

Wassim HABCHI

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Academic profile

- 2008 – today: **Lebanese American University (LAU) – Byblos Campus – Lebanon**
Assistant Professor in Mechanical Engineering
Department of Industrial and Mechanical Engineering
- 2005 – 2008: **Institut National des Sciences Appliquées – INSA de Lyon – France**
PhD Thesis: A Full-System Finite Element Approach to Elastohydrodynamic Lubrication Problems : Application to Ultra-Low-Viscosity Fluids (partially supported by *SKF ERC*)
- 2004 – 2005:
(Double Major) **Université Pierre et Marie Curie – Paris VI – France**
Masters degree in Fluid Mechanics and Energetics.
(Rank: 1/89, Global Average : 17,65/20)
- 2000 – 2005: **Lebanese University Engineering Faculty II – Roumieh – Lebanon**
BE in Mechanical engineering

Professional experience

- 2005 – 2008: **Institut National des Sciences Appliquées – INSA de Lyon – France**
Teaching Experience and project supervising:
Department of Mechanical Engineering and Development (Numerical analysis, Structural mechanics, Calculus, Heat transfer, Mechanical design, Tribology)
- Mar.–Sep. 2005: **Laboratoire de Mécanique Energétique d'Evry (LMEE) – Evry – France**
Masters Thesis:
- Numerical simulation of heat transfer on a spatial enclosure (Thermal coupling by conduction and radiation).
- 2004 (1 month): **SANITA – Zouk Mosbeh – Lebanon**
Training:
- Design of industrial machinery (Dust collection plant, Conveyor belt, Packaging machine ...)
 - Maintenance and regulation of production machines

Languages and Software

Languages: English (Fluent), French (fluent), Arabic (Mother language).
Software: Delphi-Pascal, C++, Matlab, Comsol Multiphysics, MSOffice, Autocad(2D,3D), WinRDM , Robot, Thermoblend, Refprop.

Journal Publications

- **W. Habchi**, P. Vergne, S. Bair, O. Andersson, D. Eyheramendy and G. E. Morales-Espejel – Influence of pressure and temperature dependence of thermal properties of a lubricant on the behavior of circular TEHD contacts. *Tribology International* (Article in Press).
- H. Dormois, N. Fillot, **W. Habchi**, G. Dalmaz, P. Vergne, G. E. Morales-Espejel and E. Ioannides – A numerical study of EHD rolling-sliding contacts with spinning: a local analysis (Accepted for publication in *ASME Journal of Tribology*).
- **W. Habchi**, D. Eyheramendy, P. Vergne and G. Morales-Espejel – Stabilized Fully-Coupled Finite Elements for Elastohydrodynamic Lubrication Problems (Accepted for publication in *Computers & Structures*).
- **W. Habchi**, D. Eyheramendy, S. Bair, P. Vergne and G. Morales-Espejel – Thermal Elastohydrodynamic Lubrication of Point Contacts Using a Newtonian/Generalized Newtonian Lubricant. *Tribology Letters*, 2008, vol. 30 (1), pp. 41-52.
- **W. Habchi**, D. Eyheramendy, P. Vergne and G. Morales-Espejel – A Full-System Approach of the Elastohydrodynamic Line/Point Contact Problem. *ASME Journal of Tribology*, 2008, vol. 130, 021501.
- **W. Habchi**, I. Demirci, D. Eyheramendy, G. Morales-Espejel and P. Vergne – A Finite Element Approach of Thin Film Lubrication in Circular EHD Contacts. *Tribology International*, 2007, vol. 40, pp. 1466-1473.

Conferences

- N. Fillot, T. Doki-Thonon and **W. Habchi** – The full-system approach for elastohydrodynamic lubrication. *Proceedings of the COMSOL conference 2009*, Boston, USA.
- **W. Habchi**, D. Eyheramendy, P. Vergne and G. Morales-Espejel - A finite element fully-coupled approach to solve EHD problems – How to build an EHL solver in less than 10 minutes. *Proceedings of the 4th World Tribology Congress (WTC IV)*, 2009, Kyoto (Japan)
- N. Fillot, H. Berro, **W. Habchi** and P. Vergne – Complementary scales and models to better describe lubricated contacts. **Keynote presentation** at the *4th World Tribology Congress (WTC IV)*, 2009, Kyoto (Japan)
- **W. Habchi**, N. Fillot, O. Andersson, S. Bair, D. Eyheramendy, P. Vergne and G. Morales-Espejel – A need for relevant multiphysics modeling of EHD problems: application to realistic film thickness and friction predictions. *Proceedings of the 36th Leeds-Lyon Symposium on Tribology*, 2009, Lyon (France).
- **W. Habchi**, D. Eyheramendy, P. Vergne and G. Morales-Espejel – Friction and Film Thickness in Heavily Loaded Circular Contacts Operating Under Thermal Elastohydrodynamic Regime. *Proceedings of the 35th Leeds-Lyon Symposium on Tribology*, 2008, Leeds (UK).
- **W. Habchi**, D. Eyheramendy, P. Vergne and G. Morales-Espejel – Stabilized Finite Elements for Elastohydrodynamic Lubrication Problems. *Proceedings of the 6th International Conference on Engineering Computational Technology*, 2008, Athens (Greece).
- **W. Habchi**, D. Eyheramendy, S. Bair, P. Vergne and G. Morales-Espejel – A Finite Element Approach of the Fully Coupled Elastohydrodynamic Problem. *Proceedings of the STLE / ASME International Joint Tribology Conference*, 2007, San Diego (USA).
- **W. Habchi**, I. Demirci, D. Eyheramendy, G. Morales-Espejel and P. Vergne – A

Finite Element Approach of Thin Film Lubrication in Circular EHD Contacts.
Proceedings of the 33rd Leeds-Lyon Symposium on Tribology, 2006, Leeds (UK).

Awards

- Young Researcher best paper award for the paper “Stabilized Finite Elements for Elastohydrodynamic Lubrication Problems”, presented at the 6th *International Conference on Engineering Computational Technology*.
- INSA de Lyon, PhD of the year award for the year 2008.