

Curriculum Vitae

Yannis E. Dimakopoulos

PERSONAL DATA

Work Address: Laboratory of Computational Fluid Dynamics,
Department of Chemical Engineering,
University of Patras, Greece

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Site:

Marital Status: Single

Foreign Languages: English (Proficiency of Michigan , Lower of Cambridge)

MEMBER OF SCIENTIFIC COMMUNITIES

1. Technical Chamber of Greece
2. Greek Association of Chemical Engineers
3. Hellenic Society of Rheology
4. European Mechanics Society
5. Society of Plastics Engineers

MILITARY SERVICES

Completed **2/2004-2/2005**
Assignment in Supply and Transport with specialty of Chemical Engineer

EDUCATION

Diploma in Chemical Engineering, **9/1992 - 6/1997**
Graduated from the graduate program of the Department of Chemical Engineering,
University of Patras, Greece.
Thesis Title: 'Calculations of Sound Intensity in the interior of aircrafts'

Master in the Simulation, Optimization and Control of Processes **10/1997 – 12/2003**
Graduated from the post-graduate program of the Department of Chemical Engineering,
University of Patras, Greece.
Admitted after written and oral examinations (ranked 1st).

Doctoral Diploma in Chemical Engineering, **10/1997 – 12/2003**
Graduated from the post-graduate program of the Department of Chemical Engineering,
University of Patras, Greece.
Thesis Title: 'Displacement of Newtonian and Non-Newtonian fluids from tubes
with varying cross section'

TEACHING EXPERIENCE

1. Teaching Assistant of the following courses:

- a. "Introduction in Computers and Scientific Programming (Fortran)",
two semesters: October 1998 - December 1998, October 1999 - December 1999.
- b. "Numerical Analysis", three semesters: January 1997 - June 1997,
January 1998 - June 1998, January 1999 - June 1999.
2. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2005-2006, teaching the course "Computational Transport Phenomena" (XM897) for undergraduate students.
3. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2006-2007, teaching the course "Numerical Analysis" (XM660) for undergraduate students.
4. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2006-2007, teaching the course "Computational Transport Phenomena" (XM69) for undergraduate students.
5. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2011-2012, teaching the course "Introduction in Computers and Scientific Programming" for undergraduate students.
6. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2011-2012, teaching the course "Numerical Analysis" (XM660) for undergraduate students.
7. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2011-2012, teaching the course "Computational Transport Phenomena" (XME69) for undergraduate students.
8. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2012-2013, teaching the course "Numerical Analysis" (XM660) for postgraduate students.
9. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2012-2013, teaching the course "Computational Transport Phenomena" (XME69) for undergraduate students.
10. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras for the academic year 2012-2013, teaching the course "Numerical Methods" (E741) for postgraduate students.

PROFESSIONAL EXPERIENCE

1. Chemical Engineer, November 1997 - present.
2. Chemical Analyst in the Department of Analysis of Mineral Oils (TAO/AOAP) of the 872 AK,
April 2004 - September 2004.
3. Research associate of University of Patras, March 2005 – November 2007.
4. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras, 2005- 2007.
5. Post- Doctoral Researcher of the Biomedical Department of the Technical University of Eindhoven & Institute of Material Technology (MaTE), December 2007- February 2010.
6. Research associate of Laboratory of Computational Fluid Dynamics, Department of Chemical Engineering, University of Patras, March 2005 – present.
7. Post- Doctoral Researcher of the FORTH/ICE-HT, December 2012 – May 2013.

8. Researcher of the University of Cyprus, July 2012 – present.
9. Adjunct Lecturer of the Department of Chemical Engineering of the University of Patras, 2011- 2012, 2012-2013.
10. Elected Assistant Professor, Department of Chemical Engineering, University of Patras, February 2011 – present.

AWARDS

1. Prize of the Technical Chamber of Greece (TEE) for his performance in lectures during the academic year 1996-1997.
2. Post Doctoral scholar of the National Institute of Scholarships (IKY) for the academic year 2005-2007.
3. Who's Who in the World, Silver Anniversary Edition (2008).
4. Who's Who in the World (2009 - 2011).
5. Who's Who in Science (2011).
6. International Biographical Centre, Cambridge (2009).
7. Scholarship for attending DEISA/PRACE Spring School in Edinburgh (2011).
8. Scholarship for attending Cyprus Advanced HPC Workshop Winter in Nicosia (2012).

EDITORIAL BOARD

1. Member of the Editorial Board of *ISRN Applied Mathematics*, since March 2011.
2. Member of the Editorial Board of *Mathematical Problems in Engineering*, since July 2012.

INVITED PRESENTATIONS

- I1. Tsamopoulos, J., and Dimakopoulos, Y., “*A flexible and robust numerical method for solving moving boundary problems with large deformations: Application in Polymer processing and rheology.*”, PPS-2005, August 2005, Quebec City, CANADA.
- I2. Tsamopoulos, J., and Dimakopoulos, Y., “*Yield stress phenomena and known solutions of visco-plastic flows.*”, BIRS Workshop: 05w5028 Visco-plastic fluids: from theory to application, October 2005, Banff, CANADA.
- I3. Tsamopoulos, J., and Dimakopoulos, Y., “*Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment.*”, IUATM Symposium on Recent Advances in Multiphase Flows: Numerical and Experimental, June 2007, Istanbul, TURKEY.
- I4. Tsamopoulos, J., and Dimakopoulos, Y., “*A finite element based methodology for solving moving boundary problems with large deformations in complex geometries: Applications in polymer processing and rheology.*”, PPS-24, June 2008, Salerno, ITALY.
- I5. Dimakopoulos, Y., Bogaerds, A.C.B., Anderson, P.D., Hulsen, M.A., Baaijens, F.P.T., “*Fluid-structure interaction simulations of a stented aortic valve.*”, AIO Meeting, September 2009, Eindhoven, THE NETHERLANDS.

I6. Tsamopoulos, J., and Dimakopoulos, Y., “*Viscoplastic fluids: Recent developments and new challenges.*”, 6th East Mediterranean Chemical Engineering Conference, March 2010, Instabul, TURKEY.

I7. Dimakopoulos, Y., “*Hemodynamics of the aortic valve: Numerical simulation and open issues.*”, HSR 2011, May 2011, Athens, GREECE (plenary lecture).

I8. Dimakopoulos, Y., “*Fluid structure interaction of the aortic valve with the hemodynamic environment: A fictitious domain/Lagrange multiplier approximation.*”, Workshop on Hemodynamics and Hemorheology, February 2012, Nicosia, CYPRUS.

MEETINGS ORGANIZED - SESSIONS CHAIRED

1. 6th Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2007, Chaired Session on "Transport Phenomena-Fluid Mechanics".

REVIEWER OF SCIENTIFIC ARTICLES

Article reviewer of the following international scientific journals:

1. *Polymer Engineering & Science* since June of 2005,
2. *International Polymer Processing* since February of 2007,
3. *International Journal of Advanced Manufacturing Technology* since June of 2007,
4. *Rheologica Acta* since July of 2007,
5. *Journal of Materials Processing Technology* since October of 2007,
6. *Journal of Zhejiang University-SCIENCE A* since November of 2007
7. *Chemical Engineering Science* since February of 2008
8. *Nonlinear Analysis: Modelling and Control* since October of 2009,
9. *Journal of Engineering Science and Technology Review* since November of 2009,
10. *The IMA Journal of Applied Mathematics* since April of 2010,
11. *Journal of Process Mechanical Engineering* since February of 2011,
12. *Journal of Engineering Mathematics* since February of 2011,
13. *Applied Mathematical Modeling* since February of 2011,
14. *Composites Part A: Applied Science and Manufacturing* since April 2011,
15. *Journal of Non-Newtonian Fluid Mechanics* since May 2011,
16. *Discrete dynamics in nature and society* since June 2011,
17. *Journal of Hazardous Materials* since February 2012,
18. *Physical Review & Research International* since April 2012,
19. *International Journal of Engineering Science and Technology* since June 2012,
20. *Engineering with Computers* since September 2012,
21. *Applied Energy* since April 2013.

Article reviewer of the following international conferences:

22. *7th GRACM International Congress on Computational Mechanics* in April of 2011.

SPECIAL SKILLS

1. Programming: FORTRAN 77/90/95, BASIC, VISUAL BASIC, POSTSCRIPT
2. Operating Systems: MS-DOS, WINDOWS NT/2000/XP, UNIX, LINUX, VMS, OPEN-VMS, IRIX
3. Text editors: WORD, OPEN OFFICE, LATEX
4. Commercial Software: VISIO, AUTOCAD, MATLAB, MATHEMATICA, ORIGIN, PHOTOSHOP, FLUENT, GAMBIT, POLYFLOW
4. Data bases development and administration: ACCESS, SQL
5. Trained in the use of the commercial codes FLUENT and GAMBIT.
6. Advanced Computational Techniques: MPI and OPENMP Communication Protocols

SCIENTIFIC & RESEARCH INTEREST

1. Applied Mathematics: Analytical methods for the solution of partial differential methods, linear algebra, Green's functions, perturbations methods, stability analysis and bifurcation theory, differential geometry
2. Unit Operations and Transport Phenomena.
3. Fluid Dynamics: Single and two phase flows, free surface and moving boundary flows, nonisothermal flows, flows of Non-Newtonian fluids, physiological flows.
4. Computational Mechanics: Soft Tissue Engineering, Elastic solids.
5. Rheology of viscoplastic and viscoelastic materials: calculations of rheological properties, forming processes of polymeric materials.
6. Computational Linear Algebra: Solution methods of large scale problems, iterative techniques and preconditioning, eigenvalues and eigenvector calculations of large systems, solution of saddle point problems.
7. Numerical Methods: Solution of ordinary differential equations (Runge-Kutta, Finite Differences, Shooting method), interpolation methods (Lagrange polynomials, Splines), integration techniques (Gauss, Newton-Cotes).
8. Numerical Techniques for the Solution of Partial Differential Equations: Finite element, Discontinuous elements, finite differences, finite volumes, boundary elements.
9. Computational Techniques: Differential and algebraic techniques of grid generation, parallelization of algorithms, calculation speed up, 'sparse' matrix computations.

JOURNAL ARTICLES

- A1. Kouris, Ch., Dimakopoulos, J., Georgiou, G. and Tsamopoulos, J., "Comparison of spectral and finite element methods applied to the study of interfacial instabilities of the core-annular flow in an undulating tube", *Intern. J. Num. Meth. Fluids*, **39** (1), 41-73 (2002).
- A2. Dimakopoulos, Y., and Tsamopoulos, J., "Transient displacement of a Newtonian fluid by air in straight or suddenly constricted tubes", *Phys. Fluids*, **15** (7), 1973-1991 (2003).
- A3. Dimakopoulos, Y., and Tsamopoulos, J., "Transient displacement of a viscoplastic fluid by air in straight or suddenly constricted tubes", *J. Non-Newtonian Fluid Mech.*, **112**, 43-75 (2003).
- A4. Dimakopoulos, Y., and Tsamopoulos, J., "A quasi-elliptic transformation for moving boundary problems with large anisotropic deformations", *J. Comp. Physics*, **192**, 494-522 (2003).
- A5. Dimakopoulos, Y., and Tsamopoulos, J., "On the gas-penetration in straight tubes completely filled with a viscoelastic fluid", *J. Non-Newtonian Fluid Mech.*, **117** (2-3), 117-139 (2004).
- A6. Dimakopoulos, Y., and Tsamopoulos, J., "Gas assisted injection molding with fluids partially occupying straight and complex tubes", *Polym. Eng. Sci.*, **46** (1), 47-68 (2006).
- A7. Foteinopoulou, K., Mavrantzas, V., Dimakopoulos, Y., and Tsamopoulos, J., "Numerical simulation of multiple bubbles growing in a Newtonian liquid filament undergoing stretching", *Phys. Fluids*, **18** (4), art. no 042106, 1-24 (2006).
- A8. Dimakopoulos, Y., and Tsamopoulos, J., "Transient displacement of Newtonian liquid by air in periodically constricted circular tubes", *AIChE J.*, **52** (8), 2707-2726 (2006).

- A9. Dimakopoulos, Y., and Tsamopoulos, J., “*Transient displacement of Newtonian and viscoplastic liquid by air in complex tubes*”, *J. Non-Newtonian Fluid Mech.*, **142** (1-3), 117-139 (2007).
- A10. Zacharioudaki, M., Kouris, C., Dimakopoulos, Y., and Tsamopoulos, J., “*A direct comparison between volume and surface tracking methods with a boundary-fitted coordinate transformation and 3rd order upwinding*”, *J. Comp. Physics*, **227** (2), 1428-1469 (2007).
- A11. Tsamopoulos, J., Dimakopoulos, Y., Chatzidai, N., Karapetsas, G., and Pavlidis, M., “*Steady bubble rise, deformation and entrapment in Bingham fluids*”, *J. Fluid Mech.*, **601**, 123-164 (2008).
- A12. Chatzidai, N., Giannousakis, A., Dimakopoulos, Y., and Tsamopoulos, J., “*On the elliptic mesh generation in domains containing multiple inclusions and undergoing large deformations*”, *J. Comp. Phys.*, **228**, 1980-2011 (2009).
- A13. Dimakopoulos, Y., and Tsamopoulos, J., “*On the transient coating of a straight tube with a viscoelastic material*”, *J. Non-Newtonian Fluid Mech.*, **159** (1-3), 95-114 (2009).
- A14. Papaioannou, J., Karapetsas, G., Dimakopoulos, Y., and Tsamopoulos, J., “*Injection of a viscoplastic material inside a tube or between two parallel disks: Conditions for wall detachment of the advancing front*”, *J. Rheology*, **53** (5), 1155-1191 (2009).
- A15. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Analytical and numerical solutions for the flow of an undeformed viscoelastic film down a vertical cylinder*”, *Rheologica Acta*, **48** (9), 1031-1048(2009).
- A16. Dimakopoulos, Y., “*An efficient parallel fully implicit algorithm for the simulation of transient free surface flows of multimode viscoelastic liquids*”, *J. Non-Newtonian Fluid Mech.*, **165** (7-8), 409-424 (2010).
- A17. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Steady viscoelastic film flow over 2D topography:I. The effect of viscoelastic properties under creeping flow*”, *J. Non-Newtonian Fluid Mech.*, **165** (11-12), 576-591 (2010).
- A18. Chatzidai, N., Dimakopoulos, Y., and Tsamopoulos, J., “*Viscous effects on the oscillations of two equal and deformable bubbles under a step-change in pressure*”, *J. Fluid Mech.*, **673**, 513-547 (2011).
- A19. Dimakopoulos, Y., Bogaerds, A., Anderson, P., Hulsen, M., Baaijens, F.P.T., “*Direct numerical simulation of a 2D idealized aortic heart valve at physiological flow rates*”, *Comp. Meth. Biomech. and Biomed. Engrg*, **15** (11), 1157-1179 (2012).
- A20. Dimakopoulos, Y., Pavlidis, M., and Tsamopoulos, J., “*Steady bubble rise in Herschel–Bulkley fluids and comparison of predictions via the Augmented Lagrangian Method with those via the Papanastasiou model*”, *J. Non-Newtonian Fluid Mech.*, pp. 34-51 (2013), DOI information: 10.1016/j.jnnfm.2012.10.012
- A21. Tseropoulos, G., Dimakopoulos, Y., Tsamopoulos, J., and Lyberatos, G., “*On the flow characteristics of the conical Minoan pipes used in water supply systems, via Computational Fluid Dynamics*”, *J. Archaeological Sc.* **40** (4), 2057-2068 (2013).
- A22. Dimakopoulos, Y., Karapetsas, G., Malamataris, N.A., Mitsoulis, E., “*The Free (open) Boundary Condition at Inflow Boundaries*”, *J. Non-Newtonian Fluid Mech.*, **187-188**, 16-31 (2012).
- A23. Photeinos, D., Dimakopoulos, Y., and Tsamopoulos, J., “*Enhancement of the bubble rise velocity in a viscoplastic fluid through an oscillatory pressure field*”, submitted for publication in *I&EC Research* (2013).
- A24. Tsouka, S., Dimakopoulos, Y., Mavrantzas V., and Tsamopoulos, J., “*Stress gradient induced migration of polymers in corrugated channels*”, submitted for publication in *J. Rheology* (2013).
- A25. Papaioannou, J., Giannousakis, A., Dimakopoulos, Y., and Tsamopoulos, J., “*Large deformations of viscoelastic filaments containing multiple bubbles*”, submitted for publication in *J. Non-Newtonian Fluid Mech* (2013).

AP1. Fraggedakis, D., Dimakopoulos, Y., and Tsamopoulos, J., “*Transitions from core-annular flow to bubbling, pulsing or spray flow in a periodically constricted circular tube*”, to be submitted for publication in *Phys. Fluids* (2013).

AP2. Dimakopoulos, Y., Hulsen, M., Baaijens, F.P.T., “*Motion of tissue engineered & polymeric aortic heart valves: a comparison study*”, to be submitted in *J. Biomechanics* (2013).

AP3. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Steady viscoelastic film flow over 2D topography: II. The effect of capillarity inertia and substrate geometry in preparation*”, to be submitted for publication in *J. Non-Newtonian Fluid Mech.* (2013).

PRESENTATIONS IN CONFERENCES

P1. Dimakopoulos, Y., and Tsamopoulos, J., “*Dynamic Simulation of the Gas-Assisted Injection Molding Process*”, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 263

P2. Dimakopoulos, Y., and Tsamopoulos, J., “*Displacement of a viscous fluid by air in a cylindrical pipe*”, 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001. Paper in the Proceedings, pp. 797-800, (2001).

P3. Dimakopoulos, Y., and Tsamopoulos, J., “*Fluid displacement by air in a capillary tube*”, 6th National Congress on Mechanics (dedicated to the memory of the late Professor & Academician P. S. Theocaris). Organized by the Hellenic Society of Theoretical and Applied Mechanics (HSTAM), July 2001, Thessaloniki, GREECE. Paper in the Proceedings, Vol. I, pp. 84-89, (2001).

P4. Dimakopoulos, Y., and Tsamopoulos, J., “*A finite element method for simulating the penetration of a long bubble through a viscous fluid in a tube with a 4 to 1 contraction*”, 1st National Conference on Recent Advances in Mechanical Engineering, September 2001, Patras, GREECE. Paper in the Proceedings (CD available).

P5. Dimakopoulos, Y., and Tsamopoulos, J., “*Gas-assisted injection molding in straight and constricted tubes*”, 18th International Conference of the Polymer Processing Society, June 2002, Guimaraes, PORTUGAL. Paper in the Conference Proceedings, pp. 1-9.

P6. Dimakopoulos, Y., and Tsamopoulos, J., “*Simulations of liquid displacement in a tube by pressurized air using a quasi-elliptic mesh generation scheme*”, GRACM 2002, June 2002, Patras, GREECE, Abstract in Book of Abstracts and Paper in the Proceedings, pp 1-6, (CD available).

P7. Dimakopoulos, Y., and Tsamopoulos, J., “*Gas-assisted injection molding of Bingham plastics in straight and constricted tubes*”, 6th European Conference on Rheology, September 2002, Erlangen, GERMANY, Paper in the Conference Proceedings, pp. 427-428.

P8. Dimakopoulos, Y., and Tsamopoulos, J., “*Displacement of a viscoplastic fluid by air in straight and constricted tubes*”, FLOW 2002, October 2002, Patras, GREECE, Paper available in Proceedings (CD available).

P9. Zacharioudakis, Y., Dimakopoulos, Y., and Tsamopoulos, J., “*Nonisothermal displacement of a viscous fluid by air in a cylindrical pipe*”, 4rd Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003. Paper in the Proceedings, pp. 809-812.

P10. Dimakopoulos, Y., and Tsamopoulos, J., “*Gas-penetration in straight tubes partially or completely occupied by a viscoelastic fluid*”, XIIIth International Workshop on Numerical Methods for Non-Newtonian Flows, June 2003, Lausanne, SWITZERLAND, Abstract available in Proceedings (CD available).

- P11. Dimakopoulos, Y., and Tsamopoulos, J., “*Slipping effects on the displacement of a liquid by air inside tubes of varying diameters*”, 5th EUROMECH Fluid Mechanics Conference, Toulouse, FRANCE, August 2003. Abstract in the Conference Proceedings, pp. 56.
- P12. Dimakopoulos, Y., and Tsamopoulos, J., “*On the formation of long bubbles inside liquid-filled tubes of various shapes*”, AIChE 2003 Annual Meeting (special session in honor of the 60th Birthday of professor Gary Leal), San Francisco, USA, November 2003. Abstract at the web Conference Site.
- P13. Zacharioudakis, Y., Dimakopoulos, Y., and Tsamopoulos, J., “*Nonisothermal transient displacement of viscous fluids from cylindrical tubes by air*”, AIChE 2003 Annual Meeting, San Francisco, USA, November 2003. Abstract at the web Conference Site.
- P14. Dimakopoulos, Y., and Tsamopoulos, J., “*Transient displacement of viscoelastic liquids by air*”, HSR 2004, June 2004, Athens, GREECE. Abstract in the Conference Proceedings, pp. 48.
- P15. Dimakopoulos, Y., and Tsamopoulos, J., “*Transient displacement of viscoelastic liquids by air*”, 21st International Congress of Theoretical and Applied Mechanics (ICTAM), August 2004, Warsaw, POLAND.
- P16. Dimakopoulos, Y., Zacharioudaki, M., and Tsamopoulos, J., “*Transient displacement of viscoelastic liquids by air in periodically constricted circular tubes*”, 3rd Annual European Rheology Conference, April 2006, Hersonisos, GREECE.
- P17. Poteinopoulou, K., Mavrantzas, V.G., Dimakopoulos, Y., and Tsamopoulos, J., “*Numerical simulation of bubble deformation in liquid filaments undergoing stretching*”, 3rd Annual European Rheology Conference, April 2006, Hersonisos, GREECE.
- P18. Dimakopoulos, Y., Zacharioudaki, M., and Tsamopoulos, J., “*Transient displacement of a viscous fluid by air in periodically constricted circular tubes*”, 6th EUROMECH Fluid Mechanics Conference, June 2006, KTH, Stockholm, SWEDEN.
- P19. Chantzidai, N., Pavlidis, M., Karapetsas, G., Dimakopoulos, Y. and Tsamopoulos, J., “*On the flow and the deformation of a bubble in a viscoplastic fluid*”, FLOW 2006 (5th meeting), November 2006, Patras, GREECE, Paper available in Proceedings (CD available).
- P20. Dimakopoulos, Y. and Tsamopoulos, J., “*MPI-Parallel calculations for viscoelastic flows with free surfaces*”, FLOW 2006 (5th meeting), November 2006, Patras, GREECE, Paper available in Proceedings (CD available).
- P21. Dimakopoulos, Y. and Tsamopoulos, J., “*Gas penetration in complex tubes occupied viscous liquids and Bingham plastics*”, 6th Hellenic Conference in Polymer, November 2006, Patras, GREECE, Abstract available in Proceedings (CD available).
- P22. Dimakopoulos, Y., and Tsamopoulos, J., “*Gas penetration in straight tubes partially occupied by a viscoelastic liquid*”, 4th Annual European Rheology Conference, April 2007, Napoli, ITALY.
- P23. Tsamopoulos, J., Dimakopoulos, Y., Karapetsas, G., Chantzidai, N., and Pavlidis, M., “*Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment*”, 4th Annual European Rheology Conference, April 2007, Napoli, ITALY.
- P24. Dimakopoulos, Y., and Tsamopoulos, J., “*MPI-Parallel calculations for viscoelastic flows with free surfaces*”, 6th Panhellenic Conference in Chemical Engineering, June 2007, Athens, GREECE.
- P25. Dimakopoulos, Y., and Zacharioudaki, M., “*Instabilities during the displacement of viscoelastic liquids by air in periodically constricted circular tubes*”, 6th Panhellenic Conference in Chemical Engineering, June 2007, Athens, GREECE.
- P26. Zacharioudaki, M., Kouris, Ch., and Dimakopoulos, Y., “*Comparison between numerical methods for the simulation of two-phase flows*”, 6th Panhellenic Conference in Chemical Engineering, June 2007, Athens, GREECE.

- P27. Dimakopoulos, Y., and Tsamopoulos, J., “*On the gas penetration in periodically constricted circular tubes filled with viscoelastic liquids*”, XVth International Workshop on Numerical Methods for non-Newtonian Flows, June 2007, Rhodes, GREECE.
- P28. Tsamopoulos, J., Dimakopoulos, Y., Karapetsas, G., Chantzidai, N., and Pavlidis, M., “*Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment*”, XVth International Workshop on Numerical Methods for non-Newtonian Flows, June 2007, Rhodes, GREECE.
- P29. Tsamopoulos, J., Dimakopoulos, Y., Karapetsas, G., Chantzidai, N., and Pavlidis, M., “*Steady bubble rise and deformation in Newtonian and Bingham fluids and conditions for their entrapment*”, 6th European Congress of Chemical Engineering, September 2007, Copenhagen, DENMARK.
- P30. Dimakopoulos, Y., and Tsamopoulos, J., “*On the gas penetration in periodically constricted circular tubes filled with viscoelastic liquids*”, 6th European Congress of Chemical Engineering, September 2007, Copenhagen, DENMARK.
- P31. Zacharioudaki, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Transition from the perfect core-annular flow in a constricted tube to unsteady – stratified, bubbling, pulsing and spray – flow regimes*”, 6th European Congress of Chemical Engineering, September 2007, Copenhagen, DENMARK.
- P32. Dimakopoulos, Y., Pavlidis M., and Tsamopoulos, J., “*Transient coating of the inner wall of a straight tube with a viscoelastic material*”, The XV international congress on Rheology: The Society of Rheology 80th Annual Meeting, August 2008, California, USA.
- P33. Papaioannou, J., Karapetsas G., Dimakopoulos Y. and Tsamopoulos, J., “*Injection molding of a viscoplastic fluid inside a cylindrical tube or between two parallel coaxial disks*”, 5th Annual European Rheology Conference, April 2009, Cardiff, UK.
- P34. Papaioannou, J., Karapetsas G., Dimakopoulos Y. and Tsamopoulos, J., “*Injection molding of a viscoplastic fluid inside a cylindrical tube or between two parallel coaxial disks*”, 7th Panhellenic Conference in Chemical Engineering, June 2009, Patras, GREECE.
- P35. Pavlidis, M., Dimakopoulos Y. and Tsamopoulos, J., “*Steady viscoelastic film flow over 2D topography*”, 6th Annual European Rheology Conference, April 2010, Göteborg, SWEDEN.
- P36. Pavlidis, M., Dimakopoulos Y. and Tsamopoulos, J., “*Steady viscoelastic film flow over 2D topography*”, Multiflow 2010, November 2010, Brussels, BELGIUM.
- P37. Papaioannou, J., Yiannousakis, A, Dimakopoulos, Y., and Tsamopoulos, J., “*Deformation of a bubble in a viscoelastic liquid subjected to axisymmetric extensional flow*”, 8th Panhellenic Conference in Chemical Engineering, May 2011, Thessaloniki, GREECE.
- P38. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Effect of viscoplasticity and shear thinning in the motion and the deformation of a bubble*”, 8th Panhellenic Conference in Chemical Engineering, May 2011, Thessaloniki, GREECE.
- P39. Dimakopoulos, Y., Baaijens, F., Hulsen, M., and Bogaerds, A., “*Simulations of the motion of a stented aortic valve interacting with hemodynamic environment*”, 8th Panhellenic Conference in Chemical Engineering, May 2011, Thessaloniki, GREECE.
- P40. Dimakopoulos, Y., “*Hemodynamics of the aortic valve: numerical simulation and open issues*”, HSR 2011, June 2011, Athens, GREECE.
- P41. Pavlidis, M., Dimakopoulos, Y, and Tsamopoulos, J., “*Topography-induced thickness variation*”, HSR 2011, June 2011, Athens, GREECE.
- P42. Papaioannou, J., Yiannousakis, A, Dimakopoulos, Y., and Tsamopoulos, J., “*Deformation of a bubble in a viscoelastic liquid subjected to axisymmetric extensional flow*”, HSR 2011, June 2011, Athens, GREECE.

- P43. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*An improved augmented Lagrangian technique for free surface viscoplastic flows*”, GRACM 2011, June-July 2011, Athens, GREECE.
- P44. Dimakopoulos, Y., Bogaerds, A., Anderson, P., and Baaijens, F., “*Application of the fictitious domain/Lagrange multiplier method on the simulation of the aortic valve*”, GRACM 2011, June-July 2011, Athens, GREECE.
- P45. Dimakopoulos, Y., Papaioannou, J., and Tsamopoulos, J., “*A hybrid explicit-implicit scheme for integral constitutive models: Application to the simulation of PSA Materials*”, IWNMNNF 2012, March 2012, Blois Castle, FRANCE.
- P46. Pavlidis, M., Dimakopoulos, Y., and Tsamopoulos, J., “*Application of an improved augmented Lagrangian scheme for viscoplastic material flows: the rising deformable*”, IWNMNNF 2012, March 2012, Blois Castle, FRANCE.
- P47. Tseropoulos, G., Dimakopoulos, Y., Tsamopoulos, J., and Lyberatos, G., “*Computational Fluid Dynamics (CFD) evaluation of the flow characteristics of the Conical Minoan Terracotta Pipes in the Bronze Age*”, IWA Specialized Conference on Water & Wastewater Technologies in Ancient Civilizations, March 2012, Instabul, TURKEY.
- P48. Dimakopoulos, Y., “*Fluid Structure Interaction of the aortic valve with the hemodynamic environment: A Fictitious Domain/ Lagrange Multiplier Approximation*”, Workshop on Hemodynamics and Hemorheology, February 2012, Nicosia, CYPRUS.
- P49. Dimakopoulos, Y., Papaioannou, J., and Tsamopoulos, “*Cavity growth in pressure sensitive adhesive materials: 3D Finite element calculations*”, The XVIIth International Congress on Rheology, August 2012, Lisboa, PORTUGAN.
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STATISTICS

Self citations :	Eighty Four (84)
Citations by others:	One Hundred and Fifty One (151)
Total number of citations	Two hundred & Thirty Five (235)

PARTICIPATION IN PAST RESEARCH PROGRAMMES

EPET:

- National research program: *Increase in the national recyclability of used motor oils*
- Code: EPET/KA-3
- Coordinator: Professor C. Vayenas
- Position of YD: Researcher as a graduate student

EOK:

- European research program: *Molecular-Based approach to the simulation of polymer fluid flows in processing operations*
- Code: EOK/M-6
- Coordinator: Professor D. Theodorou
- Position of YD: Researcher as a graduate student

INCO:

- European research program: *Cavitation Phenomena in waste water treatment by ultra sound*
- Code: INCO-COPERNICUS 97/98 program, contract no IC15CT980141
- Total Budget 240 KECU, share of our lab was 58.75 KECU
- Duration: Three (3) years (1998-2001)

- Coordinator: Professor J. Tsamopoulos
- Position of YD: Researcher as a graduate student

Caratheodory:

- European research program: *Stability Analysis of Heat Transfer from Saturated Vapor through Condensation on a Cooled Surface*
- Code: Caratheodory Program
- Total Budget 20 KECU
- Duration: Three (3) years (1998-2001)
- Coordinator: Professor J. Tsamopoulos
- Position of YD: Researcher as a graduate student

EKBAN:

- National research program: *Reinforced Polymers*
- Code: GSRT/EPET II-EKVAN #88
- Total Budget 940 KECU, share of our lab was 150 KECU
- Duration: Three (3) years (1998-2001)
- Coordinator: Professor J. Tsamopoulos
- Position of YD: Researcher as a graduate student

IKY:

- National research program: “Development of innovative algorithms for the simulation of material forming processes”
- Code: IKY Post-Doctoral Scholarships
- Total Budget 10,800 €
- Duration: One and a half (1 1/2) years (2005-2007)
- Coordinator: Dr Yannis Dimakopoulos
- Position of YD: Post-Doctoral Scholar

PYTHAGORAS II:

- National research program: “New numerical techniques for the computation of flows of viscoelastic materials for industrial applications ”
- Code: PYTHGORAS II
- Total Budget 50,000 €
- Duration: Two (2) years (2005-2007)
- Coordinator: J. Tsamopoulos
- Position of YD: Post-Doctoral Scholar

MODIFY:

- European research program: “*Multi-scale modeling of interfacial phenomena in acrylic adhesives undergoing deformation*”
- Code: MODIFY, NMP-2008-25-2
- Duration: Three (3) years (2009-2012)
- Coordinator: J. Tsamopoulos
- Position of YD: Researcher

FSISOLVERS:

- European research program: “*Accelerating FSI solvers using general purpose graphical processing units (GPGPUs)*”
- Code: FSISOLVERS, TIEE/IIAHPO/0609(BE)/11
- Duration: Two (2) years (2012-2014)
- Coordinator: G. Georgiou
- Position of YD: Researcher

FCELL:

- European research program: “*Mathematical modeling of the operation of a fuel cell*”
- Code: GA:298300
- Duration: six (6) months (2012-2013)
- Coordinator: S. Neophitides
- Position of YD: Post-Doctoral Scholar