

LIST OF PUBLICATIONS

Journal papers

1. M. R. Vetrano, A. Simonini, J. Steelant, P. Rambaud, “Thermal characterization of a flashing jet by planar laser-induced fluorescence”, **Experiments in Fluids**, vol. 54, (2013), pp. 1573-1583.
2. A. Foissac, J. Malet, M. R. Vetrano, J.-M. Buchlin, S. Mimouni, F. Feuillebois and O. Simonin, “Droplet size and velocity measurements at the outlet of a hollowcone spray nozzle”, **Atomization and sprays**, vol 21 (2011), pp. 893-905.
3. F. M.J.J. De Somer, M. R. Vetrano, J. P.A.J. Van Beeck and G. J. Van Nooten, “Extracorporeal bubbles: a word of caution”, **Interact. Cardio. Vasc. Thorac. Surg.**, vol.10 (2010), pp.995-1001
4. P. Collin , P. Boulet , G. Parent , M. R. Vetrano and J.-M. Buchlin, «Dynamics and thermal behaviour of water sprays», **International Journal of Thermal Sciences**, vol. 47, N. 4, (2008), pp. 399-407.
3. M. R. Vetrano, S. Gauthier, J. van Beeck, P. Boulet and J. –M. Buchlin “Characterization of a non-isothermal water spray by global rainbow thermometry”, **Experiments in Fluids**, vol. 40, (2006), pp. 15-22.
4. M. R. Vetrano, J. van Beeck and M. Riethmuller, “Assessment of refractive index gradients by Standard Rainbow Thermometry”, **Applied Optics**, vol. 44, N. 34, (2005), pp. 7275-7281.
5. M. R. Vetrano, J. van Beeck and M. Riethmuller, “Generalization of Rainbow Airy theory to non-uniform spheres”, **Optics Letters**, vol.30, (2005), pp. 658-660.
6. M. R. Vetrano, J. van Beeck and M. Riethmuller, “Global Rainbow Thermometry: improvements in the data inversion algorithm and validation technique in liquid-liquid suspension”, **Applied Optics**, vol. 43, N. 18 (2004), pp. 3600-3607.
7. L. Marrucci, D. Paparo, M. R. Vetrano, M. Colicchio, G. Viscardi and E. Santamato, “Role of dye structure in photo induced reorientation of dye-doped liquid crystals”, **J. Chem. Phys.**, vol. 113 (2000), pp. 10361-10366.

Chapter in a book

1. M. R. Vetrano and P. Dell’Aversana, “Experiments on Air-Lubricated Liquids: Role of Vapour, Electrostatic Effects, and Heat Transmission across the Interfaces”, in **Interfacial Fluid Dynamics and Transport Processes, Lecture Notes in Physics**, Vol. 628 (2002), pp 387-402.

Conferences

1. I. T. Horváth, P. Colinet and M. R. Vetrano, “Validation of the Multi-Wavelength Light Extinction technique for the characterization of solid nanoparticles”, in **25th European Conference on Liquid Atomization and Spray Systems**, Chania, Greece, 1-4 September 2013.
2. E. Porcheron, P. Lemaitre, A. Quérel, J. van Beeck, M. R. Vetrano, M. Brunel and G. Grehan, “Mesure aéroportée ILIDS de la taille des gouttes dans les nuages : le projet ALIDS du réseau EUFAR”, in **13^{ième} Congrès Francophone de Techniques Laser**, Rouen, 18 – 21 Septembre 2012.

3. C. Spaccapaniccia, Ph. Planquart, M.R. Vetrano, J.M. Buchlin, “Mesure simultanée de la température et de la vitesse par les techniques LIF et PIV dans une cavité rectangulaire”, in **13^{ième} Congrès Francophone de Techniques Laser**, Rouen, 18 – 21 Septembre 2012.
4. I. Horvath, E. Pescini, P. Colinet et M. R. Vetrano, “Application de la technique spectroscopique d’extinction à un écoulement de nanoparticules”, in **13^{ième} Congrès Francophone de Techniques Laser**, Rouen, 18 – 21 Septembre 2012.
5. M. R. Vetrano, A. Simonini, J. Steelant and P. Rambaud, “Application de la PLIF à deux couleurs à un jet en état de surchauffé”, in **13^{ième} Congrès Francophone de Techniques Laser**, Rouen, 18 – 21 Septembre 2012.
6. M. R. Vetrano, A. Simonini, J. Steelant and P. Rambaud, “Flashing jet characterization by non intrusive laser based measurement technique”, in proceedings of **16th Int Symp on Applications of Laser Techniques to Fluid Mechanics Lisbon**, Portugal, 09-12 July, 2012
7. M. R. Vetrano, A. Simonini, J. Steelant and P. Rambaud, “Temperature and concentration measurements in a flashing ethanol jet : Application to space propulsion” in proceedings of **6th International Conference on two-phase systems for ground and space applications**, Cava de’ Tirreni, Italy, September 2011
8. M. R. Vetrano, E. Cecchi, P. Rambaud and J. –M. Buchlin, “Carécterisation d’une trempe supersonique par extinction laser” in proceedings of **12^{eme} Congres francophone de technique laser**, Vandoeuvre-lès-Nancy, France, September, 2010.
9. M.R. Vetrano, F. Lebeau, A. Parente, M.L. Riethmuller, “Droplet internal recirculation measurement by micro-PIV” in proceedings of the **7th International Conference on Multiphase Flow (ICMF)**, Tampa, USA May June 2010.
10. M. Khalid, J. –M. Muylaert, V. Van der Haegen, C. O. Asma, M. R. Vetrano and J. –M. Buchlin, “Feasibility for an ESA planetary plume surface interaction facility” **Space Propulsion 2010 Conference**, San Sebastian, Spain May 2010.
11. J.-M. Muylaert, R. Reinhard, C. O. Asma, J.-M. Buchlin, P. Rambaud, and M. R. Vetrano, “QB50, an international network of 50 cubesats for multi-point, in-situ measurements in the lower thermosphere and for re-entry research” **ESA Atmospheric Science Conference** Barcelona, Spain September 2009.
12. D. Masutti, S. Bernhardt, C. O. Asma, M. R. Vetrano, “Experimental characterization of liquid jet atomization in Mach 6 crossflow” in proceedings of the **39th AIAA Fluid Dynamics Conference**, San Antonio, Texas June 2009.
13. M. R. Vetrano, V. Ruwet, F. Lebeau, P. Corieri, J. van Beeck and M. Riethmuller “Applications de la micro-PIV dans des écoulements libre et confiné” in proceedings of **11^{eme} Congres francophone de technique laser**, Futuroscope, France, September, 2008.
14. M.R. Vetrano, F. Lebeau, P. Rambaud and J.-M. Buchlin, “Correlation law for SMD in high viscous liquids” in proceedings of **22nd European Conference on Liquid Atomization and Spray Systems ILASS08**, Como, Italy, September 2008
15. M. R. Vetrano, J. van Beeck and M. Riethmuller, “Temperature gradient measurements in combustion droplets by standard rainbow thermometry” in proceedings of **22nd European Conference on Liquid Atomization and Spray Systems ILASS08**, Como, Italy, September 2008
16. M. R. Vetrano, J. van Beeck and M. Riethmuller, “Développements récents de la Technique de l’Arc-en-ciel appliquée aux gouttes avec évaporation”, in proceedings of **10^{eme} Congres francophone de technique laser**, Toulouse, France, September, 2006.
17. M. R. Vetrano, J. van Beeck and J.-M. Buchlin, “Global Rainbow Thermometry as experimental technique for the study of non-isothermal sprays”, in proceedings of **7th National Congress on Theoretical and Applied Mechanics**, Mons, Belgium, May 26-27, 2005.

18. M. R. Vetrano, J. van Beeck and M. Riethmuller, "Mesure de la température d'un spray d'eau chaude par la méthode globale par arc-en-ciel : effet du gradient de température dans les gouttes", in proceedings of **8^{eme} Congres francophone de velocimetrie laser**, Brussels, Belgium, September, 2004.
19. M.R. Vetrano and J.P.A.J. van Beeck, "Global Rainbow Thermometry in liquid-liquid suspension", in proceedings of **9th International Conference on Liquid atomisation and Spray Systems**, Sorrento, Italy, July 13-17, 2003.
20. M.R. Vetrano, J.P.A.J. van Beeck, and M.L. Riethmuller, "Global rainbow thermometry validation in liquid-liquid suspension and applications to water spray", in proceedings of **6th National Congress on Theoretical and Applied Mechanics**, Ghent, Belgium, May 26-27, 2003.
21. M.R. Vetrano, J.P.A.J. van Beeck, and M.L. Riethmuller, "Global rainbow thermometry validation in liquid-liquid suspension", in proceedings of **Photonics in Mechanical and Industrial Processes**, Louvain-la-Neuve, Belgium, February 20-21, 2003.
22. M. R. Vetrano, J. van Beeck and M. Riethmuller, "Validation experimentale de simulations de thermometrie par la methode d'arc-en-ciel global", in proceedings of **8^{eme} Congres francophone de velocimetrie laser**, Orsay, France, September, 2002.
23. M.R. Vetrano, J. van Beeck and M. Riethmuller, "Experimental validation of Global Rainbow Thermometry simulations", in proceedings of **Optical Technology and Image Processing For Fluids and Solids Diagnostics**, Bijing, July, 2002.
24. G. P. Neitzel, P. Nagy, P. Dell'Aversana, M. R. Vetrano, J.-C. Chen, C. W. Kuo, "Recent results on Permanent Non-Coalescence and Non-Wetting" **14th U.S. National Congress of Theoretical and Applied Mechanics**, Virginia Tech. Institute, Blacksburg VA, USA, June 2002
25. M. R. Vetrano and P. Dell'Aversana, "Experiments on air-lubricated liquids: Role of vapour, electrostatic effects, and heat transmission across the interfaces", in Proceedings of **First Conference of Int'l. Marangoni Association**, Giessen, Germany, September, 2001.
26. P. Dell'Aversana, M. R. Vetrano and G. P. Neitzel "Drops Sliding upon a Solid Surface Without Wetting" **53rd annual meeting of the American Physical Society Division of Fluid Dynamics**, Washington, 19 –21 November 2000
27. G. P. Neitzel, P. Dell'Aversana, V. Tontodonato and M. R. Vetrano "Principles, limits and microgravity applications of self-lubricated liquids", in Proceedings of **First Int'l. Symposium of Microgravity Res. Appl. Phys. Sci. Biotech.**, 1, 109, Sorrento, Italy, September, 2000.