Curriculum vitae

PERSONAL INFORMATION

Milan Omasta

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Sex Male | Date of birth 04/01/1985 | Nationality Czech

WORK EXPERIENCE

2014–Present — Assistant Professor

Institute of Machine and Industrial Design, Faculty of Mechanical Engineering, Brno University of Technology, Technicka 2896/2, Brno

2011–2014 — Assistant

Institute of Machine and Industrial Design, Faculty of Mechanical Engineering, Brno University of Technology, Technická 2896/2, Brno

2010–2011 — Technician

Institute of Machine and Industrial Design, Faculty of Mechanical Engineering, Brno University of Technology, Technicka 2896/2, Brno

EDUCATION AND TRAINING

2013 — Doctor of Philosophy (Ph.D.)

Faculty of Mechanical Engineering, Brno University of Technology, branch Design and Process Engineering, doctoral thesis: “Study of Elastohydrodynamic Film Formation in Hypoid Gears”

2009 — Master of Science in Mechanical Engineering (Ing.)

Faculty of Mechanical Engineering, Brno University of Technology, , branch Design and Process Engineering, diploma thesis: “Lower Limb Prosthetics FEM Analysis”

2005 — Bachelor of Science (Bc.)

Faculty of Mechanical Engineering, Brno University of Technology

PERSONAL SKILLS

Mother tongue(s): Czech

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	C1

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages

Driving licence: B

ADDITIONAL INFORMATION

Scientific activities

- Tribology of the wheel-rail contact, lubrication and contamination, friction management, traction enhancers.
- Elastohydrodynamic and mixed lubrication, roughness effects in fluid film lubrication, optical methods for lubricant films study.
- Fluid-film lubrication, journal bearings testing, fluid-film instabilities.

Publications

- h-index (WoS): 8
- Total Articles according to Web of Science (WoS): 28
- Sum of the Times Cited (WoS): 171
- Average Citations per Article (WoS): 6.11
- Researcher profile on ResearcherID, Thomson Reuters: http://www.researcherid.com/rid/G-5052-2012
- Researcher profile on Google Scholar: https://scholar.google.cz/citations?user=F96naTcAAAAJ

Selection of most recent and relevant peer reviewed publications:

- SHI, L.B.; LI, Q.; KVARDA, D.; GALAS, R.; OMASTA, M.; WANG, W.J.; GUO, J.; LIU, Q.Y. Study on the wheel/rail adhesion restoration and damage evolution in the single application of alumina particles. WEAR, 2019, 1807-1819. ISSN: 0043-1648.
- OMASTA, M.; ADAM, J.; ŠPERKA, P.; KŘUPKA, I.; HARTL, M. On the Temperature and Lubricant Film Thickness Distribution in EHL Contacts with Arbitrary Entrainment. Lubricants, 2018, 6(4), 1-12. ISSN: 2075-4442.
- OMASTA, M.; EBNER, M.; ŠPERKA, P.; LOHNER, T.; KŘUPKA, I.; HARTL, M.; HOEHN, B-R.; STAHL, K. Film formation in EHL contacts with oil-impregnated sintered materials. INDUSTRIAL LUBRICATION AND TRIBOLOGY, 2018, 70(4), 612-619. ISSN: 0036-8792.
- GALAS, R.; KVARDA, D.; OMASTA, M.; KŘUPKA, I.; HARTL, M. The role of constituents contained in water–based friction modifiers for top–of–rail application. Tribology International, 2018, 117(1), 87-97. ISSN: 0301-679X.
- OMASTA, M.; KŘUPKA, I.; HARTL, M. Effect of Sliding Direction on EHL Film Shape Under High Sliding Conditions. TRIBOLOGY TRANSACTIONS, 2017, 60(1), 87-94. ISSN: 1040-2004.
- GALAS, R.; OMASTA, M.; KLAPKA, M.; KAEWUNRUEN, S.; KŘUPKA, I.; HARTL, M. Case study: the influence of oil- based friction modifier quantity on tram braking distance and noise. Tribology in Industry, 2017, 39(2), 198-206. ISSN: 0354-8996.
- GALAS, R.; OMASTA, M.; KŘUPKA, I.; HARTL, M. Laboratory investigation of ability of oil-based friction modifiers to control adhesion at wheel-rail interface. WEAR, 2016, 368-369(3), 230-238. ISSN: 0043-1648.
- OMASTA, M.; MACHATKA, M; SMEJKAL, D.; KŘUPKA, I.; HARTL, M. Influence of sanding parameters on adhesion recovery in contaminated wheel–rail contact. WEAR, 2015, roč. 322-323, č. 1, s. 218-225. ISSN: 0043-1648.

Projects

- RISEN - Railway Infrastructure System Engineering Network (H2020-MSCA-RISE-2015; 691135; 2016-2020) – coordinator of the participant.
- Study on key technologies and application strategies for wheel-rail friction management in rail transport (The Ministry of Education, Youth and Sports of the Czech Republic; LTACH19001; 2019-2021) - key researcher
- Josef Bozek National Center of Competence for Surface Vehicles (Technology agency of the Czech Republic; TN01000026; 2018-2020) - key researcher
- A predictive system for catenary lines protection against extreme climatic conditions (Technology agency of the Czech Republic; TH04010034; 2018-2022) - key researcher
- Development of wayside unit for railway noise mitigation (Technology agency of the Czech

Republic; TJ01000427; 2018-2019) - research team member

- Research and Development of Condition Based Lubrication System (Technology agency of the Czech Republic; TH01011136; 2015-2017) - research team member
- Research and Development of System for Top-of-Rail Friction Management in Rail Transport (Technology agency of the Czech Republic; TA04030528; 2014-2017) – research team member
- Research and development of progressive sanding rail vehicle system (Technology agency of the Czech Republic; TA02030850; 2012-2014) – research team member
- Research and development of adaptive wheel flange lubrication system (Ministry of industry and trade of the Czech Republic; FR-TI3/442; 2011-2013) – research team member
- Development of international tribological research team (The Ministry of Education, Youth and Sports of the Czech Republic; EE2.3.20.0126; 2011-2014) – research team member
- Influence of rheology on real contacts lubrication (grant FRVŠ 3189/2011 G1; 2011-2011) – coordinator
- Surface topography modification of machine parts (grant FRVŠ 2452/2010 G1; 2010-2010 – coordinator

Academic and industrial internships

- 2019 – Southwest Jiaotong Technical University, Chengdu, P.R. China; internship in Power traction laboratory.
- 2015 – Technical University of Munich, Munich, internship at FZG