

JOHN TSAMOPOULOS

PERSONAL:

Born: December 9, 1956, in Athens, Greece.
Married, 3 children
Present Position: Professor of Chemical Engineering.
Office Address: Computational Fluid Dynamics Laboratory
Department of Chemical Engineering,
University of Patras, Patras, GREECE 26504,
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EDUCATION:

Ph.D. in Chemical Engineering, Massachusetts Institute of Technology (MIT), Boston, USA.
Date awarded: January 1985.
Thesis Title: Nonlinear Dynamics of Simple and Compound Drops.
Supervising Professor: Robert A. Brown,
Minor: Applied Mathematics.
G.P.A.: 5.0/5.0
M.S. in Chemical Engineering, Massachusetts Institute of Technology (MIT), Boston, USA.
Date awarded: June 1981.
Thesis Title: The Effect of Design on the Dynamics of Fluidized Bed Dryers
Supervising Professor: C. Georgakis.
Chemical Engineering Diploma, National Technical University of Athens (NTUA).
Date awarded: June 1981.
Thesis Title: Mass Transport in Reverse Osmosis Membranes
Supervising Professor: G. Saravakos.
G.P.A.: 9.3/10
Graduation Rank: 1/60.

EMPLOYMENT HISTORY:

Feb. 1995 – present	University of Patras, Professor.
Sep. 1991 - Jan. 1995	University of Patras, Associate Professor.
Feb. 1994 - Jan. 1995	State University of New York (SUNY), Buffalo, USA, Professor.
Sep. 1990 - Jan. 1994	State University of New York (SUNY), Buffalo, USA, Associate Professor.
Jan. 1985 - Aug. 1990	State University of New York (SUNY), Buffalo, USA, Assistant Professor.
Jun. 1986 - July 1986	Massachusetts Institute of Technology, (MIT), Boston, USA, Visiting Assistant Professor.

Sep. 1981 - Dec. 1984	Massachusetts Institute of Technology, (MIT), Boston, USA, Research and Teaching Assistant.
Summer 1978	AKZO CHEMIE NEDERLAND, Research Center, Amsterdam.

RESEARCH INTERESTS:

Modern numerical methods for solving basic and applied problems.
 Finite Element, Boundary Element, Finite Difference, Spectral Element & Hybrid Numerical Methods.
 Newtonian and Non-Newtonian Fluid Mechanics.
 Non-linear analysis of free boundary problems in drop and bubble dynamics.
 Dynamics and stability of liquid films over solid and liquid substrates.
 Momentum, Heat and Mass Transfer Applied to Materials Processing.
 Production limits and dynamics in Polymer Processing Operations.
 Fabrication of new materials by Chemical Vapor Infiltration & Chemical Vapor Deposition.
 Applied Mathematics.
 Singular perturbation methods using symbolic manipulators.
 Computer-aided Process Analysis. Stability analysis based on bifurcation theory.

HONORS AND AWARDS:

Fall 1979:	A.D. Little Fellowship, MIT,
Spring 1980:	DuPont Fellowship, MIT,
Fall 1980:	Union Carbide Fellowship, MIT,
Spring 1981:	Departmental Fellowship, MIT,
Fall 1981 & Spring 1982:	Halcon International Fellowship, MIT.
1980:	Chrysosoverghis Prize, National Technical University of Athens, NTUA. Awarded to the student ranking first overall in each graduating class in the School of Chemical Engineering.
1978 & 1979:	Prizes of the Technical Chamber of Greece.
1976 - 1979:	Greek Scholarship Foundation Awards.
1980:	"17th November 1973" prize, Technical Chamber of Greece. Awarded for highest academic performance among all students at NTUA.
1992, 1996, 2006:	Who's Who in Science and Engin., New Providence NJ, (USA),
2001 – 2005, 2008-2009:	Who's Who in the World, New Providence, NJ, (USA).
2007:	The presentation entitled: "Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, received the Best paper award in the Conference on Viscoplasticity: from Theory to Application, Ticino, SWITZERLAND, October 2007

LANGUAGES:

Greek, English (fluent), German (elementary)

MEMBERSHIP IN PROFESSIONAL SOCIETIES:

- American Institute of Chemical Engineers, 1980-1995.
- American Physical Society, 1981-1996.
- Society of Rheology (USA), 1986-Present.
- Technical Chamber of Greece, 1979-Present.
- American Ceramic Society, 1989-1992.
- American Chemical Society, 1980-1986.
- European Society of Rheology, 1994-Present.
- Hellenic Society of Rheology, 1996-present (Founding Member, 1st Secretary (1996-1998) and past President of the Society (2000-2002)).

OTHER PROFESSIONAL ACTIVITIES:

- Member of the National Advisory Research Council (EGSE), of the Ministry of Development of Greece, (1998-2001).
- Co-edited with D. Vlassopoulos the special issue of the J. Non-Newt. Fluid Mech. 102(2), (2002), dedicated to Prof. A. Acrivos on the occasion of his retirement from the Levich Institute and CCNY.
- Member of the editorial Board of the Journal Non-Newtonian Fluid Mechanics (Jan. 2002 - present).
- Member of the editorial Board with Ian Frigaard, John Billingham and Marcio Carvalho the special issue entitled “Complex Flows and Fluids” of the “Journal of Engineering Mathematics”, 71(1), (2011).
- Member of the editorial Board of the International Scholarly Research Network (ISRN) Chemical Engineering (2011-present)

PUBLICATIONS IN REFEREED JOURNALS:

- A1. **Tsamopoulos, J.** and Brown, R.A., "*Non-linear oscillations of inviscid drops and bubbles*", J. Fluid Mech., **127**, 519-537, (1983).
- A2. **Tsamopoulos, J.** and Georgakis, G., "*The effect of the relative size on the dynamics of fluidized bed dryers*", Chem. Eng. Comm., **23**, 343-362, (1983).
- A3. **Tsamopoulos, J.** and Brown, R.A., "*Resonant oscillations of inviscid charged drops*", J. Fluid Mech., **147**, 373-395, (1984).
- A4. Beris, A., **Tsamopoulos, J.**, Brown, R.A. and Armstrong, R.C., "*Creeping motion of a sphere through a Bingham plastic*", J. Fluid Mech., **158**, 219-244, (1985).
- A5. **Tsamopoulos, J.**, Akylas, T. and Brown, R.A., "*Dynamics of charged drop break-up*", Proc. Roy. Soc. Lond., **A401**, 67-88, (1985).
- A6. **Tsamopoulos, J.** and Brown, R.A., "*Dynamic centering of liquid shells*", Phys. Fluids, **30(1)**, 27-35, (1987).
- A7. **Tsamopoulos, J.**, Poslinski, A. and Ryan, M., "*Equilibrium shapes and stability of captive annular menisci*", J. Fluid Mech., **197**, 523-549, (1988).
- A8. **Tsamopoulos, J.**, "*Nonlinear dynamics and break-up of charged drops*", Amer. Instit. of Phys. Conf. Proc. Ser., **197**, 169-187, (1989).
- A9. Gupte, S. and **Tsamopoulos, J.**, "*Densification of porous materials by chemical vapor infiltration*", J. Electrochem. Soc., **136(2)**, 555-561, (1989).
- A10. Goethel, P., **Tsamopoulos, J.** and Yang, R.T., "*Modeling the channeling action of catalysts in gas-carbon reactions*", AIChE J., **35(4)**, 686-689, (1989).
- A11. **Tsamopoulos, J.**, Dandekar, H. and Scholtz, J., "*Gasification of graphite by the channeling action of metal catalysts*", J. Catalysis, **117**, 549-557, (1989).
- A12. Gupte, S. and **Tsamopoulos, J.**, "*An effective medium approach for modeling chemical vapor infiltration of porous ceramic materials*", J. Electrochem. Soc., **137(5)**, 1626-1638, (1990).
- A13. Gupte, S. and **Tsamopoulos, J.**, "*Forced-flow, chemical vapor infiltration of porous ceramic materials*", J. Electrochem. Soc., **137(11)**, 3675-3682, (1990).
- A14. Vincett, M., **Tsamopoulos, J.** and Lund, C.R., "*Carbon gasification by Group VIII metal catalysts*", J. Catalysis, **126**, 279-290, (1990).
- A15. Pelekasis, N., **Tsamopoulos, J.** and Manolis, G., "*Equilibrium shapes and stability of charged and conducting drops*", Phys. Fluids, **A2(8)**, 1328-1340, (1990).
- A16. Poslinski, A. and **Tsamopoulos, J.**, "*Nonisothermal parison inflation in Blow molding*",

AICHE J., 36(12), 1837-1850, (1990).

- A17. Poslinski, A. and **Tsamopoulos, J.**, "*Inflation dynamics of fluid menisci inside a mold cavity: I. Deformation driven by small gas pressures*", Chem. Eng. Sci., 46(1), 215-232, (1991).
- A18. Poslinski, A., Orlicki, D. and **Tsamopoulos, J.**, "*Inflation dynamics of fluid menisci inside a mold cavity: II. Deformation driven by large gas pressures*", Chem. Eng. Sci., 46(2), 597-608, (1991).
- A19. Pelekasis, N., **Tsamopoulos, J.** and Manolis, G., "*Nonlinear oscillations of liquid shells in zero gravity*", J. Fluid Mech., 230, 541-582, (1991).
- A20. Borkar, A. and **Tsamopoulos, J.**, "*Boundary layer analysis of the dynamics of axisymmetric capillary bridges*", Phys. Fluids, A3(12), 2866-2874, (1991).
- A21. Chitrapu, P., Lund, C.R. and **Tsamopoulos, J.**, "*A model for the catalytic growth of carbon filaments*", Carbon, 30(2), 285-293, (1992).
- A22. **Tsamopoulos, J.**, Chen, T.-Y. and Borkar, A., "*Viscous oscillations of capillary bridges*", J. Fluid Mech., 235, 579-609, (1992).
- A23. Chen, T.-Y., **Tsamopoulos, J.** and R. Good, "*Capillary bridges between parallel and non-parallel surfaces and their stability*", J. Coll. Interf. Sci., 151(1), 49-69, (1992).
- A24. Pelekasis, N., Manolis, G. and **Tsamopoulos, J.**, "*A hybrid finite-boundary element method for inviscid flows with a free surface*", J. Comp. Phys., 101(2), 231-251, (1992).
- A25. Pelekasis, N. and **Tsamopoulos, J.**, "*Bjerknes forces between two bubbles: I. Response to a step change in pressure*", J. Fluid Mech., 254, 467-499, (1993).
- A26. Pelekasis, N. and **Tsamopoulos, J.**, "*Bjerknes forces between two bubbles: II. Response to an oscillatory pressure field*", J. Fluid Mech., 254, 501-527, (1993).
- A27. Chen, T.-Y. and **Tsamopoulos, J.**, "*Nonlinear dynamics of capillary bridges: Theory*", J. Fluid Mech., 255, 373-409, (1993).
- A28. Molloy, D., **Tsamopoulos, J.**, Chen, T.-Y. and Ashgriz, N., "*Nonlinear dynamics of capillary bridges: Experiments*", J. Fluid Mech., 255, 411-435, (1993).
- A29. **Tsamopoulos, J.** and Borkar, A., "*Transient rotational flow of an Oldroyd-B fluid over a disk*", Phys. Fluids, 6(3), 1144-1157, (1994).
- A30. Borkar, A., **Tsamopoulos, J.**, Gupta, S. and Gupta, R., "*Spin coating of viscoelastic and nonvolatile fluids over a planar disk*", Phys. Fluids, 6(11), 3539-3553, (1994).
- A31. Chen, T.-Y. and **Tsamopoulos, J.**, "*Nonlinear dynamics of capillary bridges: Theory*" (Corrigendum), J. Fluid Mech., 265, 375-376, (1994).
- A32. Borkar, A. and **Tsamopoulos, J.**, "*Start-up flow of an Upper convected Maxwell fluid over a*

- rotating disk*", J. Non-Newtonian Fluid Mech., **55**, 163-189, (1994).
- A33. Pelekasis, N. and **Tsamopoulos, J.**, "*Dynamics of charged and conducting drops via the hybrid finite-boundary element method*", Engr. Anal. Boundary Elements, **15**, 339-348, (1995).
- A34. **Tsamopoulos, J.**, Chen, M. F. and Borkar, A., "*On the Spin-coating of Viscoplastic Fluids*", Rheol. Acta, **35**(6), 597-615, (1996).
- A35. Housiadas, C. and **Tsamopoulos, J.**, "*Unsteady flow of an axisymmetric annular film under gravity*", Phys. Fluids, **10**(10), 2500-2516, (1998).
- A36. Kouris, Ch., Neophytides, St., Vayenas, C., and **Tsamopoulos, J.**, "*Unsteady state operation of catalytic particles with constant and periodically changing degree of external wetting*", Chem. Eng. Sci., **53**(17), 3129-3142, (1998).
- A37. Housiadas, C. and **Tsamopoulos, J.**, "*Unsteady extrusion of a viscoelastic annular film: I. General model and its numerical solution*", J. Non-Newtonian Fluid Mech., **88**(3), 229-259, (2000).
- A38. Housiadas, C. and **Tsamopoulos, J.**, "*Unsteady extrusion of a viscoelastic annular film: II. Linearized model and its analytical solution*", J. Non-Newtonian Fluid Mech., **88**(3), 303-325, (2000).
- A39. Housiadas, C. and **Tsamopoulos, J.**, "*Cooling of a viscoelastic film during unsteady extrusion from an annular die*", Rheol. Acta, **39**(1), 44-61, (2000).
- A40. Housiadas, K., Georgiou, G. and **Tsamopoulos, J.**, "*The steady annular extrusion of a Newtonian liquid under gravity and surface tension*", Intern. J. Numer. Meth. Fluids, **33**(8), 1099-1119, (2000).
- A41. Kouris, Ch. and **Tsamopoulos, J.**, "*Concentric core-annular flow in a constricted tube with slowly varying cross section*", Chem. Eng. Sci., **55**(22), 5509-5530, (2000).
- A42. Smyrniaos, D., Pelekasis, N. and **Tsamopoulos, J.**, "*Boundary layer flow of air past solid surfaces in the presence of rainfall*", J. Fluid Mech., **425**, 79-110, (2000).
- A43. Kouris, Ch. and **Tsamopoulos, J.**, "*Core-annular flow in a periodically constricted circular tube, I. Steady state, linear stability and energy analysis*", J. Fluid Mech., **432**, 31-68, (2001).
- A44. Pelekasis, N. and **Tsamopoulos, J.**, "*Linear stability of a gas boundary layer flowing past a thin liquid film that grows over a flat plate*", J. Fluid Mech., **436**, 321-352, (2001).
- A45. Kouris, Ch. and **Tsamopoulos, J.**, "*Dynamics of axisymmetric core-annular flow in a straight tube: I. The more viscous fluid in the core, bamboo waves*", Phys. Fluids, **13**(4), 841-858, (2001).
- A46. Kouris, Ch., Neophytides, St., Vayenas, C., and **Tsamopoulos, J.**, "*Unsteady state operation of catalytic particles with constant and periodically changing degree of external wetting*",

(Corrigendum), Chem. Eng. Sci., 56, 2897, (2001).

- A47. Smyrniaios, D. and **Tsamopoulos, J.**, "*Squeeze flow of Bingham plastics*", J. Non-Newtonian Fluid Mech., 100(1-3), 165-190, (2001).
- A48. Pelekasis, N., St. Economou, C., and **Tsamopoulos, J.**, "*Linear oscillations and stability of a liquid bridge in an axial electric field*", Phys. Fluids, 13(12), 3564-3581, (2001).
- A49. Kouris, Ch. and **Tsamopoulos, J.**, "*Dynamics of axisymmetric core-annular flow: II. The less viscous fluid in the core, saw tooth waves*", Phys. Fluids, 14(3), 1011-1029, (2002).
- A50. Kouris, Ch., Dimakopoulos, J., Georgiou, G. & **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).
- A51. Smyrniaios, D., Pelekasis, N. and **Tsamopoulos, J.**, "*Boundary Layer Flow of Saturated Vapor and its Condensate over a Horizontal Tube*", Phys. Fluids, 14(6), 1945-1957 (2002).
- A52. Kouris, Ch. and **Tsamopoulos, J.**, "*Core-annular flow in a periodically constricted circular tube, II. Dynamics*", J. Fluid Mech., 470, 181-222 (2002).
- A53. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*Transient displacement of viscoplastic fluids by air in straight or suddenly constricted tubes*", J. NonNewt. Fluid Mech., 112/1, 43-75 (2003).
- A54. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*Transient displacement of a Newtonian fluid by air in straight or suddenly constricted tubes*", Phys. Fluids, 15(7), 1973-1991 (2003).
- A55. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*A quasi-elliptic transformation for moving boundary problems with large anisotropic deformations*", J. Comp. Phys., 192(2), 494-522 (2003).
- A56. Pelekasis, N., Gaki, A. Doinikov, A. & **Tsamopoulos, J.**, "*Secondary Bjerknes forces between two spherical bubbles and the phenomenon of acoustic streamers*", J. Fluid Mech., 500, 313-347 (2004), [doi: 10.1017/S0022112003007365](https://doi.org/10.1017/S0022112003007365).
- A57. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*On the gas-penetration in straight tubes completely filled with a viscoelastic fluid*", J. Non Newt. Fluid Mech., 117/2-3, 117-139 (2004).
- A58. Talaslidis, D., Manolis, D., Paraskevopoulos, E., Panagiotopoulos, C., Pelekasis, N. & **Tsamopoulos J.**, "*Risk Analysis of industrial structures under extreme transient loads*", J. Soil Dynamics. & Earthquake Eng., 24/6, 435-448 (2004).
- A59. Lac, E., Pelekasis, N. Barthes-Biesel, D. & **Tsamopoulos, J.**, "*Spherical Capsules in three-Dimensional unbounded Stokes Flows: effect of the membrane constitutive law and onset of buckling* ", J. Fluid Mech., 516, 303-334 (2004), [doi:10.1017/S002211200400062X](https://doi.org/10.1017/S002211200400062X).
- A60. Foteinopoulou, K., Mavrantzas, V. & **Tsamopoulos, J.** "*Numerical simulation of bubble growth during filament stretching of pressure-sensitive adhesive materials*", J. Non Newt. Fluid Mech., 122(1-3), 177-200 (2004), [doi:10.1016/j.jnnfm.2004.02.012](https://doi.org/10.1016/j.jnnfm.2004.02.012)

- A61. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*Gas Assisted Injection Molding of fluids partially occupying straight or complex tubes*", *J. Polym. Eng. Sci.*, **46**(1), 47-68 (2006), [doi: 10.1002/pen.20437](https://doi.org/10.1002/pen.20437).
- A62. Karapetsas and **Tsamopoulos, J.** "Transient squeeze flow of viscoplastic materials", *J. Non Newt. Fluid Mech.*, **133**, 35-56 (2006), [doi:10.1016/j.jnnfm.2005.10.010](https://doi.org/10.1016/j.jnnfm.2005.10.010)
- A63. Foteinopoulou, K., Mavrantzas, V., Dimakopoulos, Y. & **Tsamopoulos, J.** "*Numerical simulation of multiple bubbles growing in a Newtonian liquid filament undergoing stretching*", *Phys. Fluids*, **18**, 042106, 1-24 (2006), [doi: 10.1063/1.2194931](https://doi.org/10.1063/1.2194931)
- A64. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*On the displacement of a liquid by air in tubes with varying cross section*", *AIChE J.*, **52**(8), 2707-2726 (2006), [doi: 10.1002/aic.10889](https://doi.org/10.1002/aic.10889).
- A65. Housiadas, K., Klidis, G. and **Tsamopoulos, J.**, "*Two- and three-Dimensional Instabilities in the Film Blowing Process*", *J. Non Newt. Fluid Mech.*, **141**(2-3) 193-220 (2007), [doi:10.1016/j.jnnfm.2006.09.006](https://doi.org/10.1016/j.jnnfm.2006.09.006).
- A66. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*Transient displacement of Newtonian and Viscoplastic liquids by air from complex conduits*", *J. Non Newt. Fluid Mech.*, **142**(1-3) 162-182 (2007), [doi:10.1016/j.jnnfm.2006.08.002](https://doi.org/10.1016/j.jnnfm.2006.08.002)
- A67. Zacharioudaki, M., Kouris, Ch., 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. Phys.*, **227**(2) 1428-1469 (2007), [doi: 10.1016/j.jcp.2007.09.004](https://doi.org/10.1016/j.jcp.2007.09.004).
- A68. **Tsamopoulos, J.**, Dimakopoulos, Y Chatzidai N., Karapetsas, G. and Pavlidis M., "*Steady bubble rise and deformation in Newtonian and viscoplastic fluids and conditions for bubble entrapment*" *J. Fluid Mech.*, **601**, 123–164 (2008), [doi: 10.1017/S0022112008000517](https://doi.org/10.1017/S0022112008000517)
- A69. Karapetsas, G. and **Tsamopoulos, J.** "Steady extrusion of viscoelastic materials from an annular die", *J. Non Newt. Fluid Mech.*, **154**, 136–152 (2008). [doi: 10.1016/j.jnnfm.2008.04.007](https://doi.org/10.1016/j.jnnfm.2008.04.007).
- A70. 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), [doi: 10.1016/j.jcp.2008.11.020](https://doi.org/10.1016/j.jcp.2008.11.020).
- A71. Dimakopoulos, Y. & **Tsamopoulos, J.**, "*On the transient coating of a straight tube with a viscoelastic material*", *J. Non Newt. Fluid Mech.*, **159**, 95-114 (2009), [doi: 10.1016/j.jnnfm.2009.02.001](https://doi.org/10.1016/j.jnnfm.2009.02.001).
- A72. Papaioannou, J., Karapetsas, G., Dimakopoulos Y. and **Tsamopoulos, J.** "*Injection of a viscoplastic material inside a tube or between parallel disks: conditions for wall detachment of the advancing front*" *J. Rheol.* **53**(5), 1155-1191 (2009), [doi: 10.1122/1.3191779](https://doi.org/10.1122/1.3191779).
- A73. Pavlidis, M., Dimakopoulos, Y. and **Tsamopoulos, J.** "Fully developed flow of a viscoelastic

- film down a vertical cylindrical or planar wall*", *Rheol. Acta.*, **48**(9), 1031-1048, (2009), [doi: 10.1007/s00397-009-0386-4](https://doi.org/10.1007/s00397-009-0386-4).
- A74. Karapetsas, G. and **Tsamopoulos, J.** "On the stick-slip flow from slit and cylindrical dies of a Phan-Tien and Tanner fluid model: I. Steady state", *Phys. Fluids.*, **21**, 123101 (2009) (18 pages), [doi: 10.1063/1.3271495](https://doi.org/10.1063/1.3271495).
- A75. 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 Newt. Fluid Mech.*, **165**, 576-591 (2010), [doi: 10.1016/j.jnnfm.2010.02.017](https://doi.org/10.1016/j.jnnfm.2010.02.017).
- A76. Chatzidai, A. Dimakopoulos, Y. and **Tsamopoulos, J.**, "Viscous effects on two interacting and deformable bubbles under a step change in pressure" *J. Fluid Mech.*, **673**, 513-547 (2011), doi: <http://dx.doi.org/10.1017/S0022112010006361>
- A77. Tseropoulos, G., Dimakopoulos, Y., **Tsamopoulos, J.**, Lyberatos, G. "On the flow characteristics of the conical Minoan pipes used in water supply systems, via computational fluid dynamics simulations", *J. Archeolog. Sci.* **40**, 2057-2068 (2013), doi: <http://dx.doi.org/10.1016/j.jas.2012.11.025>
- A78. 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 Newt. Fluid Mech.* **200**, 34-51 (2013), doi: <http://dx.doi.org/10.1016/j.jnnfm.2012.10.012>.
- A79. Karapetsas, G. and **Tsamopoulos, J.** "On the stick-slip flow from slit and cylindrical dies of a Phan-Tien and Tanner fluid model: II. Linear stability analysis to two- and three-dimensional disturbances", *Phys. Fluids*, **25**, 093105 (2013), (28 pages), doi: <http://dx.doi.org/10.1063/1.4821805>.
- A80. Tsouka, S., Dimakopoulos, Y., Mavrantzas, V.I. and Tsamopoulos, J., "Stress Gradient Induced Migration of Polymers in Corrugated Channels" submitted for publication (2013).
- A81. Papaioannou, J., Giannousakis, A. Dimakopoulos, Y. and **Tsamopoulos, J.**, "Bubble deformation and growth inside viscoelastic filaments undergoing very large extensions" submitted for publication (2013).
- A82. Dimakopoulos, Y., Photeinos, D. and **Tsamopoulos, J.**, "Enhancement of the bubble rise velocity in a viscoplastic fluid through an externally applied oscillatory pressure field", submitted for publication (2013).
- A83. Fraggedakis, D., Dimakopoulos, Y., and **Tsamopoulos, J.**, "Transitions from stratified core-annular flow to bubbling, pulsing or spray flow in a periodically constricted circular tube", to be submitted for publication in *Phys. Fluids*, (2013).
- A84. Pavlidis, M. Dimakopoulos, Y. and **Tsamopoulos, J.** 'Steady viscoelastic film flow over 2D topography: II. The effect of capillarity, inertia and geometry of the substrate" to be submitted for publication in *J. Non Newt. Fluid Mech.* (2013).

CITATIONS

The previously listed research papers have been cited by more than **1572** research papers (including **281** self-citations) that appeared in various International Journals until **30/5/2013**, **h-index=23** (data from web of knowledge).

PRESENTATIONS AT SCIENTIFIC MEETINGS AND ABSTRACTS IN CONFERENCE PROCEEDINGS:

- B1. "*Nonlinear oscillations of inviscid drops and bubbles*", with R.A. Brown, 75th Annual AIChE Meeting, November 1982.
- B2. "*Oscillations of inviscid charged drops*", with R.A. Brown, 36th Annual Meeting of APS, Division of Fluid Mechanics, November 1983. Abstract in Bull. Am. Phys. Soc., 28, 1408, (1983).
- B3. "*Nonlinear dynamics of inviscid drops and liquid shells*", with R.A. Brown, 58th Annual Colloid and Surface Science Symposium of Amer. Chem. Soc., June 1984.
- B4. "*Analysis of a falling sphere in a Bingham plastic*", with A.N. Beris, R.A. Brown and R.C. Armstrong, International Rheology Conference, MEXICO, October 1984.
- B5. "*The motion of a solid sphere through a Bingham plastic*", with A. N. Beris, R.A. Brown and R.C. Armstrong, 77th Annual AIChE Meeting, November 1984.
- B6. "*Motion of a solid sphere through a Bingham plastic*", with A. N. Beris, R.A. Brown and R. C. Armstrong, Amer. Phys. Soc., Division of Fluid Mechanics, November 1984. Abstract in Bull. Am. Phys. Soc., 29, 1547, (1984).
- B7. "*Dynamics of charged drop break-up*", with T.R. Akylas and R.A. Brown, 37th Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1984. Abstract in Bull. Am. Phys. Soc., 29, 1518, (1984).
- B8. "*Nonlinear equilibria and dynamics of liquid drops*", with R.A. Brown and R. Natarajan, Symposium on Variational Methods for Free Surface Interfaces, Menlo Park, September 1985.
- B9. "*Dynamic centering of liquid shells*", with R.A. Brown, 38th Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1985. Abstract in Bull. Am. Phys. Soc., 30, 1691, (1985).
- B10. "*Nonlinear dynamics and break-up of charged drops*", with R.A. Brown, 78th Annual AIChE Meeting, November 1985.
- B11. "*Coupling engineering design with economics in an educational computer program*", with M. Vincett and R. Gupta, Amer. Soc. Eng. Education, August 1987.
- B12. "*Existence and stability of similarity solutions for the flow in a porous pipe*", with N. Pelekasis, 40th Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1987. Abstract in Bull. Am. Phys. Soc., 32, 2033, (1987).
- B13. "*Inflation dynamics of fluid annular menisci*", with A. Poslinski, and M. Ryan, 41st Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1988. Abstract in Bull. Am. Phys. Soc., 33, 2304, (1988).
- B14. "*Hybrid boundary-finite element method for drop dynamics*", with N. Pelekasis and G.

- Manolis, 41st Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1988. Abstract in Bull. Am. Phys. Soc., 33, 2231, (1988).
- B15. "*Dynamics of Axisymmetric Capillary Bridges*", with A. Borkar, 41st Annual Meeting of Amer. Phys. Soc., Division of Fluid Mechanics, November 1988. Abstract in Bull. Am. Phys. Soc., 33, 2240, (1988).
- B16. "*Equilibrium shapes and stability of captive annual menisci*", with A. Poslinski and M. Ryan, 81st Annual AIChE Meeting, November 1988.
- B17. "*Densification of porous materials through chemical vapor infiltration*", with S. Gupte, 81st Annual AIChE Meeting, November 1988.
- B18. "*A model of nickel-catalyzed gasification*", with M. Vincett and C.R. Lund, Amer. Chem. Soc., Division of Fuel Chemistry, April 1989.
- B19. "*A hybrid boundary-finite element method for Axisymmetric Inviscid Flows*", with N. Pelekasis and G. Manolis, Newark, USA, 1989. Paper in Advances in Boundary Elements, Vol.2, 419-432, (1989).
- B20. "*Densification of ceramic composites*", with S. Gupte, Intern. Ceramic Science & Technology Congress, Anaheim, USA, November 1989.
- B21. "*Unsteady-state operation of gasification reactors*", with M. Vincett and C. Lund, 82nd AIChE Meeting, November 1989.
- B22. "*Inflation dynamics of fluid annular menisci*", with A. Poslinski and D. Orlicki, 82nd Annual AIChE Meeting, November 1989.
- B23. "*Nonlinear dynamics of a liquid shell*", with N. Pelekasis, 83rd Annual AIChE Meeting, Abstract 161G, November 1990.
- B24. "*Nonisothermal parison inflation in blow molding*", with A. Poslinski, 83rd Annual AIChE Meeting, November 1990.
- B25. "*Equilibrium shapes and stability of charged and conducting drops*", with N. Pelekasis, 43rd Annual Meeting of Amer. Phys. Soc. Division of Fluid Mechanics, November 1990. Abstract in Bull. Amer. Phys. Soc., 35, 2244, (1990).
- B26. "*Spin coating of viscoelastic fluids on a rotating disk*", with A. Borkar and R. Gupta, 43rd Annual Meeting of Amer. Phys. Soc. Division of Fluid Mechanics, November 1990. Abstract in Bull. Amer. Phys. Soc., 35, 2278, (1990).
- B27. "*Nonlinear interactions between bubbles: A study of Bjerknes forces*", with N. Pelekasis, 84th Annual AIChE Meeting, Abstract in p214, November 1991.
- B28. "*Chemical Vapor deposition of SiC from Trichloro-Methyl-Silane in a stagnation point flow reactor*", with S.M. Gupte, T.J. Mountziaris and C.R.F Lund, 84th Annual AIChE Meeting, November 1991.

- B29. "*Bjerknes forces between two bubbles in response to an oscillatory pressure field*", with N. Pelekasis, 85th Annual AIChE Meeting, Abstract in p193, November 1992.
- B30. "*Nonlinear Dynamics of Capillary Bridges*", with T.-Y. Chen and N. Ashgriz, 86th Annual AIChE meeting, November 1993.
- B31. "*Spin Coating of Bingham-Plastic Fluids*", with A. Borkar, 86th Annual AIChE meeting, November 1993.
- B32. "*On the Spin-Coating of viscoplastic materials*", with M.F. Chen and A. Borkar, 2nd National Congress on Computational Mechanics, Chania, GREECE, June 1996.
- B33. "*On the Spin-Coating of viscoplastic materials*", with M.F. Chen and A. Borkar, 12th International Congress on Rheology, Quebec, CANADA, August 1996.
- B34. "*Three dimensional instabilities in the extrusion of annular films*", with C. Housiadas, 6th European Polymer Federation, Heraklion, GREECE, October 1996.
- B35. "*Gas-Liquid two-Phase flow in a pipe of variable cross-section*", with H. Kouris, 1st Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 1997.
- B36. "*Bjerknes interaction between two bubbles*", with N. Pelekasis, 1st Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 1997.
- B37. "*Modeling of extrusion of an annular thin film*", with C. Housiadas, 1st Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 1997.
- B38. "*Annular Film Extrusion*", with C. Housiadas, 3rd EUROMECH Conference, Goettingen, GERMANY, Sept. 1997. Abstract in Conference Proceedings, 368, (1997).
- B39. "*Bjerknes forces between two bubbles*" with N. Pelekasis, 3rd EUROMECH Conference, Abstract in p. 278, Goettingen, GERMANY, Sept. 1997. Abstract in Conference Proceedings, 278, (1997).
- B40. "*Peculiarities of Bingham fluids in non-uniform flow fields*", with D. Smyrniaios, 4th Panhellenic Conference on Polymers, Patras, GREECE, Nov. 1997. Abstract in the Conference Proceedings, p.185, (1997).
- B41. "*Influence of polymer elasticity on the shape and thickness distribution of an extruded annular polymeric film*", with Housiadas, 4th Panhellenic Conference on Polymers, Patras, GREECE, Nov. 1997. Abstract in the Conference Proceedings, p.162, (1997).
- B42. "*Non-axisymmetric effects in annular film extrusion*", with Housiadas, 2nd Meeting of the Hellenic Society of Rheology and International Symposium, Heraklion, GREECE, 1998. Abstract in the Proceedings, p.47, (1998).
- B43. "*Two Phase Flow in a Constricted Tube*", with H. Kouris, ECCOMASS 98, Athens, GREECE, Sept. 1998. Paper in the Proceedings of the 4th European Computational Fluid Dynamics Conference, Vol. 1(2), 717-722, (1998).

- B44. "*Squeeze Flow of Bingham Plastics*", with D. Smyrniaios, ECCOMASS 98, Athens, GREECE, Sept. 1998. Paper in the Proceedings of the 4th European Computational Fluid Dynamics Conference, Vol. 1(2), 1321-1325, (1998).
- B45. "*Unsteady Free Fall of an Annular Viscoelastic Film*", with K. Housiadas ECCOMASS 98, Athens, GREECE, Sept. 1998. Paper in the Proceedings of the 4th European Computational Fluid Dynamics Conference, Vol. 1(2), 1326-1331, (1998).
- B46. "*Unsteady Flow of an Axisymmetric Annular Film under Gravity*", with K. Housiadas, 5th European Society of Rheology Conference, Portoroz, SLOVENIA, Sept. 1998. Paper in the Proceedings of the 5th European Rheology Conference, 149-150, (1998), Springer.
- B47. "*Plastic Lubrication Theory of the Bingham Squeeze Problem*", with D. Smyrniaios, 5th European Society of Rheology Conference, Portoroz, SLOVENIA, Sept. 1998. Paper in the Proceedings of the 5th European Rheology Conference, 159-160, (1998), Springer.
- B48. "*Layered two-Phase Flow of Gas in a Boundary Layer and a Liquid film over a solid flat surface*", with D. Smyrniaios, and N. Pelekasis, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in the Proceedings, p. 505-508, (1999).
- B49. "*Stability Analysis of two-Phase Flow in a tube with variable cross-section*", with Ch. Kouris, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in the Proceedings, p. 485-488, (1999).
- B50. "*Linear Oscillations and Stability of Liquid Bridges under the Influence of a Direct Electric Field*", with St. Dragoumanos and C. Economou, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in the Proceedings, p. 501-504, (1999).
- B51. "*Stability Analysis of layered two-Phase Flow of Gas in a Boundary Layer and a Liquid film over a solid flat surface*", with N. Pelekasis, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in the Proceedings, p. 493-496, (1999).
- B52. "*Extrusion of a Newtonian Fluid from an Annular Die*", with Housiadas and Georgiou, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in the Proceedings, p. 593-596, (1999).
- B53. "*Stability Analysis of the Film Blowing Process for Producing thin Plastic Films*", with C. Housiadas, G. Athanasopoulos and V. Bogosian, 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999. Paper in Proceedings, p. 589-592, (1999).
- B54. "*Linear Stability of a gas boundary layer flowing past a thin film that grows over a flat plate*", with N. Pelekasis, 2nd International Symposium on Two-Phase Flow, Modeling and Experimentation, Pisa, ITALY, June 1999. Paper in the Proceedings, Vol. 2, p. 1249-1256, (1999).
- B55. "*Linear and nonlinear analysis of interfacial instabilities in two-phase flow in straight and constricted tubes*", with Ch. Kouris, 2nd International Symposium on Two-Phase Flow,

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- B56. "*Unsteady extrusion of a viscoelastic film from an annular die*", with Housiadas, Southern Europe Conference on Rheology, Sangineto, ITALY, September 1999.
- B57. "*The steady annular extrusion of a Newtonian liquid under gravity and surface tension*", with Housiadas and Georgiou, Southern Europe Conference on Rheology, Sangineto, ITALY, September 1999. Paper in the Conference Proceedings, V.2, p30-36, (1999).
- B58. "*Stability and Nonlinear Dynamics of the Core-Annular flow (CAF) in a periodically constricted tube (PCT)*", 2nd Meeting on Research in Flow Phenomena in Greece, Volos, May 2000. Paper in Proceedings, p.26-32, (2000).
- B59. "*Secondary Bjerknes forces and the phenomenon of acoustic streamers*", with N. Pelekasis, A. Gaki, and A. Doinikov, 2nd Meeting on Research in Flow Phenomena in Greece, Volos, May 2000. Paper in Proceedings, p.33-38, (2000).
- B60. "*Secondary Bjerknes forces and the phenomenon of Acoustic streamers*", with N. Pelekasis, A. Gaki, and A. Doinikov, The International Conference on Multiphase Systems, ICMS'2000, Ufa, RUSSIA, June 2000. Paper in the Proceedings of the International Conference on Multiphase Systems, p.197-203, (2000).
- B61. "*Three dimensional stability analysis of the film blowing process*" with K. Housiadas, XIII International Congress on Rheology, Cambridge, UK, August 2000. Paper in the Conference Proceedings, Volume 3, p. 152-154, (2000).
- B62. "*Squeeze flow of Bingham plastics*", with D. Smyrniaios, XIII International Congress on Rheology, Cambridge, UK, August 2000. Paper in the Conference Proceedings, Volume 2, p. 256-258, (2000).
- B63. "*The steady annular extrusion of a Newtonian liquid*" with Georgiou, XIII International Congress on Rheology, Cambridge, UK, August 2000. Paper in the Conference Proceedings, Volume 2, p. 131-133, (2000).
- B64. "*Steady flow of a two-dimensional film under pressure*", with G. Georgiou and W. Schultz, ECCOMAS 2000, European Congress on Computational Methods in Applied Sciences and Engineering, Barcelona, SPAIN, September 2000.
- B65. "*Linear stability of a gas boundary layer flowing past a thin liquid film that grows over a flat plate*", with D. Smyrniaios and N. Pelekasis, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 73.
- B66. "*Transition from the perfect core-annular flow to discontinuous core, continuous annular flow in a constricted tube*", with Kouris, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 166.
- B67. "*Dynamic Simulation of the Gas-Assisted Injection Molding Process*", with Y. Dimakopoulos,

- 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 263.
- B68. "*Interfacial Instabilities of the axisymmetric core-annular flow in a constricted tube*", with Kouris, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 281.
- B69. "*Evolution and stability of thin annular films*", with Housiadas, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 161.
- B70. "*Secondary Bjerknes forces and the phenomenon of acoustic streamers*", with A. Gaki, N. A. Pelekasis and A. Doinikov, 4th EUROMECH Fluid Mechanics Conference, Eindhoven, THE NETHERLANDS, November 2000. Abstract in the Conference Proceedings p. 26.
- B71. "*Transition of the continuous two-phase flow in a circular pipe of variable cross-section to continuous flow of one fluid and discontinuous flow of the other*", with Kouris, 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001. Paper in the Proceedings, p. 793-796, (2001).
- B72. "*Two-phase flow of a boundary layer with simultaneous condensation over a horizontal pipe*", with Smyrniotis and Pelekasis, 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001. Paper in the Proceedings, pp. 853-856, (2001).
- B73. "*Displacement of a viscous fluid by air in a cylindrical pipe*", with Dimakopoulos, 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001. Paper in the Proceedings, 797-800, (2001).
- B74. "*Effect of the air in the production of polymeric film via the Film Blowing process*", with Housiadas, 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001. Paper in the Proceedings, 861-864, (2001).
- B75. "*Two-phase flow in an undulating tube: Transitions from stratified to discontinuous flow of one of the fluids*", with Kouris, 3rd International Conference of the Hellenic Society of Rheology, Patras, GREECE, June 2001. Abstract in the Conference Proceedings, p. 97.
- B76. "*Mechanical properties and behavior of capsules in 3D flows*", with E. Lac, N. Pelekasis and D. Barthes-Biesel, 3rd International Conference of the Hellenic Society of Rheology, Patras, GREECE, June 2001. Abstract in the Conference Proceedings, p. 109.
- B77. "*On the effect of the relative viscosity of two fluids on the dynamics of axisymmetric core-annular flow in a tube*", with Kouris, 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. 45-51, (2001).
- B78. "*Stratified two-phase flow of a vapour boundary layer-condensate film over a cylinder*", with Smyrniotis and Pelekasis, 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

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- B79. "*Fluid displacement by air in a capillary tube*", with Dimakopoulos, 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).
- B80. "*Boundary layer flow of saturated vapor and its condensate over a horizontal tube*", with Smyrniaos and Pelekasis, 1st National Conference on Recent Advances in Mechanical Engineering, September 2001, Patras, GREECE. Paper in the Proceedings (CD available).
- B81. "*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*", with Dimakopoulos, 1st National Conference on Recent Advances in Mechanical Engineering, September 2001, Patras, GREECE. Paper in the Proceedings (CD available).
- B82. "*Two-phase flow in an undulating tube: Transitions from stratified to discontinuous flow of one of the fluids*", with Kouris, 1st National Conference on Recent Advances in Mechanical Engineering, September 2001, Patras, GREECE. Paper in the Proceedings (CD available).
- B83. "*Deformation and break-up of capsules in simple shear flow*", with E. Lac, N. Pelekasis and D. Barthes-Biesel, 54th Annual Meeting of the Division of Fluid Dynamics, American Physical Society, San Diego, November 2001, Abstract in the Conference Proceedings.
- B84. "*A finite element method for simulating the displacement of a melt by pressurized air from straight and constricted tubes*", Institute of Non-Newtonian Fluid Mechanics, Conference on Process Modeling, March 2002, Aberystwyth, WALES. Abstract in the Conference Proceedings.
- B85. "*Transient simulations of two-phase, core-annular flow in an undulating tube: Slug, drop or spray formation from one of the fluids*", 10th Workshop on two-phase flow predictions, April 2002, Merseburg, GERMANY. Paper in the Conference Proceedings, pp. 137-142.
- B86. "*Transient simulations of two-phase, core-annular flow in a straight tube: Wave formation in stratified flow*", with Kouris, 10th Workshop on two-phase flow predictions, April 2002, Merseburg, GERMANY. Paper in the Conference Proceedings, pp. 430-435.
- B87. "*Gas-assisted Injection molding in straight and constricted tubes*", with Dimakopoulos, 18th International Conference of the Polymer Processing Society, June 2002, Guimaraes, PORTUGAL. Paper in the Conference Proceedings, pp. 1-9.
- B88. "*Simulations of liquid displacement in a tube by pressurized air using a quasi-elliptic mesh generation scheme*" with Dimakopoulos, GRACM 2002, June 2002, Patras, GREECE, Abstract in Book of Abstracts and Paper available in Proceedings, pp 1-6, (CD available).
- B89. "*Pattern formation and bubble interaction: Phenomenon of acoustic streamers*" with Pelekasis, Gaki, & Doinikov, GRACM 2002, June 2002, Patras, GREECE, Abstract in Book of Abstracts and Paper available in Proceedings, pp 1-8, (CD available).
- B90. "*Gas-assisted injection molding of Bingham plastics in straight and constricted tubes*", with

- Dimakopoulos, 6th European Conference on Rheology, September 2002, Erlangen, GERMANY, Paper in the Conference Proceedings 427-428.
- B91. "*Displacement of a viscoplastic fluid by air in straight and constricted tubes*" with Dimakopoulos, FLOW 2002, October 2002, Patras, GREECE, Paper available in Proceedings (CD available).
- B92. "*Interaction of a capsule with shear and extensional flow*" with Lac, Pelekasis, and Barthes-Biesel, FLOW 2002, October 2002, Patras, GREECE, Paper available in Proceedings (CD available).
- B93. "Transition of a continuous two-phase flow in cylindrical tube of variable cross-section to continuous flow of one the fluids and discontinuous flow of the other one", with Zacharioudaki, and Kouris, 4th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003. Paper in the Proceedings, pp. 813-816, (2003).
- B94. "Numerical Modeling of cavitation during the extensional flow of a polymeric fiber" with Foteinopoulou and Mavrantzas, 4th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003. Paper in the Proceedings, pp. 805-808, (2003).
- B95. "Non-isothermal, transient displacement of viscous liquids by air in cylindrical tubes", with Zacharioudakis and Dimakopoulos, 4th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003. Paper in the Proceedings, pp. 809-812, (2003).
- B96. "Interaction of a capsule with a shear and an extensional flow field" with Lac, Barthes-Biesel and Pelekasis, 4th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003. Paper in the Proceedings, pp. 801-804, (2003).
- B97. "Gas-Penetration in straight tubes partially or completely occupied by a viscoelastic fluid", with Dimakopoulos, 13th International workshop on Numerical Methods for non-Newtonian Flows, Lausanne, SWITZERLAND, June 2003. Abstract in Book of Abstracts, p. 49.
- B98. "Numerical simulation of bubble growth during filament stretching of pressure-sensitive adhesive materials", with Foteinopoulou and Mavrantzas, 13th International workshop on Numerical Methods for non-Newtonian Flows, Lausanne, SWITZERLAND, June 2003. Abstract in Book of Abstracts, p. 48.
- B99. "Slipping effects on the displacement of a liquid by air inside tubes of varying diameter", with Dimakopoulos, 5th EUROMECH Fluid Mechanics Conference, Toulouse, FRANCE, August 2003. Abstract in the Conference Proceedings, p. 56
- B100. "Numerical simulation of bubble growth during filament stretching", with Foteinopoulou and Mavrantzas, 5th EUROMECH Fluid Mechanics Conference, Toulouse, FRANCE, August 2003. Abstract in the Conference Proceedings, p. 93.
- B101. "Deformation of bio-artificial capsules in hyperbolic flow; Influence of membrane rheology and onset of buckling", with Lac, Pelekasis and Barthes-Biesel, 5th EUROMECH Fluid Mechanics Conference, Toulouse, FRANCE, August 2003. Abstract in the Conference Proceedings, p. 249.

- B102. “Transient simulations of two-phase, core-annular flow in an undulating tube: slug, drop or spray formation from one of the fluids” with M. Zacharioudaki and Ch. Kouris, Annual AIChE meeting, San Francisco, USA, November 2003.
- B103. “Non-isothermal transient displacement of viscous fluids from cylindrical tubes by air” with Y. Zacharioudakis and Y. Dimakopoulos, Annual AIChE meeting, San Francisco, USA, November 2003.
- B104. “Bubble growth during filament stretching of pressure-sensitive adhesive materials”, with Katerina Foteinopoulou and Vlas Mavrantzas, Annual AIChE meeting, San Francisco, USA, November 2003.
- B105. “On the formation of long bubbles inside liquid-filled tubes of various shapes” with Y. Dimakopoulos, Annual AIChE meeting, San Francisco, USA, November 2003.
- B106. “Transient displacement of viscoelastic liquids by air” with Y. Dimakopoulos, HSR 2004, Athens, GREECE, June 2004. Abstract in the Conference Proceedings, p. 48.
- B107. “Transient squeeze flow of viscoplastic liquids” with G. Karapetsas, N. Chatzidai, and M. Pavlidis, HSR 2004, Athens, GREECE, June 2004. Abstract in the Conference Proceedings, p. 50.
- B108. “Numerical simulation of bubble growth during filament stretching of Newtonian and viscoelastic fluids”, HSR 2004, Athens, GREECE, June 2004. Abstract in the Conference Proceedings, p. 47.
- B109. “Transient displacement of viscoelastic liquids by air” with Y. Dimakopoulos, 21st International Congress of Theoretical and Applied Mechanics (ICTAM), Warsaw, POLAND, August 2004. Abstract in the Conference Proceedings, p. 409.
- B110. “Transient squeeze flow of viscoplastic liquids” with G. Karapetsas, N. Chatzidai, and M. Pavlidis, 21st International Congress of Theoretical and Applied Mechanics (ICTAM), Warsaw, POLAND, August 2004. Abstract in the Conference Proceedings, p. 150.
- B111. “Time dependent simulation of the squeeze flow of a viscoplastic material between two coaxial disks” with G. Karapetsas, Flow 2004, Athens, GREECE, November 2004. Abstract in Conference Proceedings, p. 252-259.
- B112. Numerical simulation of cavitation dynamics during the extensional flow of a polymeric filament”, with K. Foteinopoulou, and V. Mavrantzas, Flow 2004, Athens, GREECE, November 2004. Abstract in Conference Proceedings, p. 244-251.
- B113. “Stability analysis of the film Blowing process” with G. Klidis, Flow 2004, Athens, GREECE, November 2004. Abstract in Conference Proceedings, p. 260-267.
- B114. “Transient squeeze flow of viscoplastic materials” with G. Karapetsas, AERC 2005, 2nd Annual European Rheology Conference, Grenoble, FRANCE, April 2005. Abstract in Conference Proceedings, p. 163.
- B115. “Numerical calculation of the deformation of multiple bubbles in a filament undergoing

- stretching” with K. Foteinopoulou and Vl. Mavrantzas, AERC 2005, 2nd Annual European Rheology Conference, Grenoble, FRANCE, April 2005. Abstract in Conference Proceedings, p. 161.
- B116. “Time dependent simulation of the squeeze flow of a viscoplastic material between two coaxial disks” with G. Karapetsas, 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2005. Paper in the Proceedings, pp. 797-800.
- B117. “Numerical simulation of the evolution of air bubbles during stretching of a polymeric filament”, with K. Foteinopoulou and Vl. Mavrantzas, 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2005. Paper in the Proceedings, pp. 893-896.
- B118. “Motion and deformation of bubbles due to a step change in the pressure of the ambient liquid, with N. Chatzidai, 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2005. Paper in the Proceedings, pp. 909-912.
- B119. "Numerical calculation of the deformation of multiple bubbles in a filament undergoing stretching", with K. Foteinopoulou and Vl. Mavrantzas, Euromech Colloquium 465, Lorentz center, Leiden, THE NETHERLANDS, June 2005, Abstract in the Proceedings, pp. 13.
- B120. “Squeeze flow of viscoplastic materials fully accounting for the highly deforming domain of the material”, with G. Karapetsas, 5th GRACM International Congress on Computational Mechanics, Limassol, CYPRUS, July 2005.
- B121. “Numerical calculation of the deformation of multiple bubbles in a filament undergoing stretching", with K. Foteinopoulou and Vl. Mavrantzas, 5th GRACM International Congress on Computational Mechanics, Limassol, CYPRUS, July 2005.
- B122. "Transient squeeze flow of viscoplastic materials" with G. Karapetsas, 77th Annual meeting of the Society of Rheology, Vancouver, CANADA, October 2005, Abstract in the Proceedings, pp. 63.
- B123. “Numerical calculation of the deformation of multiple bubbles in a viscoelastic filament undergoing stretching”, with K. Foteinopoulou and Vl. Mavrantzas, 77th Annual meeting of the Society of Rheology, Vancouver, CANADA, October 2005, Abstract in the Proceedings, pp. 2.
- B124. “Transient displacement of viscoelastic liquids by gas in periodically constricted circular tubes” with Y. Dimakopoulos and M. Zacharioudaki, 3rd Annual European Rheology Conference, AERC, Hersonisos, GREECE, April 2006, Abstract in the Conference Proceedings, p. 18.
- B125. “Three dimensional instabilities in the film blowing process” with K. Housiadas, 3rd Annual European Rheology Conference, AERC, Hersonisos, GREECE, April 2006, Abstract in the Conference Proceedings, p. 38.
- B126. “A numerical study of die swell for viscoelastic fluids” with G. Karapetsas, 3rd Annual European Rheology Conference, AERC, Hersonisos, GREECE, April 2006, Abstract in the Conference Proceedings, p. 18.

- B127. “Numerical investigation of a bubble rising in a Bingham fluid” with N. Chatzidai and M. Pavlidis, 3rd Annual European Rheology Conference, AERC, Hersonisos, GREECE, April 2006, Abstract in the Conference Proceedings, p. 92.
- B128. “Numerical simulation of bubble deformation in liquid filaments undergoing stretching” with K. Foteinopoulou, Vl. Mavrantzas and Y. Dimakopoulos, 3rd Annual European Rheology Conference, AERC, Hersonisos, GREECE, April 2006, Abstract in the Conference Proceedings, p. 145.
- B129. “Transient displacement of a Newtonian liquid by gas in periodically constricted circular tubes” with Y. Dimakopoulos and M. Zacharioudaki, 6th EUROMECH Fluid Mechanics Conference, Stockholm, SWEDEN, June 2006. Abstract in the Conference Proceedings, p. 100.
- B130. “Viscoelastic simulations of the extrudate swell problem using the PTT model”, with G. Karapetsas, 6th EUROMECH Fluid Mechanics Conference, Stockholm, SWEDEN, June 2006. Abstract in the Conference Proceedings, p. 267.
- B131. “Bubble interactions in Acoustic fields fully accounting for viscous effects”, with Chatzidai, 6th EUROMECH Fluid Mechanics Conference, Stockholm, SWEDEN, June 2006. Abstract in the Conference Proceedings, p. 184.
- B132. “Gas penetration in complex tubes occupied by viscous liquids and Bingham plastics”_with Y. Dimakopoulos, 6th Hellenic Polymer Conference, Patras, GREECE, Nov. 2006, Abstract in the Conference Proceedings,
- B133. “Flow and deformation of a bubble in a viscoplastic fluid”, with Chatzidai N., Pavlidis M., Karapetsas, G. and Dimakopoulos, Y., Flow-2006 Conference, Patras, GREECE, Nov. 2006, Abstract in the Conference Proceedings, p. 17.
- B134. “Linear Stability Analysis of the extrusion of a viscoelastic fluid to disturbances with axial symmetry”, with G. Karapetsas, Flow-2006 Conference, Patras, GREECE, Nov. 2006, Abstract in the Conference Proceedings, p. 18.
- B135. MPI parallel computations in viscoelastic flows with deforming interfaces” with Y. Dimakopoulos, Flow-2006 Conference, Patras, GREECE, Nov. 2006, Abstract in the Conference Proceedings, p.4.
- B136. “Gas-penetration in straight tubes partially occupied by a viscoelastic liquid” with Y. Dimakopoulos, 4th Annual European Rheology Conference, AERC, Naples, ITALY, April 2007, Abstract in the Conference Proceedings, p. 96.
- B137. “Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment” with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, 4th Annual European Rheology Conference, AERC, Naples, ITALY, April 2007, Abstract in the Conference Proceedings, p. 227.
- B138. “Bubble interaction due to a pressure change in a Newtonian liquid”, with N. Chatzidai, 6th Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2007. Paper in the

Proceedings, p. 1001.

- B139. “Steady flow, deformation and entrapment of a bubble in a viscoplastic liquid” with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, 6th Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2007. Paper in the Proceedings, p. 1057.
- B140. “MPI parallel computations in viscoelastic flows with deforming interfaces” with Y. Dimakopoulos, 6th Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2007. Paper in the Proceedings, p. 1289.
- B141. “On the gas penetration in periodically constricted circular tubes filled with viscoelastic liquids”, with Y. Dimakopoulos, XVth International Workshop on Numerical Methods for non-Newtonian Flows, Rhodes, GREECE, June 2007.
- B142. “Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment” with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, XVth International Workshop on Numerical Methods for non-Newtonian Flows, Rhodes, GREECE, June 2007.
- B143. “Transition from the perfect core-annular flow in a constricted tube to unsteady – stratified, bubbling, pulsing and spray – flow regimes” with M. Zacharioudaki and Y. Dimakopoulos, 6th European Congress of Chemical Engineering, Copenhagen, DENMARK, September 2007, Paper in the Proceedings, p. 277, volume 2..
- B144. “On the gas penetration in periodically constricted circular tubes filled with viscoelastic liquids”, with Y. Dimakopoulos, 6th European Congress of Chemical Engineering, Copenhagen, DENMARK, September 2007, Paper in the Proceedings, p. 649, volume 2.
- B145. “Steady bubble rise and deformation in Newtonian and Bingham fluids and conditions for their entrapment” with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, 6th European Congress of Chemical Engineering, Copenhagen, DENMARK, September 2007, Paper in the Proceedings, p. 245, volume 2.
- B146. “Steady bubble rise and deformation in Bingham fluids and conditions for their entrapment with Y. Dimakopoulos, N. Chatzidai, G. Karapetsas, M. Pavlidis, Conference on Viscoplasticity: from Theory to Application, Ticino, SWITZERLAND, October 2007, Abstract in the Proceedings, p. 9.
- B147. “On the coating of straight tubes with viscoelastic materials” with Y. Dimakopoulos, The XVth International Congress on Rheology (ICR) and The Society of Rheology (SoR) 80th Annual Meeting, Monterey, California USA, August 3 - 8, 2008., Paper in conference Proceedings, p. 18-20.
- B148. “Injection molding of a viscoplastic fluid inside a cylindrical tube or between two parallel coaxial disks”, with J. Papaioannou, G. Karapetsas, and Y. Dimakopoulos, 5th Annual European Rheology Conference, AERC, April 15-17, 2009, Cardiff – UNITED KINGDOM.
- B149. “Linear stability analysis of the cylindrical or planar stick-slip flow for a PTT fluid model” with G. Karapetsas, 5th Annual European Rheology Conference, AERC, April 15-17, 2009, Cardiff – UNITED KINGDOM.

- B150. "Effect of the fluid viscosity on the interaction and deformation of two bubbles set in motion by a pressure change of the ambient fluid" with N. Chatzidai, 7th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2009. Paper in the Proceedings, (7 pages in CD).
- B151. "Injection molding of a viscoplastic fluid inside a cylindrical tube or between two parallel coaxial disks", with J. Papaioannou, G. Karapetsas, and Y. Dimakopoulos, 7th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2009. Paper in the Proceedings, (6 pages in CD)
- B152. "Linear stability analysis of the cylindrical or planar stick-slip flow for a Phan-Tien and Tanner fluid model" with G. Karapetsas, 7th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2009. Paper in the Proceedings, (7 pages in CD).
- B153. "Injection of a viscoplastic material with axial symmetry: Conditions for wall detachment of the advancing front", with J. Papaioannou, G. Karapetsas, and Y. Dimakopoulos, Conference on Viscoplasticity: from Theory to Application, Limasol, CYPRUS, November 2009, Abstract in the Proceedings, p. 10.
- B154. "Steady viscoelastic film flow over 2D topography", with Pavlidis and Dimakopoulos, 6th Annual European Rheology Conference, AERC, Goteborg, SWEDEN, April 2010.
- B155. "Steady viscoelastic film flow over 2D topography", with Pavlidis and Dimakopoulos, Intern. Conf. Multiscale Complex Fluid Flows and Interfacial Phenomena, MULTIFLOW, Brussels BELGIUM, November 2010.
- B156. "Influence of viscoplasticity and shear thinning on the motion and deformation of a gas bubble" with Pavlidis and Dimakopoulos, 8th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2011. Paper in the Proceedings, (6 pages in CD).
- B157. "Bubble deformation in a viscoelastic fluid under axial extensional flow", with Papaioannou, Giannousakis and Dimakopoulos, 8th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2011. Paper in the Proceedings, (7 pages in CD).
- B158. "Topography-induced thickness variation of viscoelastic films", with Pavlidis and Dimakopoulos, HSR meeting 2004, Athens, GREECE, June 2011. Abstract in the Conference Proceedings, p. 39
- B159. "Deformation of a Bubble in a Viscoelastic Liquid Subjected to Axisymmetric Extensional Flow" with Papaioannou, Giannousakis and Dimakopoulos, HSR meeting 2004, Athens, GREECE, June 2011. Abstract in the Conference Proceedings, p. 42.
- B160. "An improved augmented Lagrangian technique for free surface viscoplastic flows" with Pavlidis and Dimakopoulos, 7th GRACM International Congress on Computational Mechanics, Athens, July 2011, Paper in the Conference Proceedings, (5 pages in CD).
- B161. "Steady flow of a viscoelastic film over two-dimensional topography" with Pavlidis and Dimakopoulos, Workshop on Complex Fluids and Flows in Industry and Nature, Vancouver, CANADA, July 2011. Abstract in conference Proceedings, p. 21.

- B162. "Computational Fluid Dynamics (CFD) evaluation of the flow characteristics of the Conical Minoan Terracotta Pipes; Bronze Age" with Tseropoulos, Dimakopoulos and Lymperatos, Istanbul, TURKEY, IWA, Specialized conference on Water and Wastewater Technologies in Ancient Civilizations, March 2012. Abstract in Conference Proceedings
- B163. "Application of an improved Augmented Lagrangian scheme for viscoplastic material flows: the rising, deformable bubble", with Pavlidis and Dimakopoulos, IWNMNNF 2012, 17th International Workshop on Numerical Methods for Non-Newtonian Flows, BLOIS Castle, FRANCE, March 25-28 2012. Abstract in Conference Proceedings.
- B164. "A hybrid explicit-implicit scheme for integral constitutive models: Application to the simulation of PSA materials", with Dimakopoulos and Papaioannou, IWNMNNF 2012, 17th International Workshop on Numerical Methods for Non-Newtonian Flows, BLOIS Castle, FRANCE, March 25-28 2012. Abstract in Conference Proceedings.
- B165. "Cavity growth in pressure sensitive adhesive materials: 3D finite element calculations", with Dimakopoulos and Papaioannou, the XVIth International Congress on Rheology (ICR) Lisbon, PORTUGAL, August 5 - 10, 2012, Paper in conference Proceedings
- B166. "Filament stretching of pressure sensitive adhesives with gas inclusions: a 3D hyperelastic-viscoelastic model and numerical simulation" with Dimakopoulos and Papaioannou, ICTAM XXIII, International Congress on Theoretical and Applied Mechanics, Beijing, CHINA, August 19-24, 2012, Paper in conference Proceedings
- B167. "Increase of the mean velocity of a bubble rise in a viscoplastic fluid induced by an oscillating pressure field" with Photeinos and Dimakopoulos, ICTAM XXIII, International Congress on Theoretical and Applied Mechanics, Beijing, CHINA, August 19-24, 2012, Paper in conference Proceedings.
- B168. "Stress induced migration phenomena in corrugated channels", with Tsouka S., and Dimakopoulos, Y., 8th Annual European Rheology Conference, AERC 2013, Leuven, BELGIUM, April, 2-5, 2013, Paper in conference proceedings.
- B169. "Effect of blood viscoelasticity on the flow in micro-vessels, with G. Kelesidis, Y. Dimakopoulos and G. Georgiou, Workshop on Bioengineering and patient-specific cardiovascular modeling, Limassol, CYPRUS, April 2013.
- B170. "Viscoelastic behavior of blood in small vessels: A numerical investigation" with G. Kelesidis, G. Georgiou and Y. Dimakopoulos, European Society of Biomechanics, ESB Congress 2013, Patras, GREECE, August 2013.

INVITED LECTURES AT UNIVERSITIES, INDUSTRIES, LABORATORIES AND CONFERENCES:

- C1. *"Nonlinear dynamics of charged drops"*, Amoco, Tulsa, OK, USA, September 1983.
- C2. *"Nonlinear dynamics of charged drops in MicroGravity: An analytical solution to a free boundary problem"*, Jet Propulsion Laboratory, Pasadena, USA, January 1984.
- C3. *"Nonlinear dynamics of charged drops"*, UCLA, USA, January 1984.
- C4. *"Nonlinear dynamics and breakup of charged drops"*, University of California at Davis, USA, February 1984.
- C5. *"Nonlinear dynamics of charged drops"*, Shell Oil Co., Houston, TX, USA, February 1984.
- C6. *"Resonant oscillations of charged drops"*, Exxon, Houston, TX, USA, February 1984.
- C7. *"Nonlinear dynamics and breakup of charged drops"*, DuPont De Nemours & Co., Wilmington, DE, USA, February 1984.
- C8. *"Nonlinear dynamics of charged drops"*, Chevron, La Habra, CA, USA, February 1984.
- C9. *"Nonlinear dynamics of charged drops"*, Arco, Houston, TX, USA, February 1984.
- C10. *"Resonant oscillations of charged drops"*, Cornell University, USA, March 1984.
- C11. *"Nonlinear dynamics and breakup of charged drops"*, SUNY at Buffalo, USA, March 1984.
- C12. *"Modeling of free and moving boundary problems: Examples from surface tension dominated flows and Chemical Vapor Deposition"*, DuPont De Nemours & Co., Wilmington, USA, May 1987.
- C13. *"Flow in a porous pipe: Existence and stability of similarity solutions"*, Center for Integrated Process Systems Technology, SUNY at Buffalo, USA, March 1988.
- C14. *"Nonlinear dynamics and break-up of charged drops"*, 3rd International Colloquium on Drops and Bubbles, Monterey, California, USA, September 18-21, 1988.
- C15. *"Analysis of the blow molding process"*, Oak Ridge National Laboratory, Tennessee, USA, February 1989.
- C16. *"Spin Coating of Planar Disks: Solution by the Similarity Method"*, IBM Research Division, Yorktown Heights, USA, November 1989.
- C17. *"Thermal and Fluid Mechanical Effects in Blow Molding"*, Mechanical Engineering Department, SUNY at Binghamton, USA, March 1990.
- C18. *"Analytical and Numerical Studies of the Nonlinear Dynamics and Stability of charged and Compound Drops"*, Microgravity Fluids Workshop, NASA Lewis Research Center, Ohio, USA, August 1990.

- C19. "*Inertia, Elastic and Mass Transfer Effects on the Spin Coating of Planar Substrates*", IBM Research Division, Yorktown Heights, USA, July 1991.
- C20. "*Studies of Polymer Processing Operations Using Numerical Methods*", National Technical University of Athens, GREECE, May 1992.
- C21. "*Nonisothermal Parison Inflation in Blow Molding*", University of California at Riverside, USA, October 1992.
- C22. "*Nonisothermal Parison Inflation in Blow Molding*", Cornell University, USA, September 1993.
- C23. "*Nonisothermal Inflation of a Polymer preform inside a Mold cavity*", University of Patras, GREECE, October 1994.
- C24. "*Peculiarities in the flow of Bingham Plastics*", Inst. of Electronic Structure and Laser, FORTH, Crete, GREECE, June 1996.
- C25. "*Spin-Coating and squeeze flow of Viscoplastic Fluids*" Symposium on Rheology and Computational Fluid Mechanics (Dedicated to the Memory of Prof. Tasos Papanastasiou), CYPRUS, July 1996. Paper in the Proceedings , p. 23-26, (1996)
- C26. "*Peculiarities of Bingham Fluids in non-Uniform Flow Fields*", Dimokritos, Athens, GREECE, Jan. 1998.
- C27. "*Scaling and Asymptotic Analysis in Transport Phenomena*", a series of five 4-hour Lectures, SASOL Industries, Johannesburg, SOUTH AFRICA, Jan 1999.
- C28. "*Two Phase Flow in a Constricted Tube*", SASOL Industries, Johannesburg, SOUTH AFRICA, Jan 1999.
- C29. "*Steady and Dynamic Analysis of Extruded Thin Annular Films*", University of Compiegne, FRANCE, June 1999.
- C30. "*Stability and Dynamics of core-annular Flow in a circular tube*", ETH, Zurich, SWITZERLAND, May 2000.
- C31. "*Stability and Dynamics of the Core-Annular flow in a periodically constricted tube*", The International Conference on Multiphase Systems, ICMS'2000, Ufa, RUSSIA, June 2000. Paper in the Proceedings of the International Conference on Multiphase Systems, p.71-77, (2000).
- C32. "*Stratified boundary layer flow of a gas stream and a liquid film past solid surfaces*" with Pelekasis and Smyrniaios, 3rd International Conference of the Hellenic Society of Rheology, Patras, GREECE, June 2001. Abstract in the Conference Proceedings p. 43.
- C33. "Two-phase flow in straight and undulating tubes" Department of Mechanical Engineering, University of Thessaly, May 2002.

- C34. "Two-phase flow in conduits of constant and variable cross-section" CPERI-FORTH, Thessaloniki, February 2004.
- C35. "A flexible and robust numerical method for solving moving boundary problems with large deformations: Applications in polymer processing and rheology", Key note Lecture, Polymer Processing Society, PPS 2005, Quebec, CANADA, August 2005.
- C36. A new numerical method for solving moving boundary problems with large domain deformations, Dep. of Chem. Engineering, SUNY/Buffalo, Buffalo, USA, August 2005.
- C37. "Yield stress phenomena and known solutions of viscoplastic flows" with Y. Dimakopoulos, Plenary Lecture in the workshop "Visco-plastic fluids, from theory to application", Banff, Alberta, CANADA, October 2005.
- C38. "Steady bubble rise and deformation in Newtonian and Bingham fluids and conditions for their entrapment" with Y. Dimakopoulos, IUTAM Symposium on recent advances in Multiphase flows: Numerical and experimental", Istanbul, TURKEY. June 2007, Abstract in conference Proceedings, p. 51.
- C39. "Using advanced computational techniques for analysing flows with moving boundaries" Dep. of Materials Science and Technology, University of Crete, GREECE, November 2007.
- C40. "A finite element based methodology for solving moving boundary problems with large deformations in complex geometries: Applications in polymer processing and rheology", with Y. Dimakopoulos, The 26th Annual Meeting of the Polymer Processing Society (PPS) Salerno, ITALY, June 15-19, 2008. Paper in conference Proceedings (4 pages).
- C41. "Steady solution and linear stability analysis of the cylindrical or planar stick-slip flow for a Phan-Tien and Tanner fluid model", with Karapetsas. Invited speaker in the "Symposium on the New Frontiers in Chemical and Biochemical Engineering", to honor the life-long contribution of Professors *Anastasios Karabelas* and *Stavros Nychas* to Chemical Engineering in Greece, Thessaloniki, GREECE, November 2009, Abstract in the Proceedings.
- C42. "Viscoplastic fluids: Recent developments and new challenges", with Dimakopoulos, 6th Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries (EMCC6), Antalya, TURKEY, March 2010,. Abstract in the Proceedings.
- C43. "Bubble rise in a shear-thinning viscoplastic material" with Pavlidis & Dimakopoulos, the XVIth International Congress on Rheology (ICR) Lisbon, PORTUGAL, July 5 - 10, 2012, Paper in conference Proceedings.
- C44. "Effects of elasticity and pressure oscillations on simulations of yield stress fluids: The case of a rising bubble" with Y. Dimakopoulos, M. Pavlidis and D. Photeinos, 5th Conference on "Viscoplastic Fluids: From Theory to Application", Paris, FRANCE, Nov. 18-21. 2013.

MEETINGS ORGANIZED - SESSIONS CHAIRED:

- D1. Society of Engineering Science, 23rd Annual Meeting, August 25-27, 1986, Buffalo, New

York, USA. Chaired Session on "Instabilities and Transport Phenomena".

- D2. Division of Fluid Mechanics, American Physical Society, Member of the Organizing Committee of the 41st annual Meeting, November 1988, Buffalo, New York, USA. Chaired session on "Taylor-Couette Instability".
- D3. Microgravity Fluids Workshop, NASA, Ohio, USA, Chaired Session on "Isothermal Capillarity and Interface Dynamics". Led discussion and presented summary in the final Plenary Session.
- D4. Division of Fluid Mechanics, American Physical Society, 43rd Annual Meeting, November 1990, Cornell University, USA. Chaired Session on "Non-Newtonian Flows."
- D5. American Institute of Chemical Engineers, 1993 Annual Meeting, co-chaired the Session entitled "Non-Newtonian Fluids and Flows".
- D6. 17th Boundary Element Conference, Madison Wisconsin, USA, July 1995, co-chaired Workshop on "Boundary Element Methods in Fluid Mechanics".
- D7. 1st Panhellenic Conference in Chemical Engineering, Patra, GREECE, May 1997, Chaired Session on "Fluid Mechanics".
- D8. 4th Panhellenic Conference on Polymers, Patra, GREECE, November 1997, member of the Organizing Committee.
- D9. 2nd Meeting of the Hellenic Society of Rheology and International Symposium, Crete, GREECE, August 1998, member of the Organizing and the Scientific Committee
- D10. 2nd Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 1999, Chaired Session on "Transport Phenomena".
- D11. 2nd International Symposium on Two-Phase Flow Modelling and Experimentation, Pisa, ITALY, May 1999, Chaired Session on "Interfacial and Film Flow Phenomena".
- D12. 6th National Conference of the Institute on Solar Technology, November 1999, Volos, GREECE, Member of the Scientific Committee.
- D13. International Conference on Multiphase Systems'2000, June 2000, Member of the International Scientific Committee, Ufa, RUSSIA.
- D14. 4th EUROMECH Fluid Mechanics Conference, November 2000, Chaired Session on "Multi-Phase Flow", Eindhoven, THE NETHERLANDS.
- D15. 3rd Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2001, Chaired Session on "Transport Phenomena".
- D16. 3rd International Meeting of the Hellenic Society of Rheology, June 2001, Chairman of the Scientific Committee and member of the Organizing Committee, Patras, GREECE.
- D17. 1st National Conference on Recent Advances in Mechanical Engineering, September 2001,

Chaired Session on Fluid Mechanics, Patras, GREECE.

- D18. FLOW 2002, October 2002, Chaired Session on Computational Fluid Mechanics, Patras, GREECE.
- D19. 4th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2003, Chaired Session on "Transport Phenomena".
- D20. International Conference on Computational & Experimental Engineering & Sciences, July 2003, Member of the Organizing committee, Corfu, GREECE.
- D21. PPS 2003 (Polymer Processing Society) Europe-Africa meeting, September 2003, Member of the Organizing Committee, Athens, GREECE.
- D22. 4th International Meeting of the Hellenic Society of Rheology, June 2004, Member of the Scientific and Organizing Committees and Chaired Session on "Numerical Simulations", Athens, GREECE.
- D23. 21st International Congress of Theoretical and Applied Mechanics (ICTAM), August 2004, Chaired session on "Flow in thin films" (session block code: FM14_L1, scheduled for Tuesday 11:00 - 13:00), Warsaw, POLAND.
- D24. AERC 2005, 2nd Annual European Rheology Conference, April 2005, Member of the Scientific Committee and Chairman of the "Symposium on Materials Processing and flow instabilities", Grenoble, FRANCE.
- D25. AERC 2005, 2nd Annual European Rheology Conference, April 2005, Chairman of a Session on "Modelling, Simulation and Computational Rheology", Grenoble, FRANCE.
- D26. 5th Panhellenic Conference in Chemical Engineering, Thessaloniki, GREECE, May 2005, Chaired Session on "Transport Phenomena".
- D27. AERC 2006, 3rd Annual European Rheology Conference, Hersonisos, GREECE, April 2006, Chaired Session on "Non-Newtonian Fluid Mechanics, Turbulence and Processing".
- D28. AERC 2007, 4th Annual European Rheology Conference, Naples, ITALY, April 2007, Chaired Session on "Non-Newtonian Fluid Mechanics, Turbulence and Processing".
- D29. 6th Panhellenic Conference in Chemical Engineering, Athens, GREECE, May 2007, Chaired Session on "Transport Phenomena-Fluid Mechanics".
- D30. XVth International Workshop on Numerical Methods for non-Newtonian Flows, Rhodes, GREECE, June 2007, Chaired Session on "Viscoelastic Fluids - Modelling and Simulations".
- D31. AERC 2009, 5th Annual European Rheology Conference, Cardiff, GREAT BRITAIN, April 2009, Chaired Session on "Non-Newtonian Fluid Mechanics".
- D32. 7th Panhellenic Conference in Chemical Engineering, Patras, GREECE, May 2009, member of the scientific committee and Chaired Session on "Transport Phenomena-Fluid Mechanics".

- D33. The European/African regional meeting of the Polymer Processing Society, Larnaca, CYPRUS, October 2009, member of the organizing committee.
- D34. Conference on Viscoplasticity: from Theory to Application, Limasol, CYPRUS, November 2009, chaired session.
- D35. "7th Chemical Engineering Conference for Collaborative Research in Eastern Mediterranean Countries (EMCC7)", Corfu, GREECE, April 27th-May 1st, 2012, member of the scientific program committee.

JOURNAL REVIEWING:

1. Reviewer for the Journal of Fluid Mechanics (since 1984).
2. Reviewer for the Physics of Fluids (since 1984).
3. Reviewer for the Chemical Engineering Communications Journal (since 1985).
4. Reviewer for the AIChE Journal (since 1987).
5. Reviewer for the Chemical Engineering Science Journal (since 1990).
6. Reviewer for the Journal of Colloid and Interface Science (since 1990).
7. Reviewer for the Canadian Journal of Chemical Engineering (since 1991).
8. Reviewer for the Journal of Electrochemical Society (since 1991).
9. Reviewer for the Journal of Applied Mechanics (since 1991).
10. Reviewer for the Journal of Computational Physics (since 1991).
11. Reviewer for the Journal of Computers & Chemical Engineering (since 1991).
12. Reviewer for the Journal of Fluids Engineering (since 1992).
13. Reviewer for the Journal of Polymer Engineering and Science (since 1992).
14. Reviewer for the International Journal of Multiphase Flow (since 1994).
15. Reviewer for the Journal of Theoretical & Computational Fluid Dynamics (since 1994).
16. Reviewer for the Journal of Rheology (since 1996).
17. Reviewer for Rheologica Acta (since 1996).
18. Reviewer for the Journal Acta Mechanica (since 1996).
19. Reviewer for the Zeitschrift fur Angewandte Mathematic und Physik (since 1996).
20. Reviewer for the Journal of Heat Transfer (since 1997).
21. Reviewer for the Journal Engineering Analysis with Boundary Elements (since 1998).
22. Reviewer for the Chemical Engineering Journal (since 1999).
23. Reviewer for the International Journal for Numerical Methods in Fluids (since 1999).
24. Reviewer for the European Journal of Mechanics B/Fluids (since 2000).
25. Reviewer for the Journal of Engineering Mathematics (since 2001).
26. Reviewer for the Transactions of the Canadian Society of Mech. Engineers (since 2005).
27. Reviewer for the Industrial & Engineering Chemistry Research (since 2005).
28. Reviewer for the Journal of Hazardous Materials (since 2005).
29. Reviewer for the Journal of Applied Rheology (since 2008).
30. Reviewer for the Journal of Microelectronics Engineering (since 2008).
31. Reviewer for the Journal of Materials Science (since 2009).
32. Reviewer for the Quarterly of Applied Mathematics Journal (since 2009).
33. Reviewer for: Langmuir (since 2010).
34. Reviewer for: Applied Mathematical Modeling (since 2011).
35. Reviewer for: Physical Review Letters (since 2011).
36. Reviewer for: Physical Review E (since 2011).

PROPOSAL REVIEWING:

1. Reviewer and panelist for NSF, DOE, PRF and NASA proposals (since 1986).
2. Reviewer of the Study: "Prediction of Technological Developments in the area of Polymers", GSRT (1994).
3. Reviewer of Proposals to the Greek Secretariat for Research & Technology (since 1995).
4. Reviewer of Bilateral Research Proposals for the Greek Secretariat for Research & Technology (since 1999).
5. Reviewer of Proposals to the Greek Ministry of Education (since 2002).
6. Technical reviewer for EU proposals and reports (since 2002).
7. Reviewer of Proposals to the Canadian Space Agency (since 2003).
8. Reviewer of Proposals to Israel Science Foundation (since 2004).
9. Reviewer of Proposals to National Sciences and Engineering Research Council of Canada (since 2007).
10. Reviewer of Proposals to the foundation of Advancement of Research of the Republic of Cyprus (since 2009).

BOOK REVIEWS

“Introduction to Theoretical and Computational Fluid Dynamics” by C. Pozrikidis, Oxford, 1997, upon invitation of the publisher.

SERVICES TO THE UNIVERSITY:

A. State University of New York at Buffalo

1. Member of the Computing Committee in the School of Engineering at SUNY/Buffalo, 1985-1988.
2. Coordinator of the Departmental Seminar Series at SUNY/Buffalo, 1985-1989.
3. Member of the Undergraduate Committee in the Chemical Engineering Department, at SUNY/Buffalo, 1986-1987.
4. Wrote, edited, and supervised the printing and typesetting of the new Brochure of the Department of Chemical Engineering at SUNY/Buffalo, 1987.
5. Member of the Graduate Committee in the Chemical Engineering Department, at SUNY/Buffalo, 1987-1991.
6. Member of the qualifying examinations committee in the Chemical Engineering Department at SUNY/Buffalo, 1987-1991.
7. Director of the Executive Committee of the Western New York Section of the AIChE, 1987-1988.
8. Member of the Search Committee for Chairman of the Chemical Engineering Department at SUNY/Buffalo, 1988-1989.
9. Member of the Faculty Recruiting Committee of the Chemical Engineering Department at SUNY/Buffalo, 1988-1991.
10. Examination Committee member for awarding M.S. and PhD degrees, SUNY/Buffalo, 1986-1992.

B. University of Patras

1. Member of the Computing and Networking Committee in the University of Patras, 1994-

- present.
2. Member of the Student affairs committee of the Chemical Engineering Department in the University of Patras, 1992-1997.
 3. Member of the University-wide committee on computers and networking, University of Patras, 1994-present.
 4. Director of the 4th Division, "Unit Operations and Environment", in the Department of Chemical Engineering, University of Patras, 1995 - 1996, Sept. 1996 – 1997,
 5. Member of the Undergraduate Program Committee, 1996-1997.
 6. Chairman of the Committee of Graduate Studies in the Department of Chemical Engineering, University of Patras, 1997- 2001.
 7. Member of the University-wide committee for the “Evaluation of the Educational system and Quality control”, University of Patras, 2000-2003.
 8. Member of the Committee of Graduate Studies in the Department of Chemical Engineering, University of Patras, 2001-present.
 9. Member of the Committee of Educational Laboratories in the Department of Chemical Engineering, University of Patras, 1999- present.
 10. Chairman of the Committee for space/office allocation in the Department of Chemical Engineering, University of Patras, Sept. 2001- 2003.
 11. Chairman of the EPEAEK Committee (graduate program), in the Department of Chemical Engineering, University of Patras, Sept. 1997- 2005.
 12. Member of examination Committees for awarding Ph.D. degrees, University of Patras, 1993 - present.
 13. Director of the 1th Division, "Unit Operations and Environment", in the Department of Chemical Engineering, University of Patras, Sept. 2009-2011, Sep. 2011-2013.

TEACHING EXPERIENCE:

A. State University of New York at Buffalo

1. CE 318, Transport Processes II, Junior Level, Spring 1986, 1987, 1990, 1991.
2. CE 427, Chemical Engineering Laboratory, Senior Level, Fall 1985, 1986.
3. CE 500, Special Topics in Transport Phenomena, Graduate Level, Spring 1988, 1989.
4. CE 509, Transport Phenomena, Graduate Level, Fall 1986, 1987, 1988, 1989, 1990, Spring 1993.
5. CE 527, Colloid and Surface Phenomena, Graduate Level, Fall 1992.
6. CE 532, Numerical Methods for Chemical Engineers, Graduate Level, Spring 1985, 1986, 1988, 1990, Fall, 1992.
7. CE 533, Introduction to Finite Element Methods, Graduate Level, Spring 1987, 1989, 1991.

B. University of Patras

1. Chemical Engineering Laboratory I, 3rd year, Spring 1992,
2. Unit Operations Laboratory, 4th year, Fall 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000.
3. Numerical Analysis I, 3rd year, Spring 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011.
4. Numerical Analysis II, 4th year, Fall 1995, 1997, 1998.
5. Heat Transfer, 3rd year, Fall 2002, 2003, Spring 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.
6. Transport Phenomena, Graduate Level, Fall 1994, 1996, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013.
7. Finite Element Methods, Graduate Level, Fall 1995, 1997, 1998, 2002, 2004, 2007, 2009,

- 2010, 2011, 2012.
8. Rheology and Processing of Polymers, Graduate Level, Fall 1999, 2000, Spring 2002, 2003, 2004, 2005.
 9. Fluid Mechanics, 3rd year, Fall 2011, 2012, 2013.

DOCTORAL THESES SUPERVISED:

1. "A Finite Element Analysis of the Inflation and Cooling Stages in Blow Molding Operations," A.J. Poslinski, May 1990.
2. "Chemical Vapor Infiltration for the Production of New Ceramic Materials," S.M. Gupte, September 1990.
3. "Static and dynamic analysis of liquid bridges," T. Y. Chen, September 1991.
4. "A Study on Drop and Bubble Dynamics via a Hybrid Boundary - Element-Finite Element Methodology", N. Pelekasis, October 1991.
5. "Transient rotational flow and Spin Coating of non-Newtonian Fluids", A. Borkar, September 1993.
6. "Flow of Bingham Fluids in axisymmetric geometries", M.-F. Chen, December 1997.
7. "Static and Dynamic Analysis of Extruded Thin and Annular Fluid Films", K. Housiadas, May 1999.
8. "Linear Stability Analysis and Nonlinear Dynamics of two-phase Flow in a Tube of Constant and Variable Cross-section", Ch. Kouris, December 2000.
9. "Interfacial Phenomena and Hydrodynamic Instabilities in two-phase Flows", D. Smyrniaios, May 2002.
10. "Displacement of Newtonian and non-Newtonian liquids from conduits of varying cross section", J. Dimakopoulos, December 2003.
11. "Computational study of the effect of cavitation phenomena on the rheological and mechanical properties of adhesive materials", K. Foteinopoulou, jointly with V.I. Mavrantzas, February 2005.
12. "A study on time-dependent and conditionally unstable flows of viscoplastic and viscoelastic fluids", G. Karapetsas, December 2007.
13. "Motion, deformation and interaction of bubbles due to gravity or/and of the pressure of the ambient fluid", N. Hatzidai, December 2008.
14. "Film flow over solid substrates: The effect of fluid rheology and substrate geometry", M. Pavlidis, December 2009.
15. "On the breaking of microstructured films during the production of composite materials", Y. Papaioannou, expected in 2013.

MASTER'S THESES SUPERVISED:

1. "Viscous Fingering in Hele Shaw Cells: Viscous and Elastic Effects," K. Manoussidis, March 1988 (Jointly with R. Gupta).
2. "The Dynamics of Axisymmetric Capillary Bridges," A. Borkar, March 1989.
3. "A Model for the Catalytic Growth of Carbon Filaments," P. Chitrapu, May 1989 (Jointly with C. Lund).
4. "Carbon Gasification by Group VIII Metal Catalysts", M. Vincett, July 1992, (jointly with C. Lund).
5. "Linear stability analysis in two-phase flow", Ch. Kouris, December 2000.
6. "Squeeze flow of Bingham plastics" D. Smyrniaios, May 2002.

7. “A quasi-elliptic transformation for moving boundary problems with large anisotropic deformations”, I. Dimakopoulos, December 2003.
8. “Instabilities during the film blowing process”, G. Klidis, January 2005.
9. “Simulation of Polymer Processing operations: On the influence of the external cooling air on the film blowing process”, N. Karakosta, October 2006.
10. “Solution methods of time-dependent or conditionally unstable flows of viscoelastic or viscoplastic fluids, G. Karapetsas, February 2008.
11. “Steady rise and deformation of a bubble in Newtonian and viscoplastic fluids”, M. Pavlidis, March 2008.
12. “Motion, deformation and interaction of bubbles due to a step change in the ambient fluid, N. Chatzidai, February 2009.
13. “Study of the three dimensional extrusion from an extruder with multiple exits”, I. Katsipou, 2009.
14. “Stretching of Liquid Bridges containing gas inclusions” Arindam Sen, Nov. 2013.

INDUSTRIAL EXPERIENCE

- Summer Employment: AKZO CHEMIE NEDERLAND, Research center, Amsterdam (1978).
- Consultant for: BAXTER, USA, (1989); SASOL Industries, S. AFRICA, (1999); EBGA, GREECE (2003).

MAJOR RESEARCH GRANTS AWARDED:

More than 12 proposals have been funded with a total budget of over \$900,000 in the US and more than 28 proposals have been funded with a total budget of over 2430 k€ from Greek and European sources.

1. A fundamental study of Cavitation phenomena: Bubble interactions with other moving and deforming interfaces." NSF Engineering Initiation Grant, MSM-8705735, 2 years, (1987-89), \$69,874, plus \$10,000 in matching funds. My proposal was ranked 2nd among 58 other submitted to the Fluid Dynamics Program in the Division of Mechanics, Structures and Materials.
2. A number of University-wide competitive proposals were funded. Some examples:
 - Internal Arterial wall shear and Atheroma: A more realistic model development and testing with testing with data for atherogenesis", Biomedical Research Support Grant (from NIH, \$7,600, 1 year (1986).
 - "Strategy for the Economic Survival of Engineering Projects", Central Awards Committee, SUNY \$4,000, 1 year (1986).
 - "Study and prevention of mechanical failure of artificial heart valves", Biomedical Research Support Grant (NIH), \$2,500, 1 year (1988).
 - Faculty Development Awards from NYS/UUP Professional Development and Quality of Working Life Committee, \$1,000 (1985); \$750 (1987); \$1,000 (1991); \$750 (1993).
3. "A fundamental study of Cavitation phenomena," Cornell National Supercomputer Facility (CNSF), 100 Service Units, at a cost of \$1,000 per Service Unit, (1988) and additional 300 Service Units, at a cost of \$1,000 per Service Unit, (1990).
4. "Study and prevention of mechanical failure of artificial heart valves", New York Science and Technology Foundation, \$37,500, 1 year, (1989).
5. "Fundamentals of electronic materials processing: The spin coating process", IBM Research Division, \$70,000, 1 year (1990) and additional \$75,385, for 1 year (1991, continuation).
6. "Prevention of Cavitation Damage in Artificial Heart Valves", HIDI, NSF-NYS Center for Advanced Technology, \$24,160, 1 year, (1990).
7. "Engineering Research Equipment: High-Performance Workstation for Flow Visualization", NSF, \$81,000, jointly with T. Mountziaris, D. Kofke and J. Nitsche, (1992).
8. "Nonlinear bubble Interactions in Acoustic Pressure Fields", NASA, \$100,000, 2 years (1993-1995).
9. "Development of new modified polymers and blends for packaging and agricultural applications", GSRT/EPET II, total budget 1842 kECU, share of our lab was 72 KECU, for 3 years, (1994-1997).
10. "Increase of the domestic production capacity and recycling of used lube oils", GSRT/EPET II, total budget 2000 kECU, share of our lab was 85 KECU, for 3 years, (1994-1997).

11. "Numerical Methods for flow of deforming Particulates", with C. Pozrikidis, NATO, \$7500 US, 2 years, (1995-1997).
12. "Study of the stability of layered flow between liquid and gas", GSRT/PENED, 36 KECU (26+10 KECU for a scientist living abroad), for 2 years, (1996-1999).
13. "Modelisation numerique de la Mecanique de capsules a membrane liquide ou elastique" GSRT/France PLATO, 10.6 KECU (7.5 KECU from GSRT & 3.1 KECU from the French Embassy), for 2 years, (1997-1999).
14. "Improvement of the Graduate Program in the Chemical Engineering Department at UP" Ministry of Education, grant No 51, 432 KECU, for 3 years, start Oct. 1997.
15. "Cavitation Phenomena in Waste Water Treatment by Ultrasound" INCO-COPERNICUS 97/98 program, contract no IC15CT980141, total budget 240 KECU, share of our lab was 58.75 KECU, for 3 years, start 1998.
16. "Stability Analysis of Heat Transfer from Saturated Vapor through Condensation on a Cooled Surface" Caratheodory Program, 20 KECU, for 3 years, start 1998.
17. "Reinforced Plastics" GSRT/EPET II-EKVAN #88, total budget 940 KECU, share of our lab was 150 KECU, for 3 years, (1998-2001).
18. "Advanced NATO Fellowship" for Al. Doinikov, 3.5 KEU, for 1 year, 1999.
19. "Optimization in the Production of Master Batches by model development and software and verification in Industrial Scale", GSRT/PAVE, 65 KEU, share of our Lab was 31 KEU, for 2 years, start 2000.
20. "Study of the Production and Characterization of Polymeric Films by the Film Blowing Process", GSRT/PENED, 140 KEU, share of our Lab was 64,5 KEU, for 2 years, start 2000.
21. "Advanced NATO Fellowship" for Al. Doinikov, 3.5 KEU, for 1 year, 2000.
22. "Improvement of the Graduate Program in the Chemical Engineering Department at UP" Ministry of Education, continuation of grant No 51, 47 KECU, for 1 year, start Sep. 2000.
23. "Mouvement et deformation de cellules sous l'effet de contraintes visqueuses ou acoustiques" GSRT/France PLATO, 12 KECU, for 2 years, (2001-2003).
24. "Study of bubble-bubble interaction, coalescence and break-up", Programme IKYDA 2000, 15 KECU, for 3 years (2001-2003).
25. "Optimization of two-phase flows in the oil and chemical Industries", GSRT/PENED, 138 K€, share of our Lab was 52 k€, for 3 years, start 2002.
26. "Studies of the effect of mechanical stresses and temperature on the extrusion of reinforced polyethylene pipes", GSRT/PENED, 194 k€, share of our Lab was 40 K€, for 3 years, start 2002.

27. "Effect of Rainfall on the aerodynamic characteristics of an airplane wing", GSRT/PENED, 123 k€, share of our Lab was 35 k€, for 3 years, start 2002.
28. "Improvement of the Graduate Program in the Chemical Engineering Department at UP" Ministry of Education, new grant, 143 k€, for 2 years, start 2002.
29. Equipment for the improvement of the Graduate Program in the Chemical Engineering Department at UP" Ministry of Education, new grant, 100 k€, for 2 years, start 2002.
30. "Study of the production of Polymeric film via the film Blowing process" Caratheodory Program, 24.5 k€, for 3 years, start 2003.
31. "New numerical techniques for the computation of flows of viscoelastic materials under conditions of industrial applications", Pythagoras Program, Ministry of Education of Greece, 50 k€, 2 years, start 2005.
32. "Critical forming technologies for producing CMOS circuits with dimension <100nm in industrial scale", GSRT/PENED, 160 k€, share of our lab was 52 K€, for 3 years, start 2005.
33. "Multi-scale modelling of interfacial phenomena in acrylic adhesives undergoing deformation, Proposal acronym: MODIFY", EU, 3100 k€, share of our lab was 300 k€, for 3 years, start 2009.
34. "Film rupture of nanostructured liquids in processing of composite materials" GSRT/Heraklitos program, 45 k€, for 3 years, start 2010.
35. "Complex Visco-elastic and Visco-plastic Materials: From Microscopic Structure and Dynamics to Macroscopic Flow" COVISCO, GSRT/Thales program, 600 k€, share of our lab was 60 k€, for 45 months, start 2012.
36. "Thin film flows of complex fluids in microfluidic applications", FilCoMicrA, GSRT/Excellence program, Grant Number: 1918, 300 k€, for 3 years, start 2012.

Last update: August 30, 2013
Includes only major grants