

Curriculum Vitae



Theodoros KARAKASIDIS

Professor

Dept. Of Civil Engineering

School of Engineering

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I.1. EDUCATION

- *BSc in Physics*, Aristotle University of Thessaloniki, Greece (1989).
- *MSc in Materials Science*, University Pierre et Marie Curie, Paris, France (1991).
- *PhD in Physics*, University Pierre et Marie Curie, Paris, France (1995).
- *Master in Education*, Greek Open University, Greece (2009).

I.2. ACADEMIC HONOURS & AWARDS

- Postdoctoral grant by the National Scholarship Foundation, Greece (1-Jan-2001 to 31-Dec-2002) "Simulation of liquids using Molecular Dynamics Techniques"
- Onassis Foundation Scholarship for Graduate Studies (1991).
- Highest Grade Point Average, Dept. of Physics, University of Thessaloniki (1989).
- Scholarship for Excellence in Academic Performance, Dept. of Physics, University of Thessaloniki, National Scholarship Foundation, Greece (1985 through 1989).

I.3. RESEARCH INTERESTS

- Computational materials science
- Applied Mathematics
- Computational Fluid Dynamics
- Nanomaterials, nanofluidics and nanotechnology

- Modeling of Biological materials - Bioinformatics
- Parallel computing and computational methods
- System dynamics and non-linear time series computational analysis
- Teaching Science and Technology with the use of ICT
- Scientific Literacy, Physics Education
- Open and distant learning

I.4. TEACHING EXPERIENCE

1999-present University of Thessaly: School of Engineering.

Sep 1997 – Aug 2005	Adjunct Assistant Professor, School of Engineering, University of Thessaly, Volos, Greece
Sep 2005 – Oct 2009	Lecturer of Applied Physics, School of Engineering, University of Thessaly, Volos, Greece
Nov 2009 – Feb 2014	Assistant Professor of Applied Physics, School of Engineering, University of Thessaly, Volos, Greece
Feb 2014 – Aug 2018	Associate Professor of Applied Physics, School of Engineering, University of Thessaly, Volos, Greece
Sep 2018 - present	Professor of Applied Physics, School of Engineering, University of Thessaly, Volos, Greece

Experience (Theoretical and Laboratory) with students in the Departments of:

- **Civil Engineering**
- **Electrical and Computer Engineering**
- **Mechanical Engineering.**
- General Physics I (winter Semester)
- General Physics II (spring semester)
- Numerical Analysis (winter Semester)
- Academic Writing

Post Graduate courses:

University of Thessaly : School of Engineering

System Theory and Simulation (spring semester) 2005-2011

Applied Mathematics (winter semester) 2006-2009

Common Interdepartmental-Inter-University Graduate Program “Econophysics-Financial Predictions” (co-organized by the Dept. of Economics and the Department of Civil Engineering of University of Thessaly and The Department of Physics of the International Hellenic University”

Statistical Physics and Thermodynamic approach in the Economy 2018-20

Seminar of Research Methodology 1st and 2nd part 2019-20

Common Greek-French Master Hydrohazards between University of Thessaly and University Joseph-Fourier Grenoble France

- Member of the steering committee
- Teaching at the Risk Course elements of non-linear time-series analysis (In English).
- Supervision of master thesis with French colleagues.

Short Courses Teaching (in English)

- Erasmus program. Two visits of one week to Cranfield University (UK). Talk on non-linear timeseries to the student of the Master Course in CFD (academic years 2013-14).
- Summer School on Physics of Advanced Materials, June 28-July 9, 2004, Thessaloniki, Greece, in the frame of Socrates/Erasmus Program.

Modeling Materials at the atomic scale: Molecular Dynamics Simulations.

- Summer School on Physics of Advanced Materials, June 30-July 12, 2003, Thessaloniki, Greece, στα πλαίσια του προγράμματος Socrates/Erasmus. :
α) Molecular Dynamics Simulation for Material Scientists: Methodology
β) Applications of Molecular Dynamics in Materials Science
- 3rd Balkan Summer School on Physics of Materials, Thessaloniki 9/10/2000, :
Atomistic Modeling of Materials.
- School on Vacuum Gas Dynamics via Kinetic Theory, May 7-11, 2012, Volos, Greece
Wednesday 9th of May, 2012, Introduction to molecular dynamics (Th. Karakasidis)

I.5. DIPLOMA THESIS SUPERVISING

- University of Thessaly
- S. Mpiziaki
- K. Livaniou
- K. Kyriakopoulos
- C. Beis
- I. Gkizkini
- N. Nasikas
- K. Anagnostopoulos

I.6. M.SC. THESES SUPERVISION DEPT. OF CIVIL ENGINEERING

University of Thessaly

- A. Charakopoulos
- A. Fragkou
- M. Morfoulaki
- M. Peristeropoulou
- X. Karatza
- A. Panagiotakopoulou
- E. Kolousiou
- P. Psofogeorgou
- M. Liatsikou
- P. Tselepis
- I. Economidis
-

I.7. M.SC. THESES SUPERVISION DEPT. OF GRADUATE ECONOPHYSICS

- K. Stergiou
- P. Karagkiozis

I.8. PH. D. SUPERVISION

Dept. of Civil Engineering, University of Thessaly

- Kefou N., "Heavy metal removal from water using nanoparticles and microfluidic technology".
- Liosis C. «*Modeling of water purification via chemical reactions and electromagnetic driving of particles*».
- Myrovali G. "*Calibration of transport patterns using multiple data sources*"

- Stergiou K. "Analysis and forecasting of energy resources availability and pricing with advanced time series analysis and machine learning methods"

Supervisor of PhDs succesfly defended

- Karvelas E. «Magnetic driving of particles in Neutronian and non-Newtonian fluids», *successfully defended, February 2019.*
- Fragkou A. «Detection and characterization of observations correlations of Dynamic Systems with advanced time series analysis methods», *successfully defended, January 2017.*
- Charakopoulos A. «Analysis and identification of spatiotemporal phenomena with the use of advanced Time series analysis methods" *successfully defended, July 2017.*

Participation in the supervision of the PhD Candidates of Dept. of Civil Engineering

- Sofos F. «Numerical Simulation and experimental study of flows in micro and nano-channels" *successfully defended, 2012.*
- Kasiteropoulou D. «Methods of Mesoscopic and Macroscopic Simulation of Fluid Motion" *successfully defended, 2012.*

Member of the Guidance Committee of Phd candidates that have been successfully defended

- Tantos C., Dept. of Mechanical Engineering, University of Thessaly (2016) «Effect of rotational and vibrational degrees of freedom in polyatomic gas heat transfer, flow and adsorption processes far from equilibrium"
- Lemonakis P. Dept. of Civil Engineering, University of Thessaly, « Contributing to the investigation of motorcycle drivers' behavior in curved road sections » (2012)

Participation in PhD Examination Committees

- Sofos F. «Numerical Simulation and experimental study of flows in micro and nano-channels" *successfully defended, 2012.* Dept. of Civil Engineering, University of Thessaly
- Kasiteropoulou D. «Methods of Mesoscopic and Macroscopic Simulation of Fluid Motion" *successfully defended, 2012.* Dept. of Civil Engineering, University of Thessaly
- Pantazis S. «Simulation of transport phenomena in conditions far from thermodynamic equilibrium via kinetic theory with applications in vacuum

technology and MEMS” (2011) Dept. of Mechanical Engineering, University of Thessaly.

- Galanis A. «Contributing to the development of a methodology for monitoring and evaluation of road safety and pedestrian mobility in the urban environment» (2011) Dept. of Civil Engineering, University of Thessaly.
- Lemonakis P. Dept. of Civil Engineering, University of Thessaly, « Contributing to the investigation of motorcycle drivers' behavior in curved road sections » (2012)
- Lycharopoulos I. (2014) «Computational solution of kinetic equation in time varying transport phenomena far from equilibrium» Dept. of Mechanical Engineering, University of Thessaly
- Tantos C. «Effect of rotational and vibrational degrees of freedom in polyatomic gas heat transfer, flow and adsorption processes far from equilibrium” Dept. of Mechanical Engineering, University of Thessaly (2016)
- Gkana A. «Complex Population Dynamics and Economic Repercussions: Predator-Prey Interactions, Infectious Disease Transmission and Solar Magnetic Activity» Department of Economics, University of Thessaly (2016)
- Dimitriadis P. «Hurst-Kolmogorov dynamics in hydroclimatic processes and in the microscale of turbulence”, School of Civil Engineering, National Technical University of Athens (2017)

I.9. EXAMINATION COMMITTEES

Member of PhD examination Committees

D. Kasiteropoulou (Dept. of Civil Engineering University of Thessaly)

F. Sofos (Dept. of Civil Engineering University of Thessaly)

A. Galanis (Dept. of Civil Engineering University of Thessaly)

S. Pantazis (Dept. of Mechanical Engineering University of Thessaly)

Member of Examination of Msc Thesis

- A. Paresidou
- D. Kasiteropoulou
- D. Spetsioti
- N. Kefou
- C. Neveskiotis (Publications C9, C11)

Member of Examination of Diploma Thesis (30)

I.10. RESEARCH EXPERIENCE (INDICATIVE)

- Division of Solid State, Physics Department, University of Thessaloniki, Diploma Thesis "Random Walks on perfect and disordered lattices". Part of the research program "Dynamics of diffusion in disordered solids" funded by VW-Stiftung.
- Section des Recherches de Metallurgie Physique, Nuclear Research Center of Saclay, France.
- Laboratoire de Solides Irradies, Ecole Polytechnique, France, Grain Boundaries, Researcher.
- Participation in the European Program COST-F2 «Electrochemical Sensors for flow measurements».
- Senior Researcher in the research project "Development of a parallel processing environment and testing of parallel algorithms", funded by the Research Committee of University of Thessaly.
- School of Engineering, Hydrodynamics Laboratory. Postdoctoral Research grant by the National Scholarship Foundation, Greece. "Simulation of liquids using Molecular Dynamics Technique".
- Senior researcher in the program «Analysis and modeling of chaotic behavior in hydraulic systems: from the microscale to macroscale», funded by the Greek Secretariat of Research and Technology.
- Senior researcher in the program "Numerical modeling and experimental study of flows in micro and nano-channels" funded by the Greek Ministry of Development, Greek Secretariat of Research and Technology.
- Senior Researcher in the Project of the Reform of the Undergraduate Curriculum of the Department of Civil Engineering of the University of Thessaly, Volos, Greece.
- Project Leader "Atomistic modeling of oxide interfaces", Funding University of Thessaly, Research Committee.

I.11. GUEST EDITOR OF SPECIAL VOLUMES

- 1) Guest Editor, Desalination and Water Treatment Journal (Taylor and Francis) Special Issue "Managing water from its source, to the final user (and back to the environment) 2016 Volume 57, Issue 25, 2016
- 2) Guest Editor, Environmental Processes (Springer) (Volume 2, Issue 1 Supplement, November 2015).

- 3) Guest Editor, Fresenius Environmental Bulletin (PSP) Special Issue "Sustainable environmental design, planning, construction and management (under preparation).
- 4) Guest Editor, Computational Materials Science "Advances in Multiscale Materials Modeling" Selected papers from EUROMAT 2017 Conference

I.12. ΔΙΑΚΡΙΣΕΙΣ ΑΡΘΡΩΝ ΣΕ ΔΙΕΘΝΗ ΕΠΙΣΤΗΜΟΝΙΚΑ ΠΕΡΙΟΔΙΚΑ ΜΕ ΚΡΙΤΕΣ

- 1) The paper

Georgiou, D.N., Karakasidis, T.E., Nieto, J.J., Torres, A., Use of fuzzy clustering technique and matrices to classify amino acids and its impact to Chou's pseudo amino acid composition *Journal of Theoretical Biology*, 257, 17 (2009)

Was among the 5 5 Top-cited papers that were published in the *Journal of Theoretical Biology* during 2009-2013.

- 2) The paper

T.E. Karakasidis and C.A. Charitidis, "Multiscale modeling in nanomaterials science", *Materials Science & Engineering C* 27, 1082 (2007)

was among the 25 Top downloaded papers of the journal.

I.13. ARTICLE REVIEWER FOR INTERNATIONAL JOURNALS

- Physical Review E
- Physics of Fluids
- Computers in Biology and Medicine
- Current Applied Physics
- International Journal for Numerical Methods in Fluids
- International Journal of Emerging Technologies in Learning (IJET)
- International Journal of Heat and Mass Transfer
- Journal of Computational and Applied Mathematics
- Journal of Intelligent and Fuzzy Systems
- Journal of Mathematical Imaging and Vision
- Journal of Physics: Condensed Matter
- Materials Science and Engineering B

- Mechanics of Advanced Materials and Structures
- Modelling and Simulation in Materials Science and Engineering
- Molecular Simulation
- Nanotechnology
- Surface Science
- International Journal of Nanomedicine

I.14. SESSION CHAIRMAN – ORGANIZING COMMITTEES

- Member of the organizing committee of the 12th International Conference "Protection and Restoration of the Environment", Skiathos, 29 June-3 July 2014
- Organization of minisymposium "Atomistic and Hybrid Methods in Fluid Mechanics" in the frame of 10th HSTAM International Congress on Mechanics, May 25-27, 2013, Chania, Crete, GREECE
- Member of the scientific committee, 2nd Educational Conference "Building the school of tomorrow", Eretria, Greece, 29-31 January 2010.
- Session Chairman: "North American - European and South American Symposium on Science and Technology Education, "Science and Technology Literacy on the 21th Century", May 31 to June 4, 2006, Nicosia, Cyprus.
- Member of the local organizing committee of the 18th Summer School/Conference "Non Linear Science and Complexity", Volos, Greece, 18-30 July 2005
- Session Chairman: "Computational Physics II", International Conference of Computational methods in Sciences and Engineering (ICCMSE 2003) Kastoria, Greece 12-16 September 2003.
- Session Chairman: "Computational Physics II", International Conference of Computational methods in Sciences and Engineering (ICCMSE 2003) Kastoria, Greece 12-16 September 2003.

I.15. MEMBER OF CONFERENCE ORGANIZING COMMITTEES

- Member of the Local Organizing Committee of the 18th Summer School/Conference "Non-Linear Science and Complexity", Volos, 18-30 July 2005
- Member of the Scientific Committee of the 2nd Educational Conference "Building the school of Tomorrow", Greek Physical Society, Eretria, Evia, Greece, 29-30-31 January 2010.

- Coorganization of the mini-symposium "Atomistic and Hybrid Methodos in Fluid Mechanics" in the frame of the 10th HSTAM International Congress on Mechanics, May 25-27, 2013, Chania, Crete, GREECE
- Member of the organizing Committee of the 12th International Conference "Protection and Restoration of the Environment", Skiathos, Greece, 29/6-3/7/2014
- Member of the local organizing Committee of the 8th GRACM International Congress on Computational Mechanics 12-15 July 2015, University of Thessaly, Volos GREECE
- Member of the Organizing Committee of the 2nd EWaS International Conference: "Efficient & Sustainable Water Systems Management toward Worth Living Development" June 1-4 2016 Chania, Crete, Greece.
- Member of the Local Scientific Committee of the 23rd International Congress on Sound and Vibration (ICSV23), 10-14 July 2016, Athens Greece
- Session Chairman στο 23rd International Congress on Sound and Vibration (ICSV23), 10-14 July 2016, Athens Greece
- President of the Organizing Committee of the 24th Summer School/Conference "Dynamical Systems and Complexity" Volos, greece 12-21 July 2017
- Co-organization of the Symposium "Multiscale Materials Modeling" in the frame of the EUROMAT2017 International Conference, Thessaloniki, September 17-22/9/2017
- Program Committee member of EDUCON2017 (IEEE Gobal Engineering Education Conference) 25-28 April 2017, Athens, Greece
- Member of the Organizing Committee of the 3rd Econophysics International Conference, Volos, Greece 28-30 September 2017
- Programme Committee member International Conference Complex Systems 2018, 23-28 September, Thessaloniki, Greece
- Co-organization of the Symposium "Multiscale and Multiphysics Modelling of Materials, Processes and Devices" in the frame of the EUROMAT2019 International Conference, Stockholm, September 1-5/9/2019

I.16. PROPOSAL EVALUATOR

- Evaluator for the Greek General Secretariat of Research
- Member of the National Committee of Evaluation in the domain of Nanotechnology for bilateral proposals of the Greek General Secretariat of Research.

I.17. COMPUTER SKILLS

- Certified trainer for teaching basic ICT skills to adults based on experience and after following a special course on adult learning and course design from the National Organisation for Accreditation of Qualifications & Vocational Guidance (Greece)
- **General skills**
 - Very good knowledge of Microsoft office
 - Internet and email

Teaching Software

- Blackboard, Webct, E-Class, Banner
- Seminar in the use of Interactive boards

Scientific computing related

- Large experience in development and optimization of FORTRAN programs.
- Experience in C programming
- Good Knowledge of Parallel Programming using the MPI/MPICH protocol under Linux.
- Very good knowledge of operating systems UNIX, LINUX, Windows.
- Matlab

I.18. LANGUAGES

English : Excellent

French : Excellent

German: Basic

Greek: Mother tongue

I.19. SOCIETY MEMBERSHIPS

- American Physical Society

- European Physical Society
- Materials Research Society
- IEEE Computer Society
- American Nano Society

I.20. SCIENTIFIC PUBLICATIONS

A. THESES

- A1.** «Molecular Dynamics Simulation of Diffusion and Grain Boundaries in ionic compounds», Ph.D Thesis, University Pierre et Marie Curie (PARIS 6), Paris France, (1995). (in French)
- A2.** «Study of Dynamical Properties of Calcium Fluoride by Computer Simulations», Master Thesis, University Pierre et Marie Curie (PARIS 6), Paris France,, (1991). (in French)
- A3.** «Correlated random walks on perfect and disordered lattices», ΔDiploma Thesis, Department of Physics, Aristotle University of Thessaloniki, Greece (1989).
- A4.** «Investigation of the use of virtual and Remote labs in the distant learning of physical sciences in Higher Education» Master Thesis in Education, Greek Open University, Greece (2009).(in Greek)

B. PUBLICATIONS IN INTERNATIONAL PEER REVIEWED JOURNALS

- B1.** T. Karakasidis and P. J. D. Lindan, "A comment on a rigid-ion potential for UO_2 ", *J. Phys. : Condens. Matter* 6, 2965 (1994).
- B2.** M. Meyer, T. Karakasidis and C. Waldburger, "High Temperature Diffusion in a NiO Tilt Grain Boundary: a Molecular Dynamics Study", *Materials Science Forum*, 207-209, 525 (1996).
- B3.** T. Karakasidis and M. Meyer, "Grain boundary diffusion of cation vacancies in nickel oxide: a molecular dynamics study", *Physical Review B*, 55, 13853 (1997).
- B4.** T.E. Karakasidis, G.A. Evangelakis, "Cation vacancy diffusion on the NiO(001) surface by molecular dynamics simulations", *Surface Science* 436, 193 (1999).
- B5.** T.E. Karakasidis, D.G. Papageorgiou and G.A.Evangelakis, "Structure and dynamics of NiO(001) and Ni/NiO(001) surfaces by molecular dynamics simulation", *Applied Surface Science* 162-163, 233 (2000).

- B6.** T.E. Karakasidis and M. Meyer, "Molecular dynamics simulation of the atomic structure of a NiO tilt grain boundary at high temperature", *Modelling and Simulation in Materials Science and Engineering* 8, 117 (2000).
- B7.** J. Argyris, I. Andreadis and T.E. Karakasidis, "On perturbations of the Mandelbrot map", *Chaos, Solitons and Fractals* 11, 1131 (2000).
- B8.** J. Argyris, T.E. Karakasidis and I. Andreadis, "On the Julia set of the perturbed Mandelbrot map", *Chaos, Solitons and Fractals* 11, 2067 (2000).
- B9.** T.E. Karakasidis, D.G. Papageorgiou G.A. Evangelakis, "Molecular dynamics study of the Ni⁺² adatom diffusion on the NiO(001) surface", *Defects and Diffusion Forum* 194-199, 1387 (2001).
- B10.** P. Samaras, A. Kungolos, T. Karakasidis, D. Georgiou and K. Perakis, "Statistical evaluation of PCDD/F emission data during solid waste combustion by fuzzy clustering techniques", *Journal of Environmental Science and Health – Part A* 36, 153 (2001).
- B11.** T.E. Karakasidis, D.G. Papageorgiou and G.A. Evangelakis, "Cation adatom diffusion on the NiO(001) surface by molecular dynamics simulation", *Surface Science* 486, 46 (2001).
- B12.** T.E. Karakasidis, "Vibrational properties of a $\Sigma 5(310)[001]$ NiO grain boundary as a function of temperature: A molecular dynamics study", *Computer Physics Communications* 147, 198 (2002).
- B13.** D.G. Papageorgiou, T.E. Karakasidis and G.A. Evangelakis, "Oxygen adatom diffusion on the NiO(001) surface by molecular dynamics simulation", *Physica B*, 318, 211 (2002).
- B14.** T.E. Karakasidis, "Vibrational Properties of a $\Sigma 5(310)[001]$ NiO grain boundary: a local analysis by molecular dynamics simulation", *Surface Science*, 515, 1, (2002).
- B15.** J. Argyris, T.E. Karakasidis and I. Andreadis, "On the Julia sets of a noise perturbed Mandelbrot map", *Chaos, Solitons and Fractals* 13, 245 (2002).
- B16.** T.E. Karakasidis and I. Andreadis, "A fractional Brownian Motion model for time series produced by constant temperature molecular dynamics simulations", *International Journal of Bifurcation and Chaos in Applied Science and Engineering* 12, 377 (2002).
- B17.** T.E. Karakasidis, I. Andreadis, "A homogeneous random fractal model for time series produced by constant energy molecular dynamics simulations", *Chaos Solitons and Fractals*, 15, 87 (2003).
- B18.** T.E. Karakasidis and D.N. Georgiou, "Partitioning elements of the Periodic Table via fuzzy clustering technique", *Soft Computing* 8, 231 (2004).

- B19.** T.E. Karakasidis and A.B. Liakopoulos, "Two regime dynamical behaviour in Lennard-Jones Systems: Spectral and rescaled range analysis", *Physica A : Statistical Mechanics and its Applications* 333, 225 (2004).
- B20.** I.A. Andreadis and T.E. Karakasidis, "Noise perturbation of the thermostat in constant temperature molecular dynamics simulations", *Chaos, Solitons & Fractals*, 20, 1165 (2004).
- B21.** T.E. Karakasidis, N.S. Cholevas, A.L. Liakopoulos, "Parallel Short Range Molecular Dynamics Simulations on Computer Clusters: Performance Evaluation and Modeling", *Mathematical and Computer Modelling*, 42 783 (2005).
- B22.** T.E. Karakasidis and E. Vamvakopoulos "Ni³⁺ adsorbate dynamics on a NiO (001) surface" *Surface Science*" 600, 1952 (2006). T.E. Karakasidis, "Vibrational and topological properties of selected NiO surfaces", *Surface Science*" 600, 4089 (2006).
impact factor 1,925, ετεροαναφορές 3)
- B23.** T.E. Karakasidis, "Vibrational and topological properties of selected NiO surfaces", *Surface Science*" 600, 4089 (2006).
- B24.** J.J. Nieto, A. Torres, D.N. Georgiou, T.E. Karakasidis, "Fuzzy Polynucleotide Spaces and Metrics" *Bulletin of Mathematical Biology* 68, 703 (2006) (impact factor 1,389, ετεροαναφορές 11)
- B25.** T.E. Karakasidis and C.A. Charitidis, "Multiscale modeling in nanomaterials science", *Materials Science & Engineering C* 27, 1082 (2007)
- [Top downloaded](#)
- B26.** C. Charitidis, T.E. Karakasidis, P. Kavouras, Th. Karakostas, "The Size effect of crystalline inclusions on the fracture modes in glass-ceramic materials", *Journal of Physics Condensed Matter* 19, 266209 (2007).
- B27.** T.E. Karakasidis, A. Fragkou, A. Liakopoulos, "System dynamics revealed by recurrence quantification analysis: Application to molecular dynamics simulations", *Physical Review E* 76, 021120 (2007).
- B28.** T.E. Karakasidis, C.A. Charitidis, D. Skarakis, F. Chouliaras, "Elastic properties of nanostructured materials with layered grain boundary structure", *Surface Science* 601, 3521, (2007).
- B29.** D. Vavougiou, T. Karakasidis, Application of ICT technology in physics education: teaching and learning elementary oscillations with the aid of simulation software, *International Journal of Emerging Technologies in Learning*, 3, 53, (2008)
- B30.** Andreadis I., Karakasidis T.E., "On probabilistic Mandelbrot maps", *Chaos, Solitons and Fractals*, 42 (3), pp. 1577-1583 (2009)

- B31.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, «Transport properties of liquid argon in krypton nanochannels: Anisotropy and non-homogeneity introduced by the solid walls», *International Journal of Heat and Mass Transfer* 52, 735 (2009)
- B32.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, "Effects of wall roughness on flow in nanochannels", *Physical Review E* 79, 026305 (2009).
- B33.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, "Non-Equilibrium Molecular Dynamics investigation of parameters affecting planar nanochannel flows" *Contemporary Engineering Sciences* 2, 283 (2009)
- B34.** T.E. Karakasidis, A. Liakopoulos, A. Fragkou, P. Papanicolaou, "Recurrence Quantification Analysis of Temperature Fluctuations in a Horizontal Round Heated Jet", *International Journal of Bifurcation and Chaos* 19, 2487 (2009).
- B35.** Georgiou, D.N., Karakasidis, T.E., Nieto, J.J., Torres, A., Use of fuzzy clustering technique and matrices to classify amino acids and its impact to Chou's pseudo amino acid composition *Journal of Theoretical Biology*, 257, 17 (2009)
- Το συγκεκριμένο άρθρο ήταν ανάμεσα στα 5 highly cited του διεθνούς επιστημονικού περιδικού theoretical Biology για το χρονικό διάστημα 2009-2013
- B36.** T.E. Karakasidis, A. Charakopoulos, Detection of low-dimensional chaos in wind time series, *Chaos, Solitons and Fractals*, 41, 1723 (2009)
- B37.** T.E. Karakasidis And C.A. Charitidis, Vacancy effect on the elastic constants of layer-structured nanomaterials, *Theoretical and Applied Fracture Mechanics* 51(3), pp. 195-201 (2009)
- B38.** D.N. Georgiou, T.E. Karakasidis, Juan J. Nieto, A. Torres, "A study of Intropy/clarity of genetic sequences using metric spaces and fuzzy sets", *Journal of Theoretical Biology*, 267(1), pp 95-105 (2010)
- B39.** Andreadis, I., Karakasidis, T.E., "On a topological closeness of perturbed Mandelbrot sets", *Applied Mathematics and Computation* 215, pp. 3674-3683 (2010)
- B40.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, "Effect of wall roughness on shear viscosity and diffusion in nanochannels", *International Journal of Heat and Mass Transfer*, 53, pp. 3839-3846 (2010)
- B41.** Ioannis Andreadis, Theodoros E. Karakasidis, "On a topological closeness of perturbed Julia sets", *Applied Mathematics and Computation*, 217(6), pp. 2883-2890 (2010)

- B42.** T.E. Karakasidis, C.A. Charitidis, "*Influence of nano-inclusions' grain boundaries on crack propagation modes in materials*", *Materials Science and Engineering: B*, 176(6), pp. 490-493 (2011)
- B43.** D. Kasiteropoulou, T.E. Karakasidis A. Liakopoulos, "Dissipative particle dynamics of parameters affecting planar nanochannel flows, *Materials Science and Engineering: B*, 176, 1574 (2011)
- B44.** D. Kasiteropoulou, T. Karakasidis, A. Laikopoulos, A Dissipative Particle Dynamics study of flow in periodically grooved nanochannels, *Journal of Numerical methods in Fluids* 68:1156-1172 (2012).
- B45.** Filippos Sofos, Theodoros E. Karakasidis and Antonios Liakopoulos, "Surface wettability effects on flow in rough wall nanochannels, *Microfluidics Nanofluidics*, Volume 12, pp 25-31 (2012)
- B46.** Ioannis Andreadis, Theodoros E. Karakasidis.: On a Closeness of the Julia Sets of noise-perturbed Complex quadratic Maps., *International Journal of Bifurcation and Chaos* 22, 1250221 [14 pages] (2012)
- B47.** 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 and Mass Transfer*, Volume 55, pp. 5087-5092 (2012)
- B48.** Karakasidis, T.E., Georgiou, D.N., Nieto, J.J.: Fuzzy regression analysis: An application on tensile strength of materials and hardness scales. ;*Journal of Intelligent and Fuzzy Systems*, 23, 177-186 (2012)
- B49.** Filippos Sofos, Theodoros E. Karakasidis and Antonios Liakopoulos, Fluid Flow at the Nanoscale: How Fluid Properties Deviate from the Bulk, *Nanoscience and Nanotechnology Letters* Vol. 5, 1-4, (2013)
- B50.** D.N.Georgiou, T.E.Karakasidis, A.C.Megaritis, A Short Survey on Genetic Sequences, Chou's Pseudo Amino Acid Composition and its Combination with Fuzzy Set Theory, *Open Bioinformatics Journal*, 7, 41-48 (2013)
- B51.** Filippos Sofos, Theodoros E. Karakasidis and Antonios Liakopoulos, Parameters Affecting Slip Length at the Nanoscale, *Journal of Computational and Theoretical Nanoscience*, Vol. 10, 1-3, 2013
- B52.** D. Kasiteropoulou, T.E. Karakasidis, A. Liakopoulos, Mesoscopic simulation of fluid flow in periodically grooved microchannels, *Computers and Fluids*. Volume 74, Pages 91-101 (2013)

- B53.** F Sofos, TE Karakasidis, A Liakopoulos, How wall properties control diffusion in grooved nanochannels: a molecular dynamics study, *Heat and Mass Transfer*, Volume 49, Issue 8, pp 1081-1088 (2013) 7 (suppl.1) 41
- B54.** I Andreadis, TE Karakasidis, On numerical approximations of the area of the generalized Mandelbrot sets, *Applied Mathematics and Computation* 219 (23), 10974-10982 (2013)
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- F27.** A.Livaniou, T. E. Karakasidis, Applications of Nanomaterials and Nanotechnology in Civil Engineering: An Overview, 9th International Conference on Nanosciences & Nanotechnologies – NN12, 12-15 July 2012, Thessaloniki, Greece
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E. BOOK CHAPTERS

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G. OTHER REPORTS

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I.21. CITATIONS

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