actuators. *Chinese Journal of Mechanical Engineering*, 2017, **30**(4), 829-842.
322. Palomares E., Nieto A. J., Morales A. L., Chicharro J. M., Pintado P. Dynamic behaviour of pneumatic linear actuators. *Mechatronics*, 2017, **45**, 37-48.
323. Xie L., Zhang X., Peng J., Wang K., Tian Z. Numerical research on vane sealing surface lubrication and friction with surface roughness considered. *Journal of Wuhan University of Science and Technology*, 2017, **40**(3), 209-212.

324. **Zhu Z., Jiang L., Guo C., Cheng W.** Design and sealing performance analysis of a door-shaped sealing structure of hydraulic swing vane cylinder. *Lubrication Engineering*, 2017, issue 5, 102-108.
325. **Gupta P. K., Zaretsky E. V.** New stress based fatigued life models for ball and roller bearings. *Tribology Transactions*, 2017, DOI: 10.1080/10402004.2017.1319524; in press.
326. **Matsuzaki Y., Yagi K., Sugimura J.** In-situ fast and long observation system for friction surfaces during scuffing of steel. *Wear*, 2017, **386-387**, 165-172.
327. **Zhu X., Jing Y.** Analysis of main influence factors for slip ring combined rotating seals based on 3D contact. *China Mechanical Engineering*, 2017, **28**(13), 1548-1553.
328. **Pinedo B., Conte M., Aguirrebeitia J., Igartua A.** Effect of misalignments on the tribological performance of elastomeric rod lip seals: study methodology and case study. *Tribology International*, 2017, **116**, 9-18.
329. **Wen D., Shang X., Gu P., Pan W., Shi Z., Zheng W.** Analysis of leakage and volumetric efficiency and seal improvement for double-stator swing hydraulic motor. *Transactions of the Chinese Society of Agricultural Engineering*, 2017, **33**(12), 74-81.
330. **Yang Z.-J., Bao J., Zhou J.-Q., Li J.** Influence of vibration on the sealing performance of glyd-ring. *Fluid Machinery*, 2017, **45**, No. 540(6), 38-43.
331. **Ahmed Y. S., Paiva J. M., Covelli D., Veldhuis S. C.** Investigation of coated cutting tool performance during machining of super duplex stainless steels through 3D wear evaluations. *Coatings*, 2017, **7**(8), article 127.
332. **Bae J., Chung K.-H.** Accelerated wear testing of polyurethane hydraulic seal. *Polymer Testing*, 2017, **63**, October issue, 110-117.
333. **Gui P., Mao M., Chen Y.-J., Guo J.-J., Gao X.-D., Ning D.** Calculation and simulation of leakage of stepseals in main piston of hydro-pneumatic springs. *Acta Armamentarii*, 2017, **38**(7), 1255-1262.
334. **Wegener K., Mayr J., Merklein M., Behrens B.-A., Aoyama T., Sulitka M., Fleischer J., Groche P., Kaftanoglu B., Jochum N., Möhring H.-C.** Fluid elements in machine tools. *CIRP Annals – Manufacturing Technology*, 2017, **66**, 611-634.
335. **Bataille C., Deltombe R., Jourani A., Bigerelle M.** Joint properties of a tool machining process to guarantee fluid-proof abilities. *Surface Topography: Metrology and Properties*, 2017, **5**(4), article 045002.
336. **Wang J.-X.** Research on the tightness of marine steering gear based on digital servo stepping hydraulic cylinder. *Ship Science and Technology*, 2017, **18**, 85-87.
337. **Mišković Ž., Mitrović R., Maksimović V., Milivojević A.** Analysis and prediction of vibrations of ball bearings contaminated by open pit coal mine debris particles. *Tehnički vjesnik*, 2017, **24**(6), 1941-1950.
338. **Peng C., Ouyang X., Zhu Y., Guo S., Zhou Q., Yang H.** Investigation into the influence of stretching on reciprocating rod seals based on a novel 3-D model vs axisymmetric model. *Tribology International*, 2018, **117**, January issue, 1-14.
339. **ElGadari M., Hajjam M.** Effect of the grooved rod on the friction force of U-cup hydraulic rod seal with rough lip. *Tribology Transactions*, 2018, DOI: 10.1080/10402004.2017.1388457; in press.
340. **Frick A., Spadaro M.** Mold design for the assembly injection molding of a solid housing with integrated dynamic seal. *Polymer Engineering & Science*, 2018, **58**(4), 545-551.
341. **McKee M., Gordaninejad F.** Reciprocating shaft seals for high-temperature and high-pressure applications: a review. *Journal of Tribology*, 2018, **140**(3), article 032202.
342. **Bhaumik S., Maggirwar R., Datta S., Pathak S. d.** Analyses of anti-wear and extreme pressure properties of castor oil with zinc oxide nano friction modifiers. *Applied Surface Science*, 2018, DOI: 10.1016/j.apsusc.2017.12.131; in press.
343. **Valtonen K., Keltamäki K., Kuokkala V.-T.** High-stress abrasion of wear resistant steels in the cutting edges of loader buckets. *Tribology International*, 2018, **119**, 707-720.
344. **Wang, Y., Shen, H., Zhang, X., Zhang, B., Liu, J., Li X.** Semi-analytical study of microscopic two-dimensional partial slip contact problem with the framework of couple stress elasticity: cylindrical indenter. *International Journal of Solids and Structures*, 2018, **138**, 76-86.

345. Wang C., Wang W., Liu Y., Liu K. Micro morphological observation and mechanism analysis of boundary layer evolution in mixed powder lubrication. *Lubrication Science*, 2018, **30**(3), 91-101.
346. Li X., Suo S., Guo F., Wu C., Jia X. A study of reciprocating seals with a new mixed-lubrication model based on inverse lubrication theory. *Lubrication Science*, 2018, **30**(3), 126-136.
347. Dhodmise A., Salunke P. V. Effect of particulate grease contaminants on life cycle of foundry working ball bearings: - A review. *International Journal of Advanced in Management, Technology and Engineering Sciences*, 2018, **8**(1), 237-243.
348. Wang J.-Y., Huo L.-Q., Zhang Q.-F. Analysis of combined sealing structure of rotary vane actuator. *Chinese Hydraulics & Pneumatics*, 2018, issue 1, 40-45.
349. Wang B., Peng X., Meng X. Analysis of sealing performance of a hydraulic glyd-ring seal based on soft EHL model. *Tribology*, 2018, **38**(1), 75-83.
350. Grandin M., Wiklund U. Wear phenomena and tribofilm formation of copper/copper-graphite sliding electrical contact materials. *Wear*, 2018, **398-399**, 227-235.
351. Yin Y., Rakheja S., Yang J., Boileau P.-E. Effect of articulated frame steering on the transient yaw responses of the vehicle. *Journal of Automobile Engineering*, 2018, **232**(3), 384-399.
352. Cakir F. H., Sert A., Celik O. N., Dereoglu N. Maintenance error detection procedure and a case study of failure analysis locomotive Diesel engine bearings. *Journal of Failure Analysis and Prevention*, 2018, **18**(2), 356-363.
353. Sui T., Song B., Zhang F., Chen Y., Yan S., Wang A., Ding M. The flow characteristics of solid particles used as additives for lubricants in the point contact area. *RCS Advances*, 2018, **8**, 9457-9461.
354. Liu X., Ma M., Yang P., Guo F. A new method for Eyring shear-thinning models in elliptical contacts thermal EHL. *Journal of Tribology*, 2018, DOI:10.1115/1.4039552; in press.
355. Lei Y., Xie L., Han Q., Wu Y. Modeling and simulation of end-seal of rotary vane actuator in static sealing condition. *Lubrication Engineering*, 2018, No. 2, 60-64.
356. Que G., Peng X., Shen M., Meng X. Mechanical properties analysis and storage life prediction of hot air aging of NBR. *Lubrication Engineering*, 2018, No. 2, 18-25.
357. Tsala S., Berthier Y., Mollon G., Bertinotti A. Numerical analysis of the contact pressure in a quasi-static elastomeric reciprocating sealing system. *Journal of Tribology*, 2018; in press.
358. Peng C., Guo S., Ouyang X., Zhou Q., Yang H. Mixed lubrication modeling of reciprocating seals based on a developed multiple grid method. *Tribology Transactions*, 2018, DOI: 10.1080/10402004.2018.1457750, υπό έκδοση.

- Citations (non-self) in scientific conference proceedings

359. Marunic G. An evaluation of spur gear tooth deformation based on three-dimensional approach. *International Conference on Gearing, Transmissions, and Mechanical Systems*, Nottingham Trend University, England, 3-6 July 2000; 2000, vol. 1, pp. 243-250 (ISBN: 1860582605).
360. Diab Y., Coulon S., Ville F., Flamand L. Experimental investigations on rolling contact fatigue of dented surfaces using artificial defects: subsurface analyses. *29th Leeds-Lyon Symposium on Tribology* (2002). Elsevier Tribology and Interface Engineering Series, 2003, **41**, 359-366.
361. Borucki L. Analysis of chemical-mechanical polishing via elastohydrodynamic lubrication. *21st Annual Workshop on Mathematical Problems in Industry*, Worcester Polytechnic Institute, 13-17 June 2005, England.
362. Dwyer-Joyce R. S. The life-cycle of a debris particle. *31st Leeds-Lyon Symposium on Tribology* (Leeds 2004). Elsevier Tribology and Interface Engineering Series, 2005, **48**, 681-690.
363. Rana A. S., Sayles R. S. An experimental study on the friction behaviour of aircraft hydraulic actuator elastomeric reciprocating seals. *31st Leeds-Lyon Symposium on Tribology* (Leeds 2004). Elsevier Tribology and Interface Engineering Series, 2005, **48**, 507-515.
364. Shakoor M., Ali M., Qamhiyah A., Flugrad D. Cam fatigue life prediction for translating roller-follower systems. *9th International Fatigue Congress (FATIGUE 2006)*, 14-19 May 2006, Atlanta, Georgia, USA (on CD-ROM; 10 pages).
365. Biswas G., Manders E. J. Integrated systems health management to achieve autonomy in complex systems. *6th IFAC Symposium on Fault Detection, Supervision and Safety for Technical Processes (SAFEPROCESS2006)*, 30 August - 1 September 2006, Beijing, China, pp. 1139-1144.

366. **Salant R. F., Maser N., Yang B.** Numerical model of a reciprocating hydraulic rod seal. *STLE/ASME International Joint Tribology Conference, 22-25 October 2006, San Antonio, Texas, USA.*
367. **Shakoor M. M., Qamhiyah A., Ali M., Flugrad D. R.** Cam size optimization based on a fatigue life model. *ASME International Design Engineering Technical Conferences, 10-13 September 2006, Philadelphia, Pennsylvania, USA; paper DETC2006-99598.*
368. **Fan Y. E., Shi Z., Harris G., Gu F., Bali A.** Monitoring the lubrication condition of rolling element bearings using the acoustic emission technique. *8th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2006, 4-7 July 2006, Torino, Italy, vol. 2, pp. 843-848.*
369. **Glovnea R. P., Cretu O. S.** Double-cage constant power Continuously Variable Transmission (CP-CVT). *8th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2006, 4-7 July 2006, Torino, Italy, vol. 3, pp. 875-883.*
370. **Abu Jadayil W. M., Flugrad D. R.** Optimization of fatigue life of hollow rollers under pure normal loading. *8th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2006, 4-7 July 2006, Torino, Italy, vol. 4, pp. 11-18.*
371. **Abu Jadayil W. M., Flugrad D. R., Qamhiyah A. Z.** Fatigue life prediction of optimum hollowness of hollow cylindrical rollers in pure rolling contacts. *8th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2006, 4-7 July 2006, Torino, Italy, vol. 3, pp. 839-846.*
372. **Shinkarenko A., Kligerman Y., Etsion I.** The effect of surface texturing in soft elastohydrodynamic lubrication. *International Conference on Tribology – AITC-AIT 2006, 20-22 September 2006, Parma, Italy.*
373. **Salant R. F., Maser N., Yang B.** Elastohydrodynamic model of a reciprocating hydraulic rod seal. *International Conference on Tribology – AITC-AIT 2006, 20-22 September 2006, Parma, Italy.*
374. **Salant R. F., Maser N., Yang B.** Numerical model of a reciprocating hydraulic rod seal, including seal roughness and mixed lubrication. *14th ISC Stuttgart 2006, Stuttgart, Germany, vol. 1, pp. 31-42.*
375. **Hernández A., Fernández J. E., Tucho R., Cuetos J. M., Chou R.** Some aspects of oil lubricant additivation with ZnO nanoparticles. *5th International Conference on Mechanics and Materials in Design, 24-26 July 2006, Porto, Portugal, paper A0729.0716.*
376. **Kalyoncu M., Haydim M., Tinkir M.** Effect of the internal leakage of servovalve to fuzzy logic based position control of an electro-hydraulic servo system. *UMTS 2007, 13th National Machine Theory Symposium, Sivas, Turkey, 7-9 June 2007, pp. 551-561.*
377. **Shinkarenko A., Kligerman Y., Etsion I.** Soft elasto hydrodynamic lubrication with Laser Surface Texturing. *European Conference on Tribology – ECOTRIB 2007, 12-15 June 2007, Ljubljana, Slovenia, vol. 1, part III, paper 12., pp. 287-298.*
378. **Yang B., Salant R. F.** Elastohydrodynamic model of a reciprocating hydraulic rod seal with a double lip. *19th International Conference on Fluid Sealing, 25-26 September 2007, Poitiers, France, pp. 5-18.*
379. **Kozma M.** Hydrodynamic and boundary lubrication of elastomer seals. *19th International Conference on Fluid Sealing, 25-26 September 2007, Poitiers, France, pp. 19-28.*
380. **Shinkarenko A., Kligerman Y., Etsion I.** Soft elasto hydrodynamic lubrication between textured elastomer and rigid counterpart. *STLE 2008 Annual Meeting and Exhibition, 18-22 May 2008, Cleveland, Ohio, USA.*
381. **Thatte A., Salant R. F.** Transient EHL analysis of an elastomeric hydraulic seal. *13th Nordic Symposium on Tribology, 10-13 June 2008, Tampere, Finland, paper NT2008-45-7.*
382. **Flitney R. K., Salant R. F.** A review of the development of reciprocating seals. *IMechE seminar “Focus on Reciprocating Seals”, 25 June 2008, London, England.*
383. **Shinkarenko A., Kligerman Y., Etsion I.** The effect of laser surface texturing on soft elasto-hydrodynamic lubrication considering non-linear elasticity. *9th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2008, 7-9 July 2008, Haifa, Israel, vol. 3, pp. 323-329.*

384. **Salant R. F., Yang B.** Numerical modeling of reciprocating fluid power seals. *7th JFPS International Symposium on Fluid Power*, 15-18 September 2008, Toyama, Japan, pp. 85-90 (ISBN 4-931070-07-X).
385. **Thatte A., Salant R. F.** Hybrid finite element – finite volume algorithm for solving transient multi-scale non-linear fluid-structure interaction during operation of a hydraulic seal. *COMSOL Conference 2008*, 9-11 October 2008, Boston, USA (8 pages).
386. **Shinkarenko A., Kligerman Y., Etsion I.** Partial elastomer texturing in soft elasto-hydrodynamic lubrication. *STLE/ASME International Joint Tribology Conference – IJTC2008*, 20-22 October 2008, Miami, Florida, USA, paper 71235.
387. **Han H.-Y., Zhang Y.-Y., Zhong Z.-Y.** Theoretical effects of contaminant particles on the lubrication considering particle rotation. *STLE/ASME International Joint Tribology Conference – IJTC2008*, 20-22 October 2008, Miami, Florida, USA, pp. 303-305 (ISBN: 978-0-7918-4336-9).
388. **Zhong Z.-Y., Zhang Y.-Y., Han H.-Y.** Simple model of the entrainment of particles in a gap considering elasticity. *STLE/ASME International Joint Tribology Conference – IJTC2008*, 20-22 October 2008, Miami, Florida, USA, pp. 461-463 (ISBN: 978-0-7918-4336-9).
389. **Bryant M. D.** Entropy and dissipative processes of friction and wear. *11th International Conference on Tribology – SERBIATRIB '09*, 13-15 May 2009, Belgrade, Serbia, pp. 3-8.
390. **Shinkarenko A., Kligerman Y., Etsion I.** Partial elastomer texturing in soft elasto-hydrodynamic lubrication. *2nd European Conference on Tribology – ECOTRIB 2009*, 7-10 June 2009, Pisa, Italy.
391. **Shan X., Yuan J., Xie T., Chen W., Qi H.** New numerical method for investigating the displacement and stress fields inside contact bodies of a wire race ball bearing. *2009 IEEE International Conference on Mechatronics and Automation*, 9-12 August 2009, Changchun, China, article number 5244837, pp. 4512-4516 (ISSN: 978-1-4244-2693-5; ICMA 2009).
392. **Sari M. R., Haiahem A., Flamand L.** Influence de la pollution solide sur les mécanismes lubrifiés. *19 Congrès Français de Mécanique*, 24-28 August 2009, Marseille, France.
393. **Yang L. M., Hals J., Moan T.** A wear model for assessing the reliability of wave energy converter in heave with hydraulic power take-off. *8th European Wave and Tidal Energy Conference*, 7-10 September 2009, Uppsala, Sweden, pp. 874-881.
394. **Bryant M. D.** Entropy and dissipative processes of friction and wear. *4th World Tribology Congress*, 6-11 September 2009, Kyoto, Japan, paper I-342, p. 665.
395. **Suzuki N., Sato Y.** An experimental study on hydrodynamic film formation and friction characteristic of reciprocating seals. *20th International Conference on Fluid Sealing*, 7-9 October 2009, Nottingham, England, pp. 39-48.
396. **Yang B., Salant R. F.** Numerical analysis of a reciprocating hydraulic rod seal with a micro-scale surface pattern. *20th International Conference on Fluid Sealing*, 7-9 October 2009, Nottingham, England, pp. 109-117.
397. **Day A., Ho H. P., Hussain K., Johnstone A.** Brake system simulation to predict brake pedal feel in a passenger car. *SAE 2009 Brake Colloquium and Exhibition*, 11-14 October 2009, Tampa, Florida, USA, paper 2009-01-3043.
398. **Xie L., Kong J., Qian L., Li G., Wan X.** Numerical modeling of contact pressure in vane seals. *ASME 2009 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, 30 August – 2 September 2009, San Diego, California, USA, vol. 3, pp. 819-825 (paper DETC2009-86747).
399. **Prokopovich P., Theodossiadis S., Rahnejat H., Hodson D.** Nano- and component level friction of rubber seals in dispensing devices. *ASME 2009 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference*, 30 August – 2 September 2009, San Diego, California, USA, vol. 6, pp. 339-344 (paper DETC2009-86035).
400. **Xie L., Kong J., Jiang G., Li G., Qian L.** Study of contact stress and extrusion of vane seals via numerical method. *2010 International Conference on Intelligent Computation Technology and Automation*, 11-12 May 2010, Changsha, Hunan, China, vol. 3, pp. 410-413.
401. **Yang L. M., Moan T.** Cylinder bore wear damage analysis of a heaving-buoy wave energy converter with hydraulic power take-off. *ASME 29th International Conference on Ocean, Offshore and Arctic Engineering*, 6-11 June 2010, Shanghai, China, vol. 3, pp. 345-355.
402. **Juoksukangas J., Lehtovaara A., Miettinen J., Tolvanen P., Järvelä P., Niemi A.-M.** Development of a test rig for reciprocating seals in heavy load conditions. *14th Nordic Symposium on Tribology*, 8-11 June 2010, Storforsen, Sweden; paper 0068 (8 pages).

403. Yang B., Salant R. F. EHL simulation of O-ring and U-cup hydraulic seals. *14th Nordic Symposium on Tribology*, 8-11 June 2010, Storforsen, Sweden; paper 0044 (8 pages).
404. Podaru G., Birsan I. G., Ciortan S., Deleanu L. Pneumatic drives' seals efficiency monitoring by thermography based methods. *10th Biennial ASME Conference on Engineering Systems Design and Analysis – ESDA 2010*, 12-14 July 2010, Constantinople, Turkey, vol. 4, pp. 597-602.
405. Lubwama M., Corcoran B., Kirabira J. B., Sayers K. Wear mechanisms of piston seals in reciprocating hand pumps for rural drinking water supply. *2nd International Conference on Advances in Engineering and Technology*, 27-28 May 2011, India, (eds.: J. Mwakali and H. M. Alinaitwe, Macmillan Publishers), pp. 612-618.
406. Musimbi O. M., Rinehart R. V., Mooney M. A. Comparison of measured and BEM computed contact area between roller drum and layered soil. *GeoFlorida 2010: Advances in Analysis, Modelling & Design*, American Society of Civil Engineers, Geotechnical Special Publication 199, pp. 2444-2453 (DOI: 10.1061/41095(365)248).
407. Wang Z., Shang Y., Jiao Z., Wang C. Leakage calculation and control of vane swing hydraulic motor based on ANSYS. *International Conference on Fluid Power and Mechatronics*, 17-20 August 2011, Beijing, China, pp. 981-986 (ISBN: 978-1-4244-8451-5).
408. Errichello R., Sheng S., Keller J., Greco A. Wind turbine tribology seminar – A recap. *Wind Turbine Tribology Seminar*, 15-17 November 2011, Broomfield, Colorado, USA. (DOE/GO-102012-3496, February 2012, U.S. Department of Energy.)
409. Thatte A., Parlak Z., Degertekin F. L., Salant R. F. Nano/micro-scale structural properties of dynamic polymeric seals. *21st International Conference on Fluid Sealing*, 30 November – 1 December 2011, Milton Keynes, England, pp. 239-248.
410. Raizer B., Dedini F. G., Tanikawa M. G., Rodrigues de Sunti B., Barros de Souza R. Performance of hybrid vehicles equipped with toroidal CVT. *21st Brazilian Congress of Mechanical Engineering*, 24-28 October 2011, Natal, RN, Brazil (proceedings of COBEM 2011).
411. Raizer B., Dedini F. G. Effects of slip and side-slip on T-CVTs performance at urban cycle. *21st Brazilian Congress of Mechanical Engineering*, 24-28 October 2011, Natal, RN, Brazil (proceedings of COBEM 2011).
412. Mirza M., Temiz V., Kamburoğlu E. Experimental studies and performance analyses on polyurethane and nitrile rubber rod seals. *2nd International Congress on Advances in Applied Physics and Materials Science, American Institute of Physics (AIP) proceedings*, 2012, **1476**(1), pp. 114-118.
413. Morris N., Rahnejat H., Rahmani R., King P., Fitzsimons B. Performance evaluation of piston compression ring through accelerated wear in engine tests. *Spring Technical Conference of the ASME Internal Combustion Engine Division*, 6-9 May 2012, Torino, Italy, pp. 1003-1008.
414. Arakere N., Subhash G. Determination of mechanical properties of rolling contact fatigue affected zones in M50 bearing steel balls. *VII Iberian Conference on Tribology*, 20-21 June 2013, Porto, Portugal, pp. 44-45.
415. Rabaso P., Ville F., Dassenoy F., Martin J.-M., Diaby M. Tribological behaviour of fullerene-like MoS₂ nanoparticles for different lubrication regimes in the presence of dispersants. *40th Leeds-Lyon Symposium on Tribology*, 4-6 September 2013, Lyon, France.
416. Bartram G., Mahadevan S. Dynamic Bayesian networks for prognosis. *Annual Conference of the Prognostics and Health Management Society*, 14-17 October 2013, LA, USA, vol. 4.
417. Örjasaeter O., Haukenes J., Bjørneklett B. Improving the operational life of riser line seals and telescopic joint packers. *SPE/IADC Middle East Drilling Technology Conference and Exhibition*, 7-9 October 2013, Dubai, U.A.E., paper 166723, pp. 389-398 (ISBN: 978-1-61399-260-9).
418. Zhang W., Yuan X., Zhang H. Axial compression of a rectangular rubber ring composed of an incompressible Mooney-Rivlin material. *6th International Conference on Nonlinear Mechanics*, 12-15 August 2013, Shanghai, China, pp. 82-85 (ISBN: 978-1-60595-109-6).
419. Twist C., Jane Wang Q., Yu C. Particle-laden flows in elastohydrodynamic lubrication. *5th World Tribology Congress*, 8-13 September 2013, Torino, Italy, vol. 1, pp. 235-238.
420. Huang Y., Salant R. F. Simulation of hydraulic rod seals with plunge-ground rod. *5th World Tribology Congress*, 8-13 September 2013, Torino, Italy, vol. 4, pp. 3040-3043.

421. Kaiser F., Sauer B., Eckert S., Bock E. Experimental validation of fluid film simulation of a hydraulic U-cup seal. *2014 STLE Annual Meeting and Exhibition*, 18-21 May 2014, Florida, USA.
422. Zaretsky E. V., Branzai E. V. Rolling-bearing service life based on probable cause for removal – A tutorial. *2014 STLE Annual Meeting and Exhibition*, 18-21 May 2014, Florida, USA.
423. Zuleeg J. Understanding the generation of grease noise in ball bearings helps to develop low noise greases. *2014 STLE Annual Meeting and Exhibition*, 18-21 May 2014, Florida, USA.
424. Grandin M., Wiklund U. A wear tolerant slip-ring assembly. *ICEC 2014 - The 27th International Conference on Electrical Contacts*, 22-26 June 2014, Dresden, Germany, pp. 237-242.
425. Bryant M. D. Modelling degradation using thermodynamic entropy. *Annual Conference on the Prognostics and Health Management Society 2014*, 29 September – 2 October 2014, Texas, USA.
426. Kim H., Kim R. U., Chung K. H., An J. H., Jeon H. G. Degradation characteristics of polyurethane elastomer. *58th Annual Conference of the Korean Society of Tribologists and Lubrication Engineers*, 2014, South Korea, pp. 67-68.
427. Lee J. H., Kang C. S., Park T. J., Kim H. S., Yang S. H. Study on the flow and deformation characteristics of a piston seal shape for hydraulic cylinder. *Korea Fluid Power Systems Conference*, 2014, 4, pp. 153-157.
428. Rooplal R. C. S., Ranganath M. S., Gaurav S. Tribological analysis of etched mild steel surface. *International Conference of Advance Research and Innovation*, 31 January 2015, New Delhi, India, pp. 296-304.
429. Zhang H., Li S., Xing Q., Zhang J. Numerical simulation for frictional behaviors of PTFE composite sealing ring. *5th International Conference on Information Engineering for Mechanics and Materials*, 25-26 July 2015, Huhhot, Inner Mongolia, pp. 648-652.
430. Strubel, V., Fillot N., Ville F., Vergne P., Mondelin A., Maheo Y. Etude du piégeage de contaminants solides dans des contacts EHD. *22nd French Mechanics Congress*, 24-28 August 2015, Lyon, France (3 pages).
431. Strubel, V., Fillot N., Ville F., Vergne P., Mondelin A., Maheo Y. Debris entrapment in elliptical EHD contacts. *International Tribology Conference*, 16-20 September 2015, Tokyo, Japan, pp. 409-410.
432. Wu C., Suo S., Li X. Simulation analysis of reciprocating seals based on ABAQUS. *11th China CAE Engineering Analysis Technology Annual Meeting*, 6-7 August 2015, Guilin, Guangxi, China.
433. Wu C., Guo F., Suo S., Jia X. A mixed lubrication numerical model by inverse lubrication theory and experimental verification of hydraulic rod seals. *Society of Lubrication Engineers (STLE) Annual Conference*, 15-19 May 2016, Las Vegas, USA.
434. Zhang Y., Shi J., Wang S., Zhang C., Tomovic M. M. Sealing mechanism and failure analysis of actuator reciprocating seal. *IEEE 11th Conference on Industrial Electronics and Applications*, 5-7 June 2016, Hefei, China, pp. 2190-2195.
435. Baumueller A., Borrás F. X., Eskilson P., Nilsson M., Verner A. Upgrading of Stirling engine dynamic seals – Swedish development since 40 years. *17th International Stirling Engine Conference and Exhibition*, 24-26 August 2016, Newcastle, England.
436. Xie L., Tian Z., Fu T., Zhang X. A new numerical model of contact pressure in vane seals. *5th International Conference on Materials Engineering for Advanced Technologies*, 5-6 August 2016, Quebec, Canada, pp. 39-43 (ISBN: 978-1-60595-373-1).
437. Fard N. C., Poursina M., Khonzani M. K. Effect of the number of teeth on static transmission error in simple gears (in Persian). *3rd Conference on Recent Innovations in Engineering and Mechanical Engineering*, October 2016, Tehran, Iran.
438. Glovnea R., Zhang X., Sugimura J. The effect of lubricant supply and frequency upon the behaviour of EHD films subjected to vibrations. *13th International Conference on Tribology – ROTRIB'16; IOP Conference Series: Materials Science and Engineering*, 2017, **174**, doi:10.1088/1757-899X/174/1/012033.
439. Jia C., Xie L.-X., Luo Z.-Z. Numerical study on vane seal lubrication model considering surface morphology. *2017 International Conference on Applied Mechanics and Mechanical Automation*, 2017, pp. 12-16 (ISBN: 978-1-60595-471-4).

440. Angerhausen J., Murrenhoff H., Dorogin L., Persson B. N. J., Scaraggi M. The influence of temperature and surface structure on the friction of dynamic hydraulic seals. *The 10th JFPS International Symposium on Fluid Power*, 24-27 October 2017, Fukuoka, Japan, article 1C09.
441. Han D.-S., Han S.-Y. Development of an elastomeric seal for a soft robot actuator. *Conference of the Korean Institute of Industrial Manufacturing Engineers*, December 2017, Korea, p. 149.
442. Peng C., Ouyang X., Gong G., Yang H., Zhou Q. Investigation into the performance of the VL seal based on the 3D model. *ASME/BATH 2017 Symposium on Fluid Power and Motion Control*, 16-19 October 2017, Florida, USA, article FPMC2017-4236, p. V001T01A017.
443. Roy H., Maiti R. Dynamics during speed ratio change of a double roller full toroidal traction drive. *ASME 2017 International Mechanical Engineering Congress and Exposition*, 3-9 November 2017, Florida, USA, article IMECE2017-72164, p. V04BT05A018.
444. Xu L., Wang S., Zhang C. New fatigue life prediction of the VL reciprocating seal based on fracture mechanics. *6th International Conference on Advances in Construction Machinery and Vehicle Engineering*, 15 September 2017, Hebei, China.
445. Wang X., Lin S., Wang S., Shi J., Zhang C. A multi-fault diagnosis strategy of electro-hydraulic servo actuation system based on extended Kalman filter. *6th International Conference on Advances in Construction Machinery and Vehicle Engineering*, 15 September 2017, Hebei, China.
446. Jia C., Xie L.-X., Luo Z.-Z. Numerical modeling and simulation of multi-elastic body contact of vane seal. *2nd International Conference on Applied Mathematics, Simulation and Modelling*, 6-7 August 2017, Phuket, Thailand (ISBN: 978-1-60595-480-6).
447. Mondragon-Parra E., Courville J., Harder J. Influence of solid additives in performance of tripot-type constant velocity joints. *2018 SAE World Congress Experience*, 10-12 April 2018, Detroit, USA; paper 2018-01-1296.

- Citations (non-self) in scientific theses

448. Oila A. Micropitting and related phenomena in case carburised gears. Ph.D. thesis; University of Newcastle Upon Tyne; Newcastle, England, 2003.
449. Cioc C. A. B. An elastohydrodynamic lubrication model for helicopter high-speed transmission components. Ph.D. thesis; The University of Toledo, College of Engineering; Toledo, Spain, 2004.
450. Kolbasina N. A. Design of gears from the condition of minimizing the marginal interaction of teeth. Ph.D. thesis. Krasnoyarsk State University, Russia, 2004.
451. Rana A. S. A tribological study of elastomeric reciprocating seals for hydraulic actuators. Ph.D. and D.I.C. thesis; Imperial College London and Science Museum Library, also in the Mech. Eng. Dept. library and in the Tribology Group; Imperial College London, London, England, 2005.
452. Buerkle M. S. Examination of high-speed helical gear mesh efficiency and influences. Ph.D. thesis. The University of Michigan, Michigan, USA, 2005.
453. Bitsch L. Critical components in microfluidic systems for drug delivery: energy consumption in safe, turning microvalves. Ph.D. thesis; Technical University of Denmark, Department of Micro and Nanotechnology; Denmark, 2006.
454. Maser N. B. Numerical model of a reciprocating rod seal, including surface roughness and mixed lubrication. M.Sc. thesis; Georgia Institute of Technology, School of Mechanical Engineering; Atlanta, Georgia, USA, 2006.
455. Ingram C. Investigating profile relief for Formula 1 gears. M.Sc. thesis; Cranfield University, School of Industrial and Manufacturing Science; England, 2006.
456. Shakoor M. M. Fatigue life investigation for cams with translating roller-follower and translating flat-face follower systems. Ph.D. thesis; Iowa State University, Graduate College; Iowa, USA, 2006.
457. De Volder M. Pneumatic and hydraulic microactuators: a new approach for achieving high force and power densities at microscale. Ph.D. thesis; Catholic University of Leuven, Faculty of Engineering Science; Belgium, 2007.
458. Song B. Research on noise property of grease filled with nano particles. M.Sc. thesis. Harbin Institute of Technology, Mechanical Design and Theory, Harbin, China, 2007.

459. **Underwood R. J.** The tribological effects of contamination in rolling element bearings. Ph.D. thesis; Imperial College London, Department of Mechanical Engineering, Tribology Group; London, England, 2008.
460. **Liu W.** Study on liquid-solid lubrication considering particle behaviours. Ph.D. thesis. Hefei University of Technology, Mechanical Design and Theory, China, 2008.
461. **Yang J.** Research on theory and test equipment of contaminant solid particles influencing lubrication and wear of piston ring and cylinder liner. Ph.D. thesis. Zhejiang University, Mechanical Manufacturing and Automation, China, 2008.
462. **Tan J.** Simulation analysis of special macromolecule sealing products and blending modification of outer sizing of composite tubes. Ph.D. thesis. Beijing University of Chemical Technology, Mechanical Design and Theory, Beijing, China, 2008.
463. **Chen G.** Finite element analysis and structure optimal design for combined seal at normal temperature and low temperature. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, Harbin, China, 2008.
464. **Grimble D.** Ultra-thin film tribology of elastomeric seals in pressurized metered dose inhalers. Ph.D. thesis; Loughborough University, Wolfson School of Mechanical & Manufacturing Engineering; Loughborough, England, 2009.
465. **Ville F.** Analyse du comportement des systèmes mécaniques lubrifiés. Habilitate thesis; The National Institute of Applied Sciences in Lyon and the University Claude Bernard Lyon I, Lyon, France, 2009.
466. **Su W.** Research on the key technologies and control system of direct drive electro-hydraulic servo rotary vane steering gear. Ph.D. thesis. Harbin Institute of Technology, Mechanical and Electronic Engineering, China, 2009.
467. **Ho H. P.** The influence of braking system component design parameters on pedal force and displacement characteristics. Ph.D. thesis. University of Bradford, School of Engineering, Design and Technology, Bradford, England, 2009.
468. **Xuan Y.** A study on the elasto-hydrodynamic lubrication with spinning and fluid starvation. M.Sc. thesis. Qingdao University of Technology, Mechanical Design and Theory, China, 2009.
469. **Fu H.** Finite element analysis and structure optimal design for seal of main shaft and door of manned spacecraft. M.Sc. thesis. Harbin Institute of Technology, Aerospace Manufacturing Engineering, Harbin, China, 2009.
470. **Jian P.** Application of intelligent speed servo control to experimental research on optical elasto-hydrodynamic lubrication. Ph.D. thesis. Xi'an University of Electronic Science and Technology, Mechanical Manufacturing and Automation, China, 2009.
471. **Peng W.** Study on the test-bed for the starter of belt conveyor based on the automatic transmission. M.Sc. thesis. Shandong University, Vehicle Engineering, China, 2009.
472. **Yang B.** Elasto-hydrodynamic model of reciprocating hydraulic rod seals. Ph.D. thesis; Georgia Institute of Technology, School of Mechanical Engineering; Atlanta, Georgia, USA, 2010.
473. **Thatte A.** Multi-scale multi-physics model and hybrid computational framework for predicting dynamics of hydraulic rod seals. Ph.D. thesis; Georgia Institute of Technology, School of Mechanical Engineering; Atlanta, Georgia, USA, 2010.
474. **Raizer B.** Modeling and kinematic analysis of toroidal CVT's: influence of geometric parameters on performance. M.Sc. thesis; State University of Campinas, Faculty of Mechanical Engineering; Brazil, 2010.
475. **Bullock A.** Fundamental concepts associated with hydraulic seals for high bandwidth actuation. Ph.D. thesis; University of Bath, Department of Mechanical Engineering; Bath, England, 2010.
476. **Pylios Th.** A new metacarpophalangeal joint replacement prosthesis. Ph.D. thesis; University of Birmingham, School of Mechanical Engineering, Biomedical Engineering Research Group; Birmingham, England, 2010.
477. **Champagne E.** Tribologie de systèmes d'étanchéité en mouvement alternative linéaire pour vérins hydrauliques. M.Sc. thesis; Polytechnic School of Montreal, Department of Mathematics and Industrial Engineering; Montreal, Canada, 2010.
478. **Pálfi L.** Finite element modelling of the hysteretic part of friction considering rubber-rough counter surface sliding pairs. Ph.D. thesis; Budapest University of Technology and Economics, Faculty of Mechanical Engineering, Department of Machine and Product Design; Budapest, Hungary, 2010.

479. **America A.** Hydraulic reciprocating sealing efficiency technology research based on functional analysis. M.Sc. thesis. Tianjin University of Science and Technology, Mechanical Manufacturing and Automation, China, 2010.
480. **Liu W.** Flow characteristics and efficiency of the double helix within a 360° rotating cylinder. M.Sc. thesis. Central South University, Mechanical Design and Theory, China, 2010.
481. **Gül C.** Effect of macro geometry on the performance characteristics of reciprocating seals. M.Sc. thesis. Istanbul Technical University, Institute of Science and Technology, Constantinople, Turkey, 2010.
482. **Li C.** Analysis of reciprocating seal. M.Sc. thesis. Qingdao University of Technology, Mechanical and Electrical Engineering, China, 2010.
483. **Hu Z.** Theoretical research on the contamination control of fluid power system based on the fuzzy stochastic optimization. M.Sc. thesis. Huazhong University of Science and Technology, Mechanical and Electrical Engineering, China, 2010.
484. **Lu X.** Efficiency-reinforcement technology study for hydraulic reciprocating sealing based on functional analysis. M.Sc. thesis. Tianjin University of Science and Technology, Machinery Manufacturing and Automation, China, 2010.
485. **Yang L.** Stochastic dynamic system analysis of wave energy converter with hydraulic power take-off, with particular reference to wear damage analysis. Ph.D. thesis; Norwegian University of Science and Technology, Department of Marine Technology; Trondheim, Norway, 2011 (ISBN: ISBN 978-82-471-2738-4).
486. **Olofsson J.** Friction and wear mechanisms of ceramic surfaces. Ph.D. thesis; Uppsala University, Faculty of Science and Technology; Uppsala, Sweden, 2011 (ISBN: 978-91-554-8123-0).
487. **Békési N.** Friction and wear of elastomers and sliding seals. Ph.D. thesis; Budapest University of Technology and Economics, Faculty of Mechanical Engineering, Department of Machine and Product Design; Budapest, Hungary, 2011.
488. **Bell C. A.** Constant power – Continuously Variable Transmission (CP-CVT): Optimisation and simulation. Ph.D. thesis; Brunel University, Mechanical Engineering, School of Engineering and Design; Middlesex, England, 2011.
489. **Lafleur J.-P.** A study of abrasion in steel during comminution. M.Eng. thesis; McGill University; Montreal, Canada, 2011.
490. **Jun L.** Study on rotational fretting wear of coatings/modified layers for axle steel. Ph.D. thesis. Southwest Jiaotong University, Materials Science, China, 2011.
491. **Hu N.** Research on tribological properties of Tris(Phosphino)borato Silver(I) complexes as lubricant additive under high temperature. Ph.D. thesis. China University of Mining, Mechanical and Electronic Engineering, China, 2011.
492. **Zhang Q.** Design and research for hydraulic cylinder improvement based energy-saving. M.Sc. thesis. Tianjin University of Science and Technology, Mechanical Manufacturing and Automation, China, 2011.
493. **Schmidt T.** Mischreibung und verschleiss in hydraulikdichtsystemen - Modellbildung, simulation und experimentelle analyse. Ph.D. thesis. Leibniz Universität Hannover, Faculty of Mechanical Engineering, Hannover, Germany, 2011.
494. **Cheng W.** Design and analysis of dynamic characteristics of direct drive hydraulic system on bucket wheel of bucket wheel stacker & reclaimer. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, Harbin, China, 2011.
495. **Zheng Y.** Design of the transmission speeder of the seeder on the general 3 tube-slit model wheat seeding machine. M.Sc. thesis. Hebei Agricultural University, Agricultural Mechanization Engineering, China, 2011.
496. **Zhou W.** Theoretical and experimental study on a moving coil linear compressor with triangle flexural bearings. M.Sc. thesis. Zhejiang University, Refrigeration and Cryogenic Engineering, China, 2011.
497. **Vrbka M.** Effect of surface topography modification on rolling contact fatigue damage of rubbing surfaces. Ph.D. thesis; Brno University of Technology; Brno, Czech Republic, 2012 (ISBN 978-80-214-4433-1).

498. **Fallqvist M.** Microstructural, mechanical and tribological characterisation of CVD and PVD coatings for metal cutting applications. Ph.D. thesis; Uppsala University, Department of Engineering Sciences; Uppsala, Sweden, 2012 (ISBN: 978-91-554-8371-5).
499. **Bo L.** Dynamic characteristics study of screw oscillating hydraulic cylinder. Ph.D. thesis. Central South University, Mechanical Manufacturing and Automation, China, 2012.
500. **Zheng J.** Research on compound seal structures of spindle under different temperatures by static and dynamic numerical simulation. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electronic Engineering, China, 2012.
501. **Du X.** Design and research of double-stator rotary actuator. M.Sc. thesis. Yanshan University, Mechanical and Electrical Engineering, China, 2012.
502. **Dong F.** Study on the sealing of matched surfaces between cylinder block and head. M.Sc. thesis. Shanghai Jiaotong University, Automotive Engineering, China, 2012.
503. **Fesanghary M.** Topology and shape optimization of hydrodynamically-lubricated bearings for enhanced load-carrying capacity. Ph.D. thesis; Louisiana State University, Department of Mechanical and Industrial Engineering; Louisiana, USA, 2013.
504. **Bartram G. W.** System health diagnosis and prognosis using dynamic Bayesian networks. Ph.D. thesis; Vanderbilt University, Department of Civil Engineering; Nashville, Tennessee, USA, 2013.
505. **Forsberg P.** Combustion valve wear: a tribological study of combustion valve sealing interfaces. Ph.D. thesis; Uppsala University, Faculty of Science and Technology; Uppsala, Sweden, 2013.
506. **Fietkau P.** Transient contact simulation of automotive transmissions. Ph.D. thesis; University of Stuttgart, Institute for Machine Elements; Stuttgart, Germany, 2013.
507. **Kalogiannis K.** Behaviour of elastohydrodynamic films subjected to oscillatory motion. Ph.D. thesis; University of Sussex, Sussex, England, 2013.
508. **Lubwama M.** Tribological behaviour of DLC and Si-DLC films deposited on nitrile rubber for handpump piston seals. Ph.D. thesis; Dublin City University, School of Mechanical and Manufacturing Engineering, Dublin, Ireland, 2013.
509. **Crudu M.** Étude expérimentale et numérique des joints hydrauliques (Experimental and numerical study of reciprocating seals). Ph.D. thesis; University of Poitiers, Faculté des Sciences Fondamentales et Appliquées, Poitiers, France, 2013.
510. **Twist C. P.** Tribological interfaces and fluid flows containing particles and chemically designed additives. Ph.D. thesis; Northwestern University, Mechanical Engineering, Evanston, Illinois, USA, 2013.
511. **Peng Y.** Modeling of blade cutting of viscoelastic biomaterials. M.Sc. thesis. Graduate School of the University of Minnesota, Minnesota, USA, 2013.
512. **Heipl O. P.** Experimentelle und numerische modelbildung zur bestimmung der reibkraft translatorischer dichtungen. D.Eng. thesis. Rheinisch-Westfälischen Technischen Hochschule Aachen, Germany, 2013.
513. **Whittle M.** Wind turbine generator reliability: An exploration of the root causes of generator bearing failures. Ph.D. thesis. Durham University, School of Engineering and Computing Sciences, Durham, England, 2013.
514. **Lorentz B.** An approach to investigate surface roughness influence on non-lubricated and lubricated contacts by means of the finite element analysis. Ph.D. thesis. Karlsruhe Institute for Technology, Karlsruhe, Germany, 2013.
515. **Zhang W.-Z.** Analyses of finite deformation of hyperelastic rubber structures with axial symmetry. Ph.D. thesis. Dalian University of Technology, China, 2013.
516. **Yang D.-Y.** Research on the Leningrader seal of piston-rod in Stirling engine. Ph.D. thesis. Lanzhou University of Technology, China, 2013.
517. **Zhou Q.** Research on the lubrication performance and its impact on the performance of rotor dynamics study. Ph.D. thesis. East China University of Technology, Mechanical Design and Theory, China, 2013.
518. **Peng Z.** Study on the grease lubrication theory and failure mechanism of wheel hub bearing. Ph.D. thesis. South China University of Technology, Mechanical and Electronic Engineering, China, 2013.

-
519. **Chen Y.** Research on the leakage of the mechanical rotating seal and test under the condition of deep well. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electronic Engineering, China, 2013.
 520. **Peng Y.-W.** Research on key sealant component of swing electro-hydraulic servo motor applied to simulator. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electronic Engineering, China, 2013.
 521. **Zhao L.** Numerical and finite element analysis of the contact pressure of vane seals in rotary vane actuator. M.Sc. thesis. Wuhan University of Science and Technology, Mechanical Manufacturing and Automation, China, 2013.
 522. **Gu W.** Research on friction and noise property of multi-body plane contact interface. M.Sc. thesis. Hefei University of Technology, Mechanical Engineering, China, 2013.
 523. **Lin P.** Automotive wheel bearing grease lubrication theory and lubrication failure mechanism. Ph.D. thesis. South China University of Technology, Mechanical and Electronic Engineering, China, 2013.
 524. **High A.** Boundary value problem for a class of nonlinear elasticity equations. M.Sc. thesis. Liaoning Normal University, Basic Mathematics, China, 2013.
 525. **Fatu A.** Etude numérique et expérimentale des paliers de moteur thermique et des joints d'étanchéité dynamique. Habilitation à Diriger des Recherches. University of Poitiers, Mechanics, France, 2013.
 526. **Mpagazehe J. N.** A physics-based, Eulerian-Lagrangian computational modelling framework to predict particle flow and tribological phenomena. Ph.D. thesis. Carnegie Mellon University, Mechanical Engineering Department, USA, 2013.
 527. **Cheng J.** The control and research on hydraulic oil cleanliness of the working system of loader. M.Sc. thesis. Jilin University, Industrial Engineering, China, 2013.
 528. **Yan W.** Research on key sealant component of swing electro-hydraulic servo motor applied to simulator. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, Harbin, China, 2013.
 529. **Xu S.** Modeling and analysis of hydrodynamics for hydro-pneumatic suspension seals. M.Sc. thesis. Jilin University, Vehicle Engineering, China, 2013.
 530. **Yu G.** Analysis on the key influence factors of piston rod sealing performance for Stirling engine. M.Sc. thesis. Lanzhou University of Technology, Mechanical Manufacturing and Automation, China, 2013.
 531. **Guan W.** Research on the sealing performance of the pneumatic solenoid valve. M.Sc. thesis. South China University of Technology, Mechanical and Electrical Engineering, China, 2013.
 532. **Ma J.** Performance analysis of the combination seal structure of high pressure screw conveyor. M.Sc. thesis. Beijing University of Chemical Technology, Safety Technology and Engineering, China, 2013.
 533. **Wang Z.** The key technology research on 3 thousands tons class force/displacement servo cylinder. M.Sc. thesis. Southwest Jiaotong University, Mechanical Design and Theory, China, 2013.
 534. **Yan W.** Research on key sealant component of swing electro-hydraulic servo motor applied to simulator. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, China, 2013.
 535. **Gao A.** The boundary values problems for a class of nonlinear elastic mechanics equations. M.Sc. thesis. Liaoning Normal University, Basic Mathematics, China, 2013.
 536. **Yang C.** Experiment study and simulation analysis on clearance characteristics in shearing process of three-body friction interface. M.Sc. thesis. Hefei University of Technology, Mechanical Manufacturing and Automation, China, 2013.
 537. **Yang H.** Synchronization decoupling control study of passive electric-hydraulic servo system. M.Sc. thesis. Henan University of Science and Technology, Mechanical and Electrical Engineering, China, 2013.
 538. **Wang S.** The reciprocating hydraulic seal technology research based on hydraulic test bench. M.Sc. thesis. Tianjin University of Science and Technology, Machinery Manufacturing and Automation, China, 2013.

539. **Zhang D.** Efficiency-reinforcement design study for elastic hydraulic sealing based on coupled fluid, deformation, and contact mechanics analyses. M.Sc. thesis. Tianjin University of Science and Technology, Machinery Manufacturing and Automation, China, 2013.
540. **Zhou Q.** Research on the lubrication performance of lip seal and the influences on the rotor dynamics performance. Ph.D. thesis. East China University of Science and Technology, Mechanical Design and Theory, China, 2013.
541. **Liu B.** Development and simulation of the dynamic seals test system for aircraft cylinders. M.Sc. thesis. Zhejiang University, Fluid Power Transmission and Control, China, 2014.
542. **Xiao N.** Innovative heat transfer augmentation techniques in mechanical face seal. Ph.D. thesis. Louisiana State University, Department of Mechanical and Industrial Engineering, Louisiana, USA, 2014.
543. **Chindlea G. G.** Contribuții la studiul fenomenelor de frecare și ameliorarea fiabilității etanșărilor axiale (Contributions to the study of friction and improving the reliability of axial seals). Ph.D. thesis. University of Oradea, Industrial Engineering, Oradea, Romania, 2014.
544. **Huang Y.** Elastohydrodynamic model of hydraulic rod seals with various rod surfaces. Ph.D. thesis; Georgia Institute of Technology, School of Mechanical Engineering; Atlanta, Georgia, USA, 2014.
545. **Kyle J. P.** The rheology of nanoparticle additives: An investigation utilizing mesh free methods. Ph.D. thesis. Columbia University, Graduate School of Arts & Sciences, New York, NY, USA, 2014.
546. **Stathis A.** Improvements in the preventative maintenance of mechanical equipment (Βελτιώσεις στην προληπτική συντήρηση μηχανολογικού εξοπλισμού). Ph.D. thesis. National Technical University of Athens, School of Mechanical Engineering; Athens, Greece, 2014.
547. **Zouzoulas V.** Thermohydrodynamic analysis of tilting pad thrust bearings with artificial surface texturing. Diploma thesis. National Technical University of Athens, School of Naval Architecture & Marine Engineering, Division of Marine Engineering; Athens, Greece, 2014.
548. **Crehu A. R. D.** Tribological analysis of White Etching Crack (WEC) failures in rolling element bearings. Ph.D. thesis. INSA de Lyon, Mechanics of Materials, Lyon, France, 2014.
549. **Rabaso P.** Nanoparticle-doped lubricants: potential of inorganic fullerene-like (IF-) molybdenum disulfide for automotive applications. Ph.D. thesis. INSA de Lyon, L'Institut National des Sciences Appliquées de Lyon, Lyon, France, 2014.
550. **Li H.** Observation of surface and subsurface changes during scuffing in sliding contact. Ph.D. thesis. Kyushu University, Kyushu, Japan, 2014.
551. **Dong Z.** Design and process of ground oil sealing devices NFDY-1. M.Sc. thesis. Hunan University, Industrial Engineering, China, 2014.
552. **Gao B.** Study on pollution control method for TH200-8 excavator hydraulic system. M.Sc. thesis. Shandong University, Mechanical Engineering, China, 2014.
553. **Lu L.** Research on reciprocating piston seal technology. M.Sc. thesis. North China Institute of Aerospace Engineering, Hebei, China, 2014.
554. **Fu J.** Strength and structure analysis of HSE07 type hydraulic rotary actuator. M.Sc. thesis. Inner Mongolia University of Science and Technology, China, 2014.
555. **Xue J.** Sealing research of hydraulic servo motor. M.Sc. thesis. Shanghai Jiaotong University, Mechanical Engineering, China, 2014.
556. **Sun J.** Research on mechanism of a typical dynamic seal for hydraulic actuators. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, Harbin, China, 2014.
557. **Liu X.** Numerical analysis and experimental study on reciprocating seals in hydraulic cylinder. M.Sc. thesis. Qingdao University of Technology, Mechanical Engineering, China, 2014.
558. **Ma X.** Design and optimization of garage door access to materials dry fermentation and sealing device. M.Sc. thesis. Anhui Agricultural University, Agricultural Mechanization, China, 2014.
559. **Lian S.** Oil pollution and mechanical wear conditions research base on Gray theory and neural network theory. M.Sc. thesis. Henan University of Technology, Mechanical and Electrical Engineering, China, 2014.
560. **Chen S.** Contact pressure of rotary seal I rotary vane actuator. M.Sc. thesis. Wuhan University of Science and Technology, Machinery Manufacturing and Automation, China, 2014.
561. **Zhang Y.** The research on seal of piston pressure balance device in deep sea. M.Sc. thesis. Hefei University of Technology, Mechanical Design and Theory, China, 2014.

-
562. **Alkadhimi F.** Wear testing and finite element analysis of nitrile rubber (NBR) hand pump seals. M.Eng. thesis. Dublin City University, School of Mechanical and Manufacturing Engineering, Dublin, Ireland, 2015.
563. **Kenneally B.** Time and frequency domain finite element analysis of vibratory drum interaction with layered earthwork. Ph.D. thesis. Colorado School of Mines, Mechanical Engineering Department, Colorado, USA, 2015.
564. **Qian W.-Q.** Study on the mechanism and arch phenomenon of rotating seal. M.Sc. thesis. Wuhan University of Science and Technology, Mechanical Engineering, China, 2015.
565. **Zhang P.** Performance analysis and research of EHV throttle movement seal. M.Sc. thesis. Southwest Petroleum University, Chemical Process Equipment, China, 2015.
566. **Verleg M. N.** Wrist prosthesis. M.Sc. thesis. Delft University of Technology, Biomedical Engineering, The Netherlands, 2015.
567. **NiBler B. U.** Dichtheit von hydraulikstangendichtungen aus polyurethan – Einfluss von geometrieveränderungen an PU-nutringen auf deren dichtverhalten und vergleich verschiedener dichtheitsbewertung. Ph.D. thesis. University of Stuttgart, Institute for Machine Elements, Germany, 2015.
568. **Huang X.** Study on the influence of solid particles on non-steady-state thermal elastohydrodynamic lubrication of spur gears running-in. M.Eng. thesis. Qingdao University of Technology, School of Mechanical Engineering, China, 2015.
569. **Ma W.** Study on thermal-damage behavior of friction lining under high-speed sliding friction conditions. Ph.D. thesis. China University of Mining & Technology, China, 2015.
570. **Li X.** Research on calculation method of leakage prediction for seal ring in downhole equipments. Ph.D. thesis. Harbin Institute of Technology, Mechanical Engineering, Harbin, China, 2015.
571. **Gang L.** Research on the performance of dynamic seal based on the isotropic hypothesis of PTFE. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, Harbin, China, 2015.
572. **Ji J.** Research on sealing and friction characteristics of O-seal ring. M.Sc. thesis. Harbin Institute of Technology, Mechanical Engineering, Harbin, China, 2015.
573. **Dai A.** Study on sealing technology of reciprocating compressor's piston-rod. M.Sc. thesis. Shanghai Jiaotong University, Mechanical Engineering, Shanghai, China, 2015.
574. **Huang L.** Simulation research on performance of reciprocating seal used in stamping equipment. M.Sc. thesis. Tsinghua University, Mechanical Engineering, Beijing, China, 2015.
575. **Wang Y.** Study on sealing performance of rotary liner hanger bearing in ultra-deep well drilling. M.Sc. thesis. China University of Geosciences, Mechanical Engineering, Beijing, China, 2015.
576. **Li C.** Analysis and improvement of seals for hydraulic cylinder of WY20 excavator. M.Sc. thesis. Yanshan University, Mechanical and Electrical Engineering, Hebei, China, 2015.
577. **Zhao Q.** Research on the seal and friction properties of the electro-hydraulic servo swing motor. M.Sc. thesis. Henan University of Science and Technology, Mechanical and Electrical Engineering, China, 2015.
578. **Luo G.** The design of the machine assembling hydraulic cylinder's piston sealing rings. M.Sc. thesis. Jilin University, Mechanical Engineering, China, 2015.
579. **Liu H.** Study of flow field and sealing performance for clearance seal in reciprocating motion. M.Sc. thesis. Wuhan University of Technology, School of Chemical Engineering, Wuhan, China, 2015.
580. **Zhao R.** Operation parameters efficiency-reinforcement study for elastic hydraulic reciprocating sealing based on Taguchi method. M.Sc. thesis. Tianjin University of Science and Technology, Industrial Engineering, China, 2015.
581. **Zhang Y.** The seal technology research of deep-sea hydraulic power unit. M.Sc. thesis. Southwest Jiaotong University, Mechanical Engineering, China, 2015.
582. **Tang H.** The application research of fuzzy PID algorithm in CFETR blanket RH control system. M.Sc. thesis. Hefei University of Technology, Mechanical Engineering, China, 2015.
583. **Shen C.** Study on transmission characteristics of dual-cones traction drive. Ph.D. thesis. Beijing University of Science and Technology, Vehicle Engineering, Beijing, China, 2015.
584. **Imanian A.** An entropic theory of damage with applications to corrosion-fatigue structural integrity assessment. Ph.D. thesis. University of Maryland, College Park, USA, 2015.

-
585. **Dilithiah Aiharti** Reliability modelling and experimental research of pneumatic Y seal. M.Sc. thesis. Tsinghua University, Mechanical Engineering, China, 2015.
 586. **Li S.** Investigation of acceleration dependent nonlinear lubricated friction in hydraulic actuation systems. Ph.D. thesis. University of Saskatchewan, Mechanical Engineering Department, Saskatoon, Canada, 2016.
 587. **Grönlund J.** Endurance test of hydraulic piston and rod seals. M.Sc. thesis. Tampere University of Technology, Department of Mechanical Engineering and Industrial Systems, Tampere, Finland, 2016.
 588. **Zhao Y.-L.** Metal rubber seal research on reciprocating shaft sealing performance. M.Sc. thesis. Harbin Institute of Technology, Mechanical Design and Theory, China, 2016.
 589. **Xu N.** Research on dynamic seal performance of anisotropic PTFE. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electrical Engineering, China, 2016.
 590. **Fujita T.** Studies on mechanism of rolling contact fatigue under low lambda condition and life data analysis in rolling contact fatigue testing. Ph.D. thesis. Kanazawa University, Japan, 2016.
 591. **Kellogg J. D.** Design of a rubber V-belt electronically controlled Continuously Variable Transmission for use in a Formula SAE vehicle. M.Eng. thesis. Bradley University, Department of Mechanical Engineering, Illinois, USA, 2016.
 592. **Li H.** Finite element analysis and optimization of X-ring for servo mechanism. M.Sc. thesis. East China University of Science and Technology, China, 2016.
 593. **You J. C.** Axial deformation detection research of rectangular rubber sealing ring based on tightening torque. M.Eng. thesis. Chongqing University, College of Automation, Chongqing, China, 2016.
 594. **Wu F.** Design of the solid rocket engine tightening control system based on expert estimation. Professional Degree thesis. Chongqing University, College of Automation, Chongqing, China, 2016.
 595. **Liu Y.** The design on combination seal of piston and its application research in underwater pressure sensor. M.Sc. thesis. Hefei University of Technology, Hefei, Anhui, China, 2016.
 596. **Xue Z.** Analysis on the reciprocating seal mechanism of the aircraft hydraulic cylinder. M.Sc. thesis. Zhejiang University, China, 2016.
 597. **Zhang E.** Research on the test system of high-pressure (28 MPa) reciprocating seals. M.Sc. thesis. Zhejiang University, China, 2016.
 598. **Tian Z.** Numerical analysis of the contact pressure, deformation and extrusion of composite vane seals. M.Sc. thesis. Wuhan University of Science and Technology, Mechanical Engineering, China, 2016.
 599. **Li L.** Theoretical and experimental research on vane sealing surface lubrication and friction. M.Sc. thesis. Wuhan University of Science and Technology, Mechanical Engineering, China, 2016.
 600. **Han X.** The influence of the hydraulic cylinder piston seal structure on start-up pressure and internal leakage. M.Sc. thesis. Lanzhou University of Technology, Mechanical and Electrical Engineering, China, 2016.
 601. **Cai Y.** Research on controllable flexible sealing under the condition of rotating. M.Sc. thesis. Northeast Petroleum University, Mechanical Engineering, China, 2016.
 602. **Wang Y.** Key technology research on the new fully flexible electro-hydraulic variable valve actuation system. Ph.D. thesis. Hunan University, Mechanical Engineering, China, 2016.
 603. **Sun Y.** The optimize design study on efficiency parameters for coaxial sealing based on Response Surface Methodology. M.Sc. thesis. Tianjin University of Science and Technology, Industrial Engineering, China, 2016.
 604. **Chen S.** Research on the static and dynamic seal performance of rubber O ring. M.Sc. thesis. Northeast Petroleum University, Mechanical Engineering, China, 2016.
 605. **Jun L.** Prediction model and control method of leakage rate of gate sealing structure. M.Sc. thesis. Huazhong University of Science and Technology, Engineering Thermophysics, China, 2016.
 606. **Strubel V.** Particle entrapment in EHD contacts – Aerospace applications. Ph.D. thesis. University of Lyon, Mechanics of the Structures, Lyon, France, 2016.

607. **Gebretsadik D. W.** Tribological characteristics of some multi-layered Pb-free engine bearing materials. Ph.D. thesis. Luleå University of Technology, Department of Engineering Sciences and Mathematics, Division of Machine Elements, Luleå, Sweden, 2017.
608. **Tao K.** Research on the working condition simulation system of reciprocating sealing for aircraft actuators. M.Sc. thesis. Zhejiang University, Mechanical and Electronic Engineering, China, 2017.
609. **Wang T.** Analysis and experimental study on seal failure in the track roller of hydraulic excavator. M.Sc. thesis. Jilin University, Mechanical Design and Theory, China, 2017.
610. **Zhang X.** Tribological and rheological properties of lubricating base oils. M.Sc. thesis. Chongqing University, Mechanical Engineering, China, 2017.
611. **Lei H.** Design and analysis of smart slider structure based on RFID communication. M.Sc. thesis. Southwest Petroleum University, Mechanical Engineering, China, 2017.
612. **Grandin M.** Tribology of metal-graphite composites – A study of sliding electrical contact surfaces. Ph.D. thesis. Uppsala University, Faculty of Science and Technology, Uppsala, Sweden, 2017.
613. **Zhong K.** A research on the performance of dynamic seal based on the TEHL theory. M.Sc. thesis. Harbin Institute of Technology, Mechanical and Electronic Engineering, China, 2017.
614. **Tian S.** Analysis and improvement of seals for rotary liner hanger bearing. M.Sc. thesis. China University of Geosciences (Beijing), Mechanical Engineering, Beijing, China, 2017.
615. **Guo J.** Study on contact effect and fatigue behaviour of high alloy bearing steel. M.Sc. thesis. Kunming University of Science and Technology, Materials Engineering, China, 2017.
616. **Wang H.** Efficiency-reinforcement study on oil seal based on numerical calculation. M.Sc. thesis. Tianjin University of Science and Technology, Mechanical Manufacturing and Automation, China, 2017.
617. **Ma W.** Tribological properties of leaf wax as green oil lubricant additive. M.Sc. thesis. North China Electric Power University, Mechatronic Engineering, Beijing, China, 2017.
618. **Du J.** Development and performance analysis of reciprocating seal for flexible shaft. M.Sc. thesis. Beijing University of Chemical Technology, Mechanical Engineering, Beijing, China, 2017.
619. **Olander P.** Tribology for greener combustion engines. Scuffing in marine engines and a lubricating boric acid fuel additive. Ph.D. thesis. Uppsala University, Faculty of Science and Technology, Uppsala, Sweden, 2018.
620. **Seriacopi V.** Evaluation of abrasive mechanisms in metallic alloys during scratch tests: a numerical-experimental study in micro-scale. Ph.D. thesis. Escola Politécnica, University of São Paulo, Mechanical Engineering – Manufacturing and Design, São Paulo, Brazil, 2018.

- Citations (non-self) in scientific books

621. **Zhang S. W.** State-of-the-art review of rubber tribology. Chapter 9 in the book *Polymer Tribology* (eds.: S. K. Shinha and B. J. Briscoe). Imperial College Press, London, England, 2009. ISBN: 978-1848162020.
622. **Heshmat H.** *Tribology of interface layers*. CRC Press, USA, 2010. ISBN: 978-0-8247-5832-5.
623. **Terrell E. J., Needelman W. M., Kyle J. P.** Wind turbine tribology. Chapter 18 in the book *Green Tribology* (eds.: M. Nosonovsky and B. Bhushan). Springer, London, England, 2012. ISBN: 978-3-642-23680-8.
624. **Etsion I.** Surface texturing. Chapter 53 in the book *Handbook of Lubrication and Tribology, Vol. II – Theory and Design* (2nd ed.) (ed.: R. W. Bruce). CRC Press, USA, 2012. ISBN: 978-1-4200-6808-2.
625. **Laukkanen A.** Wear models. Chapter 13 in the book *Handbook of Lubrication and Tribology, Vol. II – Theory and Design* (2nd ed.) (ed.: R. W. Bruce). CRC Press, USA, 2012. ISBN: 978-1-4200-6808-2.
626. **Pan X.-D.** Recent advances in rubber friction in the context of tire traction. Chapter 11 (pp. 443-499) in the book *Polymer, Adhesion, Friction, and Lubrication* (ed.: H. Zeng). John Wiley & Sons, Inc., Hoboken, NJ, USA, 2013. ISBN: 978-0-470-91627-8.
627. **Wang Y., Wang Q. J.** Lubrication regimes. In: *Encyclopedia of Tribology* (eds.: Q. J. Wang and Y.-W. Chung). Springer, New York, USA, 2013, pp. 2110-2113. ISBN: 978-0-387-92896-8.

- 628. Salant R. F. Reciprocating lip seal analysis.** In: *Encyclopedia of Tribology* (eds.: Q. J. Wang and Y.-W. Chung). Springer, New York, USA, 2013, pp. 2748-2752. ISBN: 978-0-387-92896-8.
- 629. Wang Y., Wang Q. J. Stribeck curves.** In: *Encyclopedia of Tribology* (eds.: Q. J. Wang and Y.-W. Chung). Springer, New York, USA, 2013, pp. 3365-3370. ISBN: 978-0-387-92896-8.
- 630. Jang J. Y., Khonsari M. M. Wet clutch friction material: the surfaced groove effect.** In: *Encyclopedia of Tribology* (eds.: Q. J. Wang and Y.-W. Chung). Springer, New York, USA, 2013, pp. 4102-4108. ISBN: 978-0-387-92896-8.
- 631. Stachowiak G., Batchelor A. W. Engineering Tribology** (4th ed.). Butterworth-Heinemann, USA, 2013.
- 632. Pawlak Z., Urbaniak W., Kaldonski T., Oloyede A. Importance of bearing porosity in engineering and natural lubrication.** Chapter 7 (pp. 311-354) in the book *Biomaterials and Medical Tribology* (ed.: J. Paulo Davim). Woodhead Publishing Ltd., Cambridge, England, 2013. ISBN: 978-0-85709-017-1.
- 633. Fred Higgs III C., Marinack M. Jr., Mpagazehe J., Pudjoprawoto R. Particle tribology: granular, slurry, and powder tribosystems.** Chapter 12 (pp. 391-445) in the book *Tribology for Scientists and Engineers* (eds.: P. L. Menezes, S. P. Ingole, M. Nosonovsky, S. V. Kailas, M. R. Lovell). Springer, New York, USA, 2013. ISBN: 978-1-4614-1944-0.
- 634. Prokopovich P. Tribology of inhaler devices and components.** Chapter 3 in the book *Inhaler devices: fundamentals, design and drug delivery* (ed.: P. Prokopovich). Woodhead Publishing, Cambridge, UK, 2013. ISBN: 978-0857094964.
- 635. Österle W. Sub-surface microstructural analysis.** Chapter 16 (pp. 323-337) in the book *Handbook of Technical Diagnostics* (ed.: H. Czichos). Springer, New York, USA, 2013. ISBN: 978-3-642-25849-7.
- 636. de Vicente J., Bombard A. J. F. Thin-film rheology and tribology of magnetorheological fluids.** Chapter 6 (pp. 142-155) in the book *Magnetorheology: Advances and Applications* (ed.: N. M. Wereley). Royal Society of Chemistry, Abingdon, England, 2014. ISBN: 978-1-849736671.
- 637. Heipl O., Murrenhoff H. Simulation of reciprocating seals.** Pages 1803-1816 in the book *Encyclopedia of lubricants and lubrication* (ed.: T. Mang). Springer, Berlin, Germany, 2014. ISBN: 978-3-642-22646-5.
- 638. Flitney R. Seals and sealing handbook** (6th ed.). Butterworth-Heinemann, USA, 2014. ISBN: 978-0080994161.
- 639. Urbaniak W. Smarowanie powierzchni – biologicznych i inżynierskich substancjami o budowie warstwowej.** UKW, Poland, 2015. ISBN: 978-83-8018-023-9.
- 640. Siczek K. J. Tribological processes in the valve train systems with lightweight valves.** Butterworth-Heinemann, UK, 2016. ISBN: 978-0-08-100956-7.
- 641. Khonsari M. M., Booser E. R. Applied Tribology: bearing design and lubrication** (3rd ed.). Wiley, USA, 2017. ISBN: 978-1-118-63724-1.

References

The following persons have kindly written and/or can provide letters of recommendation for Dr Nikas.

- **Dr Richard Sayles**, Reader (retired; currently Distinguished Research Fellow)
Imperial College London, Department of Mechanical Engineering, Tribology Group
Exhibition Road, London, SW7 2AZ, England
- **Professor Liming Chang**, Professor of Mechanical Engineering
The Pennsylvania State University, Department of Mechanical and Nuclear Engineering
322 Leonhard Building, University Park; PA 16802, U.S.A.
- **Dr Stathis Ioannides**, Director Product R&D of SKF (retired) and Visiting Professor in the
Mechanical Engineering Department of Imperial College London
Exhibition Road, London, SW7 2AZ, England
- **Professor Rob Dwyer-Joyce**, Professor of Lubrication Engineering, Head of Mechanical
Engineering Department
University of Sheffield, Department of Mechanical Engineering
Mappin Street, Sheffield, S1 3JD, England
- **Professor Michael M. Khonsari**, Professor of Mechanical Engineering

Louisiana State University, Mechanical & Industrial Engineering Department
1419A Patrick F. Taylor Hall; Baton Rouge, LA 70803, U.S.A.

- **Professor Michael Bryant**, Professor of Mechanical Engineering
The University of Texas at Austin, Department of Mechanical Engineering
1 University Station C2200; Austin, TX 78712-0292, U.S.A.
- **Mr Guy Burridge**, Product Manager
James Walker
Gawsworth House, Westmere Drive, Crewe, Cheshire, CW1 6XB, England
- **Mr Robert Almond**, Senior Engineer (Design Engineering Support)
GE Aviation
Mechanical Systems – UK Landing Gear & Actuation
Building CH2 (upper floor), Bishops Cleeve, Cheltenham, GL52 8SF, England
- **Mr David Goddard**, Senior Engineer (retired)
Smiths Aerospace
Arle Court, Cheltenham, Gloucestershire, GL51 0TP, England
- **Dr Erwin Zaretsky**, former Chief Engineer at NASA Glen Research Center, USA; Adjunct
Professor at Case Western Reserve University, Ohio, U.S.A.
- **Dr Theodore Costopoulos**, Associate Professor (retired)
School of Mechanical Engineering, National Technical University of Athens
Iroon Polytexneiou 9, 15780 Zografou, Athens, Greece
- **Dr Panagiotis Makris**, Associate Professor (retired)
School of Mechanical Engineering, National Technical University of Athens
28 Oktovriou (Patision) 42, 10682 Athens, Greece