

Curriculum Vitae



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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
- 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 – present	Associate 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 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)

Textbooks and Course notes

1. "Numerical methods for engineers using matlab, 3rd edition, tziolas publications, 2015" (in greek, 650 pages) (in collaboration with Dr. Sarris from the Technological Institute of Athens). Representative chapter <https://static.eudoxus.gr/books/17/chapter-50656017.pdf>. The book is adopted as suggested textbook in 19 university departments in Greece (in 5 of them is adopted as the principal textbook).
2. "Academic writing" 2nd edition, Tziolas publications, 2015 (in Greek, English, French, Italian 764 pages) (in collaboration with Dr. E. Evdoridou, of the Language Department) Representative chapter <https://static.eudoxus.gr/books/59/chapter-50655959.pdf> The book is adopted as suggested textbook in 6 university departments in Greece (in 5 of them as the principal textbook).
3. "Notes for laboratory exercises (University of Thessaly, Department of Civil Engineering) (in Greek, 30 pages) (2010)

4. Matlab Laboratory Exercises for System Theory (100 pages, in Greek)

I.5. DIPLOMA THESIS SUPERVISING

- University of Thessaly
- S. Mpiziaki
- K. Livaniou
- K. Kyriakopoulos

I.6. M.S. THESES SUPERVISION

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. PH. D. SUPERVISION

Successfully Completed

A. Charakopoulos Analysis of spatiotemporal phenomena using advanced methods of timeseries analysis

Supervisor of (5) PhD students

I.8. 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

- G. Palamitzoglou
- I. Daxtaris
- S. Katsamagkou – N. Kefou
- M. Malekiddis
- A. Stamou
- G. Stamouli
- E. Papadaki

I.9. 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.10. CO-EDITOR OF SPECIAL VOLUME

Desalination journal (Taylor and Francis)
Environmental Processes journal (springer)

I.11. ARTICLE REVIEWER FOR INTERNATIONAL JOURNALS

- Surface Science, Nanotechnology
- Journal of Physics: Condensed Matter
- Modelling and Simulation in Materials Science and Engineering
- Current Applied Physics
- Mechanics of Advanced Materials and Structures
- Journal of Mathematical Imaging and Vision
- Journal of Computational and Applied Mathematics
- International Conference on Protection and Restoration of the Environment, Skiathos, Greece 1-5/5/2002

I.12. 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.13. PROPOSAL EVALUATOR

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

I.14. 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.15. LANGUAGES

English : Excellent

French : Excellent

German: Basic

Greek: Mother tongue

I.16. SOCIETY MEMBERSHIPS

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

I.17. 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.** Sofos, F., Karakasidis, T. E., & Liakopoulos, A. (2015). Fluid structure and system dynamics in nanodevices for water desalination. *Desalination and Water Treatment*, (ahead-of-print), 1-11.
- B2.** Sofos, F., Karakasidis, T. E., Giannakopoulos, A. E., & Liakopoulos, A. (2015). Molecular dynamics simulation on flows in nano-ribbed and nano-grooved channels. *Heat and Mass Transfer*, 1-10.
- B3.** A. Charakopoulos, T.E. Karakasidis, P. Papanicolaou, A Liakopoulos, The application of complex network time series analysis in turbulent heated jets, *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 24(2), 024408. (2014)
- B4.** 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, *icrofluidics and Nanofluidics*, 17(6), 1011-1023 (2014)
- B5.** 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)
- B6.** 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
- B7.** 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)
- B8.** 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)
- B9.** I Andreadis, TE Karakasidis, On numerical approximations of the area of the generalized Mandelbrot sets, *Applied Mathematics and Computation* 219 (23), 10974-10982

- B10.** PV Lemonakis, NE Eliou, GN Botzoris, TE Karakasidis, Contribution to the Investigation of Motorcyclists' Speed Prediction Equations for Two-Lane Rural Roads, *Journal of Transportation Technologies* 3, 204-213 (2014)
- B11.** Lemonakis, P.V., Eliou, N.E., Karakasidis, T. Botzoris, G., A new methodology for approaching motorcycle riders' behavior at curved road sections, *J European Transport Research Review*, 10.1007/s12544-014-0132-6
- B12.** 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, to appear in *The Open Bioinformatics Journal* (2013)
- B13.** A. Charakopoulos, T.E. Karakasidis, P.N. Papanicolaou, Detection of jet axis in a horizontal turbulent jet via nonlinear analysis of minimum/maximum temperature time series, *Chaotic Modeling and Simulation CMSIM*) 1: 205-217, 2012
- B14.** Filippou Sofos, Theodoros E. Karakasidis and Antonios Liakopoulos, "Surface wettability effects on flow in rough wall nanochannels, *Microfluidics Nanofluidics*, Volume 12, pp 25-31 (2012)
- B15.** 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)
- B16.** 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)
- B17.** 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)
- B18.** A. Charakopoulos, T.E. Karakasidis, P.N. Papanicolaou, Detection of jet axis in a horizontal turbulent jet via nonlinear analysis of minimum/maximum temperature time series, *Chaotic Modeling and Simulation CMSIM*) 1: 205-217, 2012
- B19.** 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).
- B20.** 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)

- B21.** Andreadis, I., Karakasidis, T.E., "On a topological closeness of perturbed Mandelbrot sets", *Applied Mathematics and Computation* 215, pp. 3674-3683 (2010)
- B22.** 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)
- B23.** Ioannis Andreadis, Theodoros E. Karakasidis, "On a topological closeness of perturbed Julia sets", *Applied Mathematics and Computation*, 217(6), pp. 2883-2890 (2010)
- B24.** D.N. Georgiou, T.E. Karakasidis, Juan J. Nieto, A. Torres, "A study of entropy/clarity of genetic sequences using metric spaces and fuzzy sets", *Journal of Theoretical Biology*, 267(1), pp 95-105 (2010)
- B25.** F. Sofos, T. E. Karakasidis, A. Liakopoulos, "Effect of wall roughness on shear viscosity and diffusion in nanochannels", *International Journal of Heat & Mass Transfer*, 53, pp. 3839-3846, 2010.
- B26.** Andreadis I., Karakasidis T.E., "On probabilistic Mandelbrot maps", *Chaos, Solitons and Fractals*, 42 (3), pp. 1577-1583 (2009)
- B27.** 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)
- B28.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, "Effects of wall roughness on flow in nanochannels", *Physical Review E* 79, 026305 (2009).
- B29.** Filippos Sofos, Theodoros Karakasidis, Antonios Liakopoulos, "Non-Equilibrium Molecular Dynamics investigation of parameters affecting planar nanochannel flows" *Contemporary Engineering Sciences* 2, 283 (2009)
- B30.** Andreadis, I., Karakasidis, T.E., "On probabilistic Mandelbrot maps", *Chaos, Solitons and Fractals*, 42 1577 (2009).
- B31.** 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).
- B32.** 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)

- B33.** 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)
- B34.** T.E. Karakasidis, A. Charakopoulos, Detection of low-dimensional chaos in wind time series, *Chaos, Solitons and Fractals*, Article in Press (2008)
- B35.** T.E. Karakasidis and C.A. Charitidis, "Multiscale modeling in nanomaterials science", *Materials Science & Engineering C* 27, 1082 (2007)
- B36.** C. Charitidis, T.E. Karakasidis, P. Kavouras, Th. Karakostas, "Size effect of crystalline inclusions on the fracture modes in glass-ceramic materials", *Journal of Physics Condensed Matter* 19, 266209 (2007).
- B37.** 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).
- B38.** 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).
- B39.** T.E. Karakasidis and E. Vamvakopoulos "Ni³⁺ adsorbate dynamics on a NiO (001) surface" *Surface Science*" 600, 1952 (2006).
- B40.** T.E. Karakasidis, "Vibrational and topological properties of selected NiO surfaces", *Surface Science*" 600, 4089 (2006).
- B41.** J.J. Nieto, A. Torres, D.N. Georgiou, T.E. Karakasidis, "Fuzzy Polynucleotide Spaces and Metrics" *Bulletin of Mathematical Biology* 68, 703 (2006)
- B42.** 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).
- B43.** T.E. Karakasidis and D.N. Georgiou, "Partitioning elements of the Periodic Table via fuzzy clustering technique", *Soft Computing* 8, 231 (2004).
- B44.** 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).
- B45.** I.A. Andreadis and T.E. Karakasidis, "Noise perturbation of the thermostat in constant temperature molecular dynamics simulations", *Chaos, Solitons & Fractals*, 20, 1165 (2004).

- B46.** 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).
- B47.** 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).
- B48.** 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).
- B49.** 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).
- B50.** 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).
- B51.** 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).
- B52.** 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).
- B53.** 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).
- B54.** 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).
- B55.** 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).
- B56.** 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).
- B57.** J. Argyris, I. Andreadis and T.E. Karakasidis, "On perturbations of the Mandelbrot map", *Chaos, Solitons and Fractals* 11, 1131 (2000).

- B58.** J. Argyris, T.E. Karakasidis and I. Andreadis, "On the Julia set of the perturbed Mandelbrot map", *Chaos, Solitons and Fractals* 11, 2067 (2000).
- B59.** T.E. Karakasidis, G.A. Evangelakis, "Cation vacancy diffusion on the NiO(001) surface by molecular dynamics simulations", *Surface Science* 436, 193 (1999).
- B60.** T. Karakasidis and M. Meyer, "Grain boundary diffusion of cation vacancies in nickel oxide: a molecular dynamics study", *Physical Review B*, 55, 13853 (1997).
- B61.** 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).
- B62.** T. Karakasidis and P. J. D. Lindan, "A comment on a rigid-ion potential for UO₂", *J. Phys. : Condens. Matter* 6, 2965 (1994).

C. PUBLICATIONS IN INTERNATIONAL CONFERENCES WITH REVIEW

- 1.** D. Kasiteropoulou, T. Karakasidis, and A. Liakopoulos, "Dissipative Particle Dynamics Simulation of Flow in Periodically Grooved Three-Dimensional Nano- and Microchannels", 3rd Micro and Nano Flows International Conference, Thessaloniki - Greece, 22-24 August 2011.
- 2.** F. Sofos, T.E. Karakasidis and A. Liakopoulos, Fluid flow at the nanoscale: how fluid properties deviate from the bulk, 8th International Conference on Nanosciences & Nanotechnologies – NN11, 12-15 July 2011, Thessaloniki, Greece
- 3.** D. Kasiteropoulou, T.E. Karakasidis, A. Liakopoulos, "Dissipative Particle Dynamics Simulation of Flow in Periodically Grooved Three-Dimensional Nanochannels", 4th ICSC, July 7-10, Athens, 2010.
- 4.** D. Kasiteropoulou, T. Karakasidis, and A. Liakopoulos, "Investigation of Parameters Affecting Planar Nanochannel Flows by Dissipative Particle Dynamics", 7th International Conference on Nanosciences and Nanotechnologies, Halkidiki, Greece, July 2010.
- 5.** D. Kasiteropoulou, T. Karakasidis, and A. Liakopoulos, "Microfluidics Simulations in Periodically Grooved Channels using Dissipative Particle Dynamics", 2nd European Conference on Microfluidics, Toulouse, December 2010.
- 6.** F. Sofos, T. Karakasidis, and A. Liakopoulos, "Fluid properties in rough-wall nanochannels, 2nd European Conference on Microfluidics", Toulouse, December 2010
- 7.** T E Karakasidis, C A Charitidis, "Nanoscale tailoring of crack propagation modes in glass-ceramic materials" symposium J: Interfacial nanostructures in ceramics: a

multiscale approach of the E-MRS 2007 Spring Meeting, Strasbourg (France) from May 28 to June 1, 2007

8. T.E. Karakasidis, N. Skoulidis, and H.M. Polatoglou "A molecular dynamics study of NiO deposited on Ag(001)", Submitted to symposium J : Interfacial nanostructures in ceramics: a multiscale approach of the E-MRS 2007 Spring Meeting, May 28 to June 1, 2007.
9. F. Sofos, T. Karakasidis and A. Liakopoulos: "Variation of transport properties across nanochannels: a study by non-equilibrium Molecular Dynamics", IUTAM Symposium on Advances in Micro and Nanofluidics, Dresden, Germany, 6-8 September 2007.
10. T.E. Karakasidis, C.A. Charitidis, D. Skarakis, "The effect of point defects on the elastic properties of layered structured nanomaterials", Conference MESOMECHANICS 2007, 13-17 May 2007, Giens Peninsula, France
11. T. Karakasidis, D. Vavougiou, "Promoting science literacy through understanding of novel technological materials", North American - European and South American Symposium on Science and Technology Education, "Science and Technology Literacy on the 21st Century", May 31 to June 4, 2006, Nicosia, Cyprus
12. T.E. Karakasidis, A. Fragkou, A. Liakopoulos, "Binary Lennard-Jones Fluids: A look through time series analysis", March Meeting της American Physical Society (Baltimore 13-17 March 2006).
13. Theodoros Karakasidis , Athanasios Fragkou , Antonios Liakopoulos, "Recurrence Analysis of Fluid Molecular Dynamics Simulation", 59th Annual Meeting of the APS Division of Fluid Dynamics, November 19-21, 2006; Tampa Bay, Florida
14. T.E. Karakasidis "Time series analysis of a fluid at the microscale", Workshop Heat transfer simulation at the atomic scale: new challenges for the future, Centre Européen de Calcul Atomique et Moléculaire, Lyon, France , 14-16/09/2006
15. T.E. Karakasidis, G. Palamitzoglou, P. Papanicolaou, A. Liakopoulos "Temperature fluctuations in a horizontal round heated jet :a look through time series analysis", Workshop "Towards the Future of Complex Dynamics" Dresden, May 30 - June 1, 2005
16. T.E. Karakasidis "Vibrational and topological properties of selected NiO surfaces", European Conference on Surface Science (ECOSS23) Berlin 4-8 September 2005
17. T.E. Karakasidis, "Vibrational properties of NiO(110) by molecular dynamics simulation", International Conference of Computational Methods in Sciences and Engineering 2003 (ICCMSE 2003) Kastoria, Greece 12-16/9/2003.
18. T.E. Karakasidis and A. B. Liakopoulos, "Characteristic scale extraction in continuum and atomistic fluid simulations", Conference on the Influence of Traditional

Mathematics and Mechanics on Modern Science and Technology, Messini, Greece, 24-28/5/2004.

- 19.** T.E. Karakasidis and A. B. Liakopoulos, "*Revealing short-time atomic dynamics in fluids: linear and non-linear methods*", έγινε δεκτό στο 7th National Congress on Mechanics, Chania, Crete, Greece, 24-26/6/2004.
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I.18. CITATIONS

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