CURRICULUM VITAE

FILIPPOS D. SOFOS

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Date of birth: 04/04/1976

Marital status: Married, 2 children

Education

- University of Limerick (IE) – Stokes Institute
  - PostDoc, Temperature measurements in 2-D flows (February to September 2012)
- University of Thessaly – School of Engineering – Civil Engineering Department
  - PhD in Engineering (March 2009)
- Democritus University of Thrace – School of Engineering – Electrical and Computer Engineering
  - MSc in Digital systems (February 2002)
  - Grade: 9.10/10.00
- Democritus University of Thrace – School of Engineering – Electrical and Computer Engineering
  - BSc in Electrical and Computer Engineering (October 1999)
  - Grade: 7.28/10.00

Work/Research experience

- (2010-now) University of Thessaly – School of Engineering – Civil Engineering Department – worked as research associate and assistant professor in Numerical methods in Hydraulics and Programming for engineers.

- (2014-2015) University of Western Macedonia – School of Engineering – ICT and Telecommunications Engineering Department – worked as assistant professor in Advanced Digital System Design.
- (2013-2014) Technological Educational Institute (T.E.I.) of Central Greece – worked as an assistant professor in Networking/Microprocessors.
- (2012) University of Limerick – Stokes Research Center – work as experienced researcher under grant Marie Curie for the project GASMEMS (Gas flows in Micro Electro Mechanical Systems).
- (2004-2013) Technological Educational Institute (T.E.I.) of Larisa – worked as a teaching assistant in Digital systems, Electronics and Telecommunications.
- (2005-2008) University of Thessaly – School of Engineering – Civil Engineering Department – worked as a researcher in project PENED-03337C, in molecular simulation techniques in nanochannels.
- (2005-2006) Technological Educational Institute (T.E.I.) of Central Greece (former, TEI of Lamia)– worked in a teleducation project.
- (2004) Viokeral/Terra S.A., Brick & Tile industry, Larissa, Greece – worked as an electrical engineer.
- (2003-2004) Greek Army – worked as a computer programmer (in parallel with military services).
- (2000-2003) INTPAKOM S.A., Xanthi Research Center, Greece – worked as Software/Hardware Engineer for the development of Telecommunication systems.

Grants

- Marie Curie grant as experienced researcher, February-September 2012, University of Limerick, Stokes Institute
- Technical Chambers of Greece, grant for degrees during last-year studies, Democritus University of Thrace, 1999.

Languages

- Mother tongue: Greek
- English: Cambridge Proficiency in English degree (Level C2)

- Spanish: Inicial de Espanol degree (Level B1)

Computer skills

- Operating systems: MS Windows, Linux (OpenSuse, Ubuntu)
- Programming languages: Fortran, C/C++, VHDL, Tcl, Assembly, Pascal
- Simulation tools: MatLab, LabView, LAMMPS (Large-scale Atomic/Molecular Massively Parallel Simulator), MPLAB
- Design tools: Xilinx Design Suite, Altera Design Suite, Protel PCB (Digital Design), AutoCAD

Journal Publications

J1. A.E. Giannakopoulos, F. Sofos, T.E. Karakasidis, A. Liakopoulos, "A quasi-continuum multi-scale theory for self-diffusion and fluid ordering in nanochannel flows", Microfluidics & Nanofluidics 17 (2014), 1011-1023

J2. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, How wall properties control diffusion in grooved nanochannels: a molecular dynamics study, Heat and Mass Transfer 49 (2013) 1081-1088.

J3. P. Berillis, C. Simon, E. Mente, F. Sofos, I.T. Karapanagiotidis, A novel image processing method to determine the nutritional condition of lobster, Micron 45 (2013) 140-144.

J4. F. Sofos, T.E. Karakasidis, A. Liakopoulos, Fluid flow at the nanoscale: how fluid properties deviate from the bulk, Nanoscience & Nanotechnology Letters 5 (2013) 1-4.

J5. F. Sofos, T.E. Karakasidis, A. Liakopoulos, Parameters affecting slip length at the nanoscale, Journal of Computational & Theoretical Nanoscience 10 (2013) 1-3.

J6. A.E. Giannakopoulos, F. Sofos, T.E. Karakasidis, A. Liakopoulos, Unified description of size effects of transport properties of liquids flowing in nanochannels, International Journal of Heat & Mass Transfer 55 (2012) 5087-5092.

J7. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Surface wettability effects on flow in rough wall nanochannels, Microfluidics & Nanofluidics (2012), Volume 12, Numbers 1-4, 25-31.

J8. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Effects of wall roughness shear viscosity and diffusion in nanochannels, International Journal of Heat & Mass Transfer 53 (2010) 3839-3846.

J9. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Effects of wall roughness on flow in nanochannels, Physical Review E 79 (2009) 026305.

J10. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Transport properties of liquid argon in krypton nanochannels: Anisotropy and non-homogeneity introduced by the solid walls, International Journal of Heat & Mass Transfer 52 (2009) 735-743.

J11. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Non-Equilibrium Molecular Dynamics investigation of parameters affecting planar nanochannel flows, Contemporary Engineering Sciences 2 (2009) 283-298.

Book Chapters

B1 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos and A. Liakopoulos, "Fluid flows from nanoscale to macroscale: a molecular dynamics based appoach", Volos 2014.

B2 F. Sofos, T.E. Karakasidis, and A. Liakopoulos, "Fluid transport properties at the nanoscale by molecular dynamics simulations", Volos 2014.

B3 F. Sofos, T.E. Karakasidis, and A. Liakopoulos, "*Variation of transport properties along nanochannels: a study by non-equilibrium molecular dynamics*", IUTAM Symposium on Advances in Micro- and Nanofluidics, IUTAM Bookseries 15, Springer Science + Business Media B.V., 2009.

B4 F. Sofos, I. Andreadis, F. Tsalides, A cellular approach for square root calculation based on IEEE 754 numbers, 4th International Conference on Technology and Automation, Thessaloniki, Greece, Tziolas Editions, 2000.

Conference Proceedings publications

C1 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos, A. Liakopoulos, Wall effects on diffusion coefficients in nanochannel flows, 11th International Conference on Diffusion in Solids and Liquids, Munich, Germany, June 2015.

C2 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos, A. Liakopoulos, A multiscale approach for the calculation of transport properties of liquids, CECAM workshop

"Advanced thermoelectrics at nanoscale: from materials to devices", Paris, France, July 2015.

C3 F. Sofos, T.E. Karakasidis, A. Liakopoulos, The impact of slip on nanochannel friction factor, 8th GRACM International Congress on Computational Mechanics, Volos, GR, July 2015.

C4 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos, A. Liakopoulos, Molecular dynamics methods for modelling blood flows at the micro/nano scale, 12th International Conference on Nanosciences & Nanotechnologies (NN15), 7-10 July 2015, Thessaloniki, Greece.

C5 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos and A. Liakopoulos, Transport properties of fluids in hydrophobic/hydrophilic nanochannels, 4th Micro and Nanoflows Conference, London, UK, September 2014

C6 F. Sofos, T.E. Karakasidis, A. Liakopoulos, Understanding the structure of fluid flows in nanodevices through molecular dynamics simulations, 12th International Conference on Protection and Restoration of the Environment, Skiathos, GR, July 2014

C7 F. Sofos, T.E. Karakasidis, A. Liakopoulos, Darcy friction factor in nanoscale channel flows: a molecular dynamics study, 10th HSTAM International Congress on Mechanics May 2013, Chania, Crete, Greece.

C8 F. Sofos, T.E. Karakasidis, A. Liakopoulos, Fluid/wall interactions in a nanofluidic system: the interface region, 9th International Conference on Nanosciences & Nanotechnologies (NN12), July 2012, Thessaloniki, Greece

C9 F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos, A. Liakopoulos, Transport properties of fluids in confined nanochannels: bridging nano to macro, 3rd Micro and Nano Flows Conference (MNF2011), August 2011, Thessaloniki, Greece.

C10 F. Sofos, T.E. Karakasidis, A. Liakopoulos, Fluid flow at the nanoscale: how fluid properties deviate from the bulk, 8th International Conference on Nanosciences & Nanotechnologies (NN11), July 2011, Thessaloniki, Greece

C11 F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Fluid properties in rough-wall nanochannels, 2nd European Conference on Microfluidics, Toulouse, 2010

C12 F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Non-Equilibrium Molecular Dynamics Simulations of Channel Flows, Bulletin of the APS 52 (17), 2007.

C13 F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Variation of transport properties along nanochannels: a study by non-equilibrium molecular dynamics, IUTAM Symposium on Advances in Micro- and Nanofluidics, Dresden, 2007

Conference presentations

C1. F. Sofos, T.E. Karakasidis, A.E. Giannakopoulos and A. Liakopoulos, Modelling and simulation of size effects on liquid flows at small scales, 1st Workshop on Fatigue of Materials used in Vascular Surgery, Volos, GR, February 2015

C2. F. Sofos, Temperature measurements in 2-D microflows, Marie Curie ESOF 2012, July 2012, Dublin, IE.

C3. F. Sofos, GASMEMS project presentation, 1st European Conference on Gas Microflows GASMEMS 2012, June 2012, Skiathos, GR.

C4. P. Berillis, E. Mente, C. Simon, F. Sofos, I.T. Karapanagiotidis, Tubule and digestive cell area measurement of the digestive gland of lobsters. The role of image analysis into the digestive physiology, The Crustacean Society Summer Meeting and the 10th Colloquium Crustacea Decapoda Mediterranea, July 2012, Athens.

C5. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Argon shear viscosity calculation in a rough-wall nanochannel, Nanotech Conference & Expo 2011, June 2011, Boston MA, USA.

C6. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Slip/No slip existence at the nanoscale, 26th Panhelenic Conference on Solid State Physics and Materials Science, Ioannina, 2010.

C7. F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Transport properties of flows at the nanoscale, 25th Panhelenic Conference on Solid State Physics and Materials Science, Thessaloniki, 2009.

C8. D. Kasiteropoulou, F. Sofos, T.E. Karakasidis, and A. Liakopoulos, Multiscale modeling of flow in channels with periodic rectangular protrusions, FLOW 2008 Conference, Kozani, Greece.

C9. F. Sofos, Calculation of flow and transport properties with molecular dynamics methods, 2nd Panhellenic meeting of post-graduate students - Hydromedon conference, 2008, Volos, Greece.

C10. T.E. Karakasidis, F. Sofos, D. Kasiteropoulou and A. Liakopoulos, Calculation of transport coefficients via molecular dynamics simulations, FLOW 2006 Conference, Patras, Greece.

Other publications

- Post-doc technical report, Measurement of Temperature in a 2D Microchannel, Limerick, Ireland, 2012.
- PhD Thesis, Fluid flows at the nanoscale: a study by Molecular Dynamics, Volos, 2009
- MSc Thesis, Advanced pipelining techniques in digital systems, Xanthi, 2002.
- Diploma Thesis, Design and development of a voltage stabiliser with a Digital Signal Processor (DSP), Xanthi, 1999