

Curriculum Vitae

Gaetano D'Avino received his degree cum laude in Chemical Engineering from University of Naples Federico II on March 2004. In December 2007, he got his PhD at the Department of Chemical Engineering of University of Naples Federico II defended the thesis: "Computational Rheology of Solid Suspensions" under the supervision of Prof. Pier Luca Maffettone. During the PhD, he spent 9 months at the Department of Mechanical Engineering of the Technische Universiteit of Eindhoven TU/e (The Netherlands) in the group of Prof. Martien Hulsen. Later, he got a research contract from the University of Naples Federico II. In 2010, Gaetano spent one year as PostDoc at the Department of Chemical Engineering of the Katholieke Universiteit of Leuven (Belgium) in the group of Prof. Jan Vermant, followed by a research contract at the Department of Chemical Engineering of University of Naples Federico II. In February 2011, he joined the Center for Advanced Biomaterials for Health Care of the Istituto Italiano di Tecnologia (IIT) as Senior PostDoc. Since December 2012, he is assistant professor at the Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale of University of Naples Federico II.

His research activity is mainly focused on the computational rheology with specific interest in: i) simulations of particle dynamics in complex fluids with applications in microfluidics, ii) prediction of rheological properties of viscoelastic suspensions, iii) development of efficient numerical methods for simulating the fluid dynamics of systems governed by non-Newtonian constitutive equations.

He is author of 57 scientific publications in international "peer review" journals and speaker in numerous international conferences.

2004 Master's Degree in Chemical Engineering cum laude, University of Naples Federico II

2006 - 2007 Visiting PhD at the Department of Mechanical Engineering, Technische Universiteit of Eindhoven, Eindhoven (The Netherlands)

2007 PhD in Chemical Engineering, University of Naples Federico II

2008 - 2009 Research contract at the Department of Chemical Engineering, University of Naples Federico II

2009 - 2010 PostDoc at the Department of Chemical Engineering, Katholieke Universiteit of Leuven, Leuven (Belgium)

2010 - 2011 PostDoc at the Department of Chemical Engineering, University of Naples Federico II

2011 - 2012 Senior PostDoc at the Center for Advanced Biomaterials for Health Care, Istituto Italiano di Tecnologia

2012 Attainment of the "Abilitazione Scientifica Nazionale" for Associate Professor (SC: 09/D2)

2012 - 2015 Assistant Professor (RTD-A) at the Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, University of Naples Federico II

2015 - present Assistant Professor (RTD-B) at the Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale, University of Naples Federico II

2017 Attainment of the “Abilitazione Scientifica Nazionale” for Full Professor (SC: 09/D2)

Publication list

1. A. Sannino, A. Esposito, M. M. Villone, M. A. Hulsen and G. D’Avino, Bubble impingement in the presence of a solid particle: a computational study, *Computers and Fluids*, **170**, 349-356 (2018)
2. D. Tamaro, R. Pasquino, M. M. Villone, G. D’Avino, V. Ferraro, E. Di Maio, A. Langella, N. Grizzuti and P. L. Maffettone, Elasticity in bubble rupture, *Langmuir*, **34**, 5646-5654 (2018)
3. F. Del Giudice, S. Sathish, G. D’Avino and A. Q. Shen, “From the edge to the center”: viscoelastic migration of particles and cells in a strongly shear-thinning liquid flowing in a microchannel, *Analytical Chemistry*, **89**, 131146-131159 (2017)
4. M. M. Villone, G. D’Avino, E. Di Maio, M. A. Hulsen and P. L. Maffettone, Modeling and simulation of viscoelastic film retraction, *Journal of Non-Newtonian Fluid Mechanics*, **249**, 26-35 (2017)
5. S. Mirzaagha, R. Pasquino, E. Iuliano, G. D’Avino, F. Zonfrilli, V. Guida and N. Grizzuti, The rising motion of spheres in structured fluids with yield stress, *Physics of Fluids*, **29**, 093101 (2017)
6. G. D’Avino and P. L. Maffettone, Numerical simulations of dispersive mixing of viscoelastic suspensions in a four-roll mill, *Rheologica Acta*, **56**, 695-706 (2017)
7. G. D’Avino, F. Greco and P. L. Maffettone, Particle migration due to viscoelasticity of the suspending liquid, and its relevance in microfluidic devices, *Annual Review of Fluid Mechanics*, **49**, 341-360 (2017), **Invited Review**
8. M. De Corato and G. D’Avino, Dynamics of a microorganism in a sheared viscoelastic liquid, *Soft Matter*, **13**, 196-211 (2017)
9. M. Trofa, G. D’Avino, M. A. Hulsen and P. L. Maffettone, The effect of wall slip on the dynamics of a spherical particle in Newtonian and viscoelastic fluids subjected to shear and Poiseuille flows, *Journal of Non-Newtonian Fluid Mechanics*, **236**, 123-131 (2016)
10. K. Shahzad, G. D’Avino, F. Greco, S. Guido and P. L. Maffettone, Numerical investigation of hard-gel microparticle suspension dynamics in microfluidic channels: Aggregation/fragmentation phenomena, and incipient clogging, *Chemical Engineering Journal*, **303**, 202-216 (2016)
11. M. De Corato, J. J. M. Slot, M. Hutter, G. D’Avino, P. L. Maffettone and M. A. Hulsen, Finite element formulation of fluctuating hydrodynamics for fluids filled with rigid particles using boundary fitted meshes, *Journal of Computational Physics*, **316**, 632-651 (2016)

12. M. Trofa, M. M. Villone, G. D'Avino, M. A. Hulsen, P. A. Netti and P. L. Maffettone, Numerical simulations of the separation of elastic particles in a T-shaped bifurcation, *Journal of Non-Newtonian Fluid Mechanics*, **233**, 75-84 (2016)
13. C. Dessi, G. D. Tsibidis, D. Vlassopoulos, M. De Corato, M. Trofa, G. D'Avino, P. L. Maffettone and S. Coppola, Analysis of dynamic mechanical response in torsion, *Journal of Rheology*, **60**, 275-287 (2016)
14. M. Trofa, G. D'Avino, M. A. Hulsen, F. Greco and P. L. Maffettone, Numerical simulations of the dynamics of a slippery particle in Newtonian and viscoelastic fluids subjected to shear and Poiseuille flows, *Journal of Non-Newtonian Fluid Mechanics*, **228**, 46-54 (2016)
15. D. Tamaro, G. D'Avino, E. Di Maio, R. Pasquino, M. M. Villone, D. Gonzales, M. Groombridge, N. Grizzuti and P. L. Maffettone, Validated modeling of bubble growth, impingement and retraction to predict cell-opening in thermoplastic foaming, *Chemical Engineering Journal*, **287**, 492-502 (2016)
16. M. M. Villone, G. D'Avino, M. A. Hulsen and P. L. Maffettone, Dynamics of prolate spheroidal elastic particles in confined shear flow, *Physical Review E*, **92**, 062303 (2015)
17. G. D'Avino, F. Greco and P. L. Maffettone, Rheology of a dilute viscoelastic suspension of spheroids in unconfined shear flow, *Rheologica Acta*, **54**, 915-928 (2015)
18. G. D'Avino, M. A. Hulsen and P. L. Maffettone, Separation of particles in non-Newtonian fluids flowing in T-shaped microchannels, *Advanced Modeling and Simulation in Engineering Sciences*, **2**, 9 (2015)
19. M. De Corato, F. Greco, G. D'Avino and P. L. Maffettone, Hydrodynamics and Brownian motions of a spheroid near a rigid wall, *Journal of Chemical Physics*, **12**, 194901 (2015)
20. M. Trofa, M. Vocciante, G. D'Avino, M. A. Hulsen, F. Greco and P. L. Maffettone, Numerical simulations of the competition between the effects of inertia and viscoelasticity on particle migration in Poiseuille flow, *Computers and Fluids*, **107**, 214-223 (2015)
21. F. Del Giudice, G. D'Avino, F. Greco, I. De Santo, P. A. Netti and P. L. Maffettone, Rheometry-on-a-chip: measuring the relaxation time of a viscoelastic liquid through particle migration in microchannel flows, *Lab on a Chip*, **15**, 783-792 (2015)
22. G. D'Avino and P. L. Maffettone, Particle dynamics in viscoelastic liquids, *Journal of Non-Newtonian Fluid Mechanics*, **215**, 80-104 (2015), **Invited Review**
23. F. S. Gentile, I. De Santo, G. D'Avino, L. Rossi, G. Romeo, F. Greco, P. A. Netti and P. L. Maffettone, Hindered Brownian diffusion in a square-shaped geometry, *Journal of Colloid and Interface Science*, **447**, 25-32 (2015)
24. F. Del Giudice, G. D'Avino, F. Greco, P. A. Netti and P. L. Maffettone, Effect of fluid rheology on particle migration in a square-shaped microchannel, *Microfluidics and Nanofluidics*, **19**, 95-104 (2015)

25. F. Del Giudice, H. Madadi, M. M. Villone, G. D'Avino, A. Cusano, R. Vecchione, M. Ventre, P. L. Maffettone and P. A. Netti, Magnetophoresis 'meets' viscoelasticity: Deterministic separation of magnetic particles in a modular microfluidic device, *Lab on a Chip*, **15**, 1912-1922 (2015)
26. De Santo, G. D'Avino, G. Romeo, F. Greco, P. A. Netti and P. L. Maffettone, A microfluidic Lagrangian trap for Brownian particles: 3D focusing down to the nanoscale, *Phys. Rev. Applied*, **2**, 064001 (2014)
27. G. D'Avino, M. A. Hulsen, F. Greco and P. L. Maffettone, Bistability and metastability scenario in the dynamics of an ellipsoidal particle in a sheared viscoelastic fluid, *Phys. Rev. E*, **89**, 043006 (2014)
28. M. M. Villone, G. D'Avino, M. A. Hulsen, F. Greco and P. L. Maffettone, Numerical simulations of linear viscoelasticity of monodisperse emulsions of Newtonian drops in a Newtonian fluid from dilute to concentrated regime, *Rheol. Acta*, **53**, 401-416 (2014)
29. R. Pasquino, G. D'Avino, P. L. Maffettone, F. Greco and N. Grizzuti, Migration and chaining of noncolloidal spheres suspended in a sheared viscoelastic medium. Experiments and simulations, *J. Non-Newtonian Fluid Mech.*, **203**, 1-9 (2014)
30. F. Del Giudice, G. Romeo, G. D'Avino, F. Greco, P. A. Netti and P. L. Maffettone, Particle alignment in a viscoelastic liquid flowing in a square-shaped microchannel, *Lab Chip*, **13**, 4263-4271 (2013)
31. G. D'Avino, M. A. Hulsen and P. L. Maffettone, Dynamics of pairs and triplets of particles in a viscoelastic fluid flowing in a cylindrical channel, *Comp. Fluids*, **86**, 45-55 (2013)
32. G. Romeo, G. D'Avino, F. Greco, P.A. Netti and P.L. Maffettone, Viscoelastic flow focusing in microchannels: scaling properties of the particle radial distributions, *Lab Chip*, **13**, 2802-2807 (2013)
33. G. D'Avino, F. Greco, M.A. Hulsen and P.L. Maffettone, Rheology of viscoelastic suspensions of spheres under small and large amplitude oscillatory shear by numerical simulations, *J. Rheology*, **57**, 813-839 (2013)
34. G. D'Avino, Non-Newtonian deterministic lateral displacement separator: theory and simulations, *Rheol. Acta*, **52**, 221-236 (2013)
35. M.M. Villone, G. D'Avino, M.A. Hulsen, F. Greco and P.L. Maffettone, Particle motion in square channel flow of a viscoelastic liquid: Migration vs secondary flows, *J. Non-Newtonian Fluid Mech.*, **195**, 1-8 (2013)
36. G. D'Avino, M.A. Hulsen and P. L. Maffettone, Decoupled transient schemes for viscoelastic fluid flow with inertia, *Comp. Fluids*, **66**, 183-193 (2012)

37. G. D'Avino, G. Romeo, M.M. Villone, F. Greco, P.A. Netti and P. L. Maffettone, Single line particle focusing induced by viscoelasticity of the suspending liquid: theory, experiments and simulations to design a micropipe flow-focuser, *Lab Chip*, **12**, 1638–1645 (2012)
38. G. D'Avino, F. Snijkers, R. Pasquino, M. A. Hulsen, F. Greco, P. L. Maffettone and J. Vermant, Migration of a sphere suspended in viscoelastic liquids in Couette flow: experiments and simulations, *Rheol. Acta*, **51**, 215–234 (2012)
39. M.M. Villone, G. D'Avino, M.A. Hulsen, F. Greco and P.L. Maffettone, Simulations of viscoelasticity-induced focusing of particles in pressure-driven micro-slit flow, *J. Non-Newtonian Fluid Mech.*, **166**, 1396-1405 (2011)
40. L. Carracciuolo, D. Casaburi, L. D'Amore, G. D'Avino, P.L. Maffettone and A. Murli, Computational simulations of 3D large-scale time-dependent viscoelastic flows in high performance computing environment, *J. Non-Newtonian Fluid Mech.*, **166**, 1382-1395 (2011)
41. S. Caserta, G. D'Avino, F. Greco, S. Guido and P. L. Maffettone, Migration of a sphere in a viscoelastic fluid under planar shear flow: Experiments and numerical predictions., *Soft Matter*, **7**, 1100-1106 (2011)
42. F. Snijkers, G. D'Avino, P.L. Maffettone, F. Greco, M.A. Hulsen and J. Vermant, Effect of viscoelasticity on the rotation of a sphere in shear flow, *J. Non-Newtonian Fluid Mech.*, **166**, 363-372 (2011)
43. M. M. Villone, G. D'Avino, M. A. Hulsen, F. Greco and P. L. Maffettone, Numerical simulations of particle migration in a viscoelastic fluid subjected to Poiseuille flow, *Comp. Fluids*, **42**, 82-91 (2011)
44. G. D'Avino, S. Crescitelli, P. L. Maffettone and M. Grosso, On the choice of the optimal periodic operation for a continuous fermentation process, *Biotech. Prog.*, **26**, 1580-1589 (2010)
45. G. D'Avino, P.L. Maffettone, F. Greco and M.A. Hulsen, Viscoelasticity-induced migration of a rigid sphere in confined shear flow, *J. Non-Newtonian Fluid Mech.*, **175**, 466-474 (2010)
46. G. D'Avino, T. Tuccillo , P.L. Maffettone , F. Greco , M.A. Hulsen, Numerical simulations of particle migration in a viscoelastic fluid subjected to shear flow, *Comp. Fluids*, **39**, 709-721, (2010)
47. G. D'Avino and M.A. Hulsen, Decoupled second-order transient schemes for the flow of viscoelastic fluids without a viscous solvent contribution, *J. Non-Newtonian Fluid Mech.*, **165**, 1602-1612 (2010)
48. G. D'Avino , M.A. Hulsen, F. Greco and P.L. Maffettone, Rheology of a dilute suspension of spheres in a viscoelastic fluid under large amplitude oscillations, *J. Comp. Theor. Nanosci.*, **7**, 780-786, (2010)

49. G. D'Avino and M.A. Hulsen, A comparison between a collocation and weak implementation of the rigid-body motion constraint on a particle surface, *Int. J. Numer. Meth. Fluids*, **64**, 1014-1040 (2010)
50. F. Snijkers, G. D'Avino, P.L. Maffettone, F. Greco, M.A. Hulsen and J. Vermant, Rotation of a sphere in a viscoelastic liquid subjected to shear flow. Part II. Experimental results, *J. Rheology*, **53**, 459-480 (2009)
51. G. D'Avino, G. Cicale, M.A. Hulsen, F. Greco and P.L. Maffettone, Effects of confinement on the motion of a single sphere in a sheared viscoelastic liquid, *J. Non-Newtonian Fluid Mech.*, **157**, 101-107 (2009)
52. G. D'Avino, M.A. Hulsen, F. Snijkers, J. Vermant, F. Greco and P.L. Maffettone, Rotation of a sphere in a viscoelastic liquid subjected to shear flow. Part I: Simulation results, *J. Rheology*, **52**, 1331-1346 (2008)
53. G. D'Avino, P.L. Maffettone, M.A. Hulsen and G.W.M. Peters, Numerical simulation of planar elongational flow of concentrated rigid particle suspensions in a viscoelastic fluid, *J. Non-Newtonian Fluid Mech.*, **150**, 65-79 (2008)
54. F. Greco, G. D'Avino and P.L. Maffettone, Rheology of a dilute suspension of rigid spheres in a second order fluid, *J. Non-Newtonian Fluid Mech.*, **147**, 1-10 (2007)
55. G. D'Avino, P.L. Maffettone, M.A. Hulsen, G.W.M. Peters, A numerical method for simulating concentrated rigid particle suspensions in an elongational flow using a fixed grid, *J. Comp. Phys.*, **226**, 688-711 (2007)
56. G. D'Avino, S. Crescitelli, P.L. Maffettone, M. Grosso, A critical appraisal of the p-criterion through continuation/optimization, *Chem. Eng. Sci.*, **61**, 4689-4696 (2006)
57. F. Greco, G. D'Avino, P.L. Maffettone, Stress tensor of a dilute suspension of spheres in a viscoelastic liquid, *Phys. Rev. Lett.*, **95**, 246001 (2005)

Conferences

1. Del Giudice F, D'Avino G, Greco F, Shen AQ, Maffettone PL, "Viscoelastic ordering of particles in a straight microfluidic channel", The Society of Rheology: 90th Annual Meeting, Houston (Texas, USA), 14 - 18 October 2018
2. Trofa M, D'Avino G, Tomaiuolo G, Greco F, Maffettone PL, Guido S, "Numerical simulations of particulate fouling in microchannels", The Society of Rheology: 90th Annual Meeting, Houston (Texas, USA), 14 - 18 October 2018
3. Arseni AMG, D'Avino G, Greco F, Maffettone PL, "3D simulation of dense granular flow in a rotating drum", The Society of Rheology: 90th Annual Meeting, Houston (Texas, USA), 14 - 18 October 2018

4. D'Avino G, Del Giudice F, Greco F, Maffettone PL, "Numerical simulations of viscoelasticity-induced ordering of particles in a straight microfluidic channel", EUROMECH Colloquium 596: Numerical simulations of flows with particles, bubbles, and droplets, Venezia (ITALY), 09 – 11 May 2018
5. D'Avino G, Greco F, Hulsen MA, Maffettone PL, "Numerical simulations on the dynamics of a spheroid in a viscoelastic liquid in a slit microchannel", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
6. Arseni AMG, D'Avino G, Greco F, Maffettone PL, "3D simulation of dense granular flow in a rotating drum", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
7. Tammaro D, Pasquino R, Villone MM, D'Avino G, Ferraro V, Di Maio E, Langella A, Grizzuti N, Maffettone PL, "The role of elasticity in pore wall breaking", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
8. Del Giudice F, D'Avino G, Shen AQ, "High throughput viscoelastic ordering of particles in a straight microfluidic channel", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
9. Del Giudice F, Romeo G, D'Avino G, Greco F, Shivani S, Netti PA, Shen AQ, Maffettone PL, "Viscoelastic alignment, separation and ordering of particles in straight microfluidic channels", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
10. Trofa M, D'Avino G, Tomaiuolo G, Greco F, Maffettone PL, Guido S, "Numerical simulation of clogging in microchannels", AERC 2018: 12th Annual European Rheology Conference, Sorrento (ITALY), 17 – 20 April 2018
11. Villone MM, D'Avino G, Di Maio E, Hulsen MA, Maffettone PL, "Numerical simulations of viscoelastic film retraction", The Society of Rheology: 89th Annual Meeting, Denver (Colorado, USA), 08 – 12 October 2017
12. Del Giudice F, D'Avino G, De Santo I, Calcagno V, Esposito Taliento V, Haward SJ, Greco F, Netti PA, Maffettone PL, Shen AQ, "The μ -rheometer: an effective microfluidic platform to measure the relaxation time of weakly viscoelastic polymer solutions", The Society of Rheology: 89th Annual Meeting, Denver (Colorado, USA), 08 – 12 October 2017
13. Del Giudice F, Shivani S, D'Avino G, Shen AQ, "Microfluidic-based particle and cell manipulation in strongly shear-thinning fluids", The Society of Rheology: 89th Annual Meeting, Denver (Colorado, USA), 08 – 12 October 2017
14. D'Avino G, Greco F, Hulsen MA, Maffettone PL, "Simulation of the motion of a spheroid in a viscoelastic liquid in a pressure-driven channel flow", AERC 2017: 11th Annual European Rheology Conference, Copenhagen (DENMARK), 03 – 06 April 2017

15. Trofa M, D'Avino G, Hulsen MA, Greco F, Maffettone PL, "The effect of slip on the dynamics of a spherical particle in viscoelastic Poiseuille flow", AERC 2017: 11th Annual European Rheology Conference, Copenhagen (DENMARK), 03 – 06 April 2017
16. Del Giudice F, D'Avino G, De Santo I, Calcagno V, Esposito Taliento V, Haward SJ, Greco F, Netti PA, Maffettone PL, Shen AQ, "The μ -rheometer: an effective microfluidic platform to measure the relaxation time of weakly viscoelastic polymer solutions", AERC 2017: 11th Annual European Rheology Conference, Copenhagen (DENMARK), 03 – 06 April 2017
17. Tammaro D, Pasquino R, Villone MM, D'Avino G, Di Maio E, Langella A, Grizzuti N, Maffettone PL, "Making a hole in a viscoelastic film: the role of deformation history", AERC 2017: 11th Annual European Rheology Conference, Copenhagen (DENMARK), 03 – 06 April 2017
18. Tammaro D, Pasquino R, Villone MM, D'Avino G, Di Maio E, Grizzuti N, Maffettone PL, "The role of elasticity in bubble breaking", The Society of Rheology: 88th Annual Meeting, Tampa (Florida, USA), 12 – 16 February 2017
19. D'Avino G, Greco F, Maffettone PL, "Dynamics and rheology of a dilute viscoelastic suspension of spheroids in an unbounded shear flow", ICMF 2016: 9th International Conference of Multiphase Flows, Firenze (ITALY), 22 – 27 May 2016
20. Del Giudice F, D'Avino G, Villone MM, Trofa M, Greco F, Maffettone PL, "Viscoelastic microfluidics", A Special Rheology Symposium in honor of Professor Roger I. Tanner on the occasion of his 82nd birthday, Samos (GREECE), 29 June – 02 July 2015
21. Del Giudice F, D'Avino G, Villone MM, Greco F, Maffettone PL, "Particle manipulation through polymer solutions in microfluidic processes", Proceedings of the Polymer Processing with Resulting Morphology and Properties: Feet in the Present and Eyes at the Future: Proceedings of the GT70 International Conference, Salerno (ITALY), 15 – 17 October 2015
22. D'Avino G, Greco F, Maffettone PL, "Dynamics and rheology of a dilute viscoelastic suspension of spheroids in an unbounded shear flow", EuroMech Colloquium Anisotropic Particles in Turbulence, Norwegian University of Science and Technology, Trondheim (NORWAY), 10 – 12 June 2015, Keynote Lecture
23. D'Avino G, Hulsen MA, Greco F, Maffettone PL, "Dynamics and rheology of a dilute viscoelastic suspension of spheroids in an unbounded shear flow", AERC 2015: 10th Annual European Rheology Conference, Nantes (FRANCE), 14 – 17 April 2015
24. Del Giudice F, D'Avino G, Greco F, De Santo I, Netti PA, Maffettone PL, "Rheometry-on-a-chip: measuring the relaxation time of a viscoelastic liquid through particle migration in microchannel flows", AERC 2015: 10th Annual European Rheology Conference, Nantes (FRANCE), 14 – 17 April 2015
25. Trofa M, Vocciante M, D'Avino G, Hulsen MA, Greco F, Maffettone PL, "Numerical simulations of the competition between the effects of inertia and viscoelasticity on particle migration in Poiseuille flow", AERC 2015: 10th Annual European Rheology Conference, Nantes (FRANCE), 14 – 17 April 2015

26. Dessì C, Coppola S, Maffettone PL, D'Avino G, De Corato M, Trofa M, Vlassopoulos D, "Analysis of dynamic mechanical response of rubbers in torsion", AERC 2015: 10th Annual European Rheology Conference, Nantes (FRANCE), 14 – 17 April 2015
27. De Santo I, D'Avino G, Greco F, Maffettone PL, Netti PA, "Brownian particles trap through viscoelastic fluid in microfluidic flows", AERC 2015: 10th Annual European Rheology Conference, Nantes (FRANCE), 14 – 17 April 2015
28. De Santo I, D'Avino G, Greco F, Netti PA, Maffettone PL, "Viscoelastic focusing down to the nanoscale", The Society of Rheology: 86th Annual Meeting, Philadelphia (Pennsylvania, USA), 05 – 09 October 2014
29. De Corato M, D'Avino G, Greco F, Maffettone PL, "Brownian motion of an ellipsoidal particle in confined geometries", ASME 2014: 12th International Conference on Nanochannels, Microchannels, and Minichannels, Chicago (Illinois, USA), 03 – 07 August 2014
30. Del Giudice F, Romeo G, D'Avino G, Greco F, Netti PA, Maffettone PL, "Particle alignment in a viscoelastic liquid flowing in a square-shaped microchannel", EMBL 2014: European Molecular Biology Laboratory, Heidelberg (GERMANY), 23 – 25 July 2014
31. D'Avino G, Greco F, Hulsen MA, Maffettone PL, "Non-linear dynamics of an ellipsoid in a sheared viscoelastic fluid", AERC 2014: 9th Annual European Rheology Conference, Karlsruhe (GERMANY), 08 – 11 April 2014
32. Pasquino R, Aprea R, D'Avino G, Maffettone PL, Greco F, Grizzuti N, "Alignment of spheres in confined geometries", AERC 2014: 9th Annual European Rheology Conference, Karlsruhe (GERMANY), 08 – 11 April 2014
33. Del Giudice F, D'Avino G, Pulleine E, Greco F, Maffettone PL, Netti PA, Cooper J, Tassieri M, "Microrheology with optical tweezers reveals anomalous high-frequency oscillations of the particle Normalized Position Autocorrelation Function in rod-like Hydroxyethyl Cellulose solutions", AERC 2014: 9th Annual European Rheology Conference, Karlsruhe (GERMANY), 08 – 11 April 2014
34. D'Avino G, Greco F, Hulsen MA, Maffettone PL, "Rotation of an ellipsoidal particle in a viscoelastic liquid in an unconfined shear flow by numerical simulations", The Society of Rheology: 85th Annual Meeting, Montréal (Québec, CANADA), 13 – 17 October 2013
35. D'Avino G, Greco F, Hulsen MA, Maffettone PL, "Simulation of the motion of an ellipsoidal particle in a viscoelastic liquid undergoing unbounded shear flow", AERC 2013: 8th Annual European Rheology Conference, Leuven (BELGIUM), 02 – 05 April 2013
36. Del Giudice F, Romeo G, D'Avino G, Greco F, Maffettone PL, "Experimental investigation on the motion of particles in viscoelastic fluids in square-shaped microchannels", AERC 2013: 8th Annual European Rheology Conference, Leuven (BELGIUM), 02 – 05 April 2013

37. D'Avino G, Romeo G, Villone MM, Greco F, Netti P, Maffettone PL, "Migration of particles suspended in viscoelastic liquids in microfluidic devices", ICR 2012: The XVIth International Congress on Rheology, Lisbon (PORTUGAL), 05 – 10 August 2012
38. D'Avino G, Granato M, Hulsen MA, Greco F, Maffettone PL, "Dynamics of pair of particles in a viscoelastic fluid subjected to a pressure-driven flow", ICR 2012: The XVIth International Congress on Rheology, Lisbon (PORTUGAL), 05 – 10 August 2012
39. D'Avino G, Romeo G, Villone MM, Hulsen MA, Greco F, Netti PA, Maffettone PL, "Single line particle focusing induced by viscoelasticity of the suspending liquid: simulations and experiments", 17th International Workshop on Numerical Methods for Non-Newtonian Flows, Blois (FRANCE), 25 – 28 March 2012
40. D'Avino G, Romeo G, Villone MM, Greco F, Netti P, Maffettone PL, "Viscoelasticity induced migration of particles in confined flows", The Society of Rheology: 83rd Annual Meeting, Cleveland (Ohio, USA), 09 – 13 October 2011
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