

Brice SAINT-MICHEL

65, Appach Road, SW2 2LE, LONDON, UNITED KINGDOM
Mobile : +44 790 862 7934
Email : bsaintmichel@gmail.com
Web : <https://bsaintmichel.fr>
ORCID : 0000-0002-0362-3209
Born on December 28th, 1987 in Dunkirk (France)



Postdoctoral Researcher at Imperial College London

Education

- 2010 – 2013 PhD Thesis defended at the Condensed State Department (SPEC) of the French Atomic Energy Commission (CEA Saclay, France). Dynamical unsteady regimes and statistical aspects of a von Kármán turbulent swirling flow.
> SPEC: Orme des Merisiers, bât 772, 91 191 Gif-sur-Yvette – <http://iramis.cea.fr/spec/>
> François Daviaud – francois.daviaud@cea.fr
- 2009 – 2010 2nd MSc year (4th year total) of the ESPCI Paris (*The City of Paris Industrial Physics and Chemistry Higher Educational Institution*) curriculum. Courses on complex systems from Pierre et Marie Curie and Paris Diderot universities. Awarded with honours.
- 2006 – 2009 1st – 3rd year of the ESPCI Paris curriculum. Courses in Physics, Chemistry and Biology. Physics major. Awarded with honours.
> ESPCI Paris: 10, rue Vauquelin, 75005 Paris – <http://www.espci.fr>
- 2004 – 2006 Two years of prep school (higher education) at Lycée Faidherbe, Lille.
- 2004 French Scientific Baccalaureate. Awarded with honours.
-

Experience

- 2018 – 2019 Postdoctoral position in Chemical Engineering, Imperial College London. Extensional rheology of complex media under extreme deformation using ultrasound excitation.
> Chemical Engineering: London SW7 2AZ – <http://www.imperial.ac.uk/chemical-engineering>
> Valeria Garbin – vgarbin@imperial.ac.uk
- 2015 – 2018 Postdoctoral position at the Physics laboratory of ENS de Lyon (France). Local rheology of non-Brownian suspensions and non-Newtonian fluids using ultrasound echography.
> Laboratoire de Physique: 46, allée d'Italie, 69007 Lyon – <http://www.ens-lyon.fr/PHYSIQUE/>
> Sébastien Manneville – sebastien.manneville@ens-lyon.fr
- 2013 – 2014 Postdoctoral position at the Out-of-Equilibrium Phenomena Research Institute (IRPHÉ, Marseille, France). Directional freezing of colloidal suspensions (part of ERC FreeCo).
> IRPHÉ: 49, rue F. Joliot-Curie, 13013 Marseille – <http://www.irphe.fr>
> Alain Pocheau – pocheau@irphe.univ-mrs.fr
- 2010 MSc internship at Complex Matter and Systems (MSC, Univ. Paris 7, France) laboratory.
- 2008 Engineering internship at Schlumberger (Clamart, France – Jebel Ali, UAE).
-

Skills

Languages French: Mother tongue
English: Fluent, both oral and written.
German, Japanese: Beginner skills.

Computer Proficient in LaTeX, MATLAB. Fair knowledge of C/C++, Python, Java, Wordpress, ImageJ, LabVIEW. Notions of Fortran, Maple, Origin, HTML/CSS, CUDA.

Leisure

Theatre Amateur plays, ESPCI: “Krum” (H. Levin, 2010), “Children of the Sun” (M. Gorky, 2011).

Sports Badminton, swimming, jogging.

Other Photography, Piano, Swing.

References

Peer-Reviewed Articles

Under review

xx/ [X Radiography of Viscous Resuspension](#),
B. Saint-Michel, S. Manneville, S. Meeker, G. Ovarlez and H. Bodiguel,
Under Review for *Physics of Fluids* (special Edition: Outstanding Early-Career Researchers)

xx/ [Effect of Bulk and Interfacial Rheology on the Stability of Bubbles in Oleogels \[...\]](#)
S. Saha, B. Saint-Michel, B. P. Binks and V. Garbin,
Under Review for *Rheologica Acta*

2019

18/ [Oscillations of Small Bubbles and Medium Yielding in Elastoviscoplastic Fluids](#),
M. De Corato *et al.*,
Physical Review Fluids **4**, 073301 (2019)

17/ [Boundary-Induced Inhomogeneity of Particle Layers in the Solidification of Suspensions](#),
B. Saint-Michel, T. Gibaud and S. Manneville,
Physical Review E **99**(5), 052601 (2019)

16/ [Irreversible Hardening in Soft Colloidal Gels: The Smart Response of Natural Rubber Latex Gels](#),
G. De Oliveira Reis *et al.*
Journal of Colloid and Interface Science **539**, 287-296 (2019)

2018

15/ [Wall Friction and Janssen Effect in the Solidification of Suspensions](#),
B. Saint-Michel, M. Georgelin, S. Deville and A. Pocheau
Soft Matter **14**(46), 9498-9510 (2018)

14/ [Uncovering Instabilities in the Spatiotemporal Dynamics of a Shear-Thickening Cornstarch Suspension](#),
B. Saint-Michel, T. Gibaud and S. Manneville,
Physical Review X **8**(3), 031006 (2018)

2017

13/ [Interaction of multiple particles with a solidification front : from compacted particle layer to particle](#)

trapping,

B. Saint-Michel, S. Deville, M. Georgelin and A. Pocheau,
Langmuir, **33**(23), 5617-5627 (2017).

- 12/ [Simultaneous Concentration Maps in non-Brownian Particulate Suspensions](#),
B. Saint-Michel, H. Bodiguel, S. Meeker and S. Manneville,
Physical Review Applied **8**(1), 014023 (2017).
- 11/ [Stochastic Chaos in a Turbulent Flow](#),
D. Faranda, Y. Sato, B. Saint-Michel C. Wiertel-Gasquet, V. Padilla, B. Dubrulle and F. Daviaud,
Physical Review Letters, **119**(1), 014502 (2017).
- 10/ [Predicting and Assessing the Yielding Transition in Protein Gels Under Stress](#),
B. Saint-Michel, T. Gibaud, M. Leocmach and S. Manneville,
Soft Matter **13** (14), 2643-2653 (2017).
- 2016 -----
- 9/ [Shear-Banding in Wormlike Micelles: Beware of Elastic Instabilities](#),
M.A Fardin, L. Casanellas, B. Saint-Michel, S. Manneville and S. Lerouge,
Journal of Rheology **60** (5), 917 (2016).
- 8/ [Local Oscillatory Rheology from Echography](#),
B. Saint-Michel, T. Gibaud, M. Leocmach and S. Manneville,
Physical Review Applied **5**, 034014 (2016).
- 2015 -----
- 7/ [A Statistical Mechanics Framework for the Large-Scale Structure of Turbulent von Kármán Flows](#),
S. Thalabard, B. Saint-Michel, E. Herbert, F. Daviaud and B. Dubrulle,
New Journal of Physics **17**, 0630006 (2015).
- 2014 -----
- 6/ [Modelling and Analysis of Turbulent Datasets Using ARMA Processes](#),
D. Faranda, F. M. E. Pons, B. Dubrulle, F. Daviaud, B. Saint-Michel, E. Herbert and P.-P. Cortet,
Physics of Fluids **26**, 1050101 (2014).
- 5/ [Influence of Reynolds Number and Forcing Type in a von Kármán Flow](#),
B. Saint-Michel, B. Dubrulle, L. Marié, F. Ravelet and F. Daviaud,
New Journal of Physics **16**, 0630037 (2014).
- 4/ [Probing Quantum and Classical Turbulence Analogy in von Kármán \[...\] experiments](#),
B. Saint-Michel *et al*,
Physics of Fluids **26**, 125109 (2014).
- 3/ [Superfluid High Reynolds von Kármán Experiment \(SHREK\)](#),
B. Rousset *et al*,
Review of Scientific Instruments **85**, 1030908 (2014).
- 2/ [A Zero-Mode Mechanism for Spontaneous Symmetry Breaking in a Turbulent von Kármán Flow](#),
B. Saint-Michel, F. Daviaud and B. Dubrulle,
New Journal of Physics **16**, 0130055 (2014).
- 2013 -----
- 1/ [Evidence for Forcing-Dependent Steady States in a Turbulent Swirling Flow](#),
B. Saint-Michel, B. Dubrulle, L. Marié, F. Ravelet and F. Daviaud,
Physical Review Letters **111** (23), 234502 (2013).

Participation to Conferences:

- Annual European Rheology Conference (oral presentation), Portorož (Slovenia), 2019

- Liquids at Interfaces (poster presentation), Bordeaux (France), 2018
- Annual European Rheology Conference (/), Sorrento (Italy), 2018
- Rencontres du Non-Linéaire 2017 (oral presentation), Paris (France), 2017
- International Soft Matter Conference, (poster presentation) Grenoble (France), 2016
- STATPHYS 26 (poster presentation), Lyon (France), 2016
- APS Division of Fluid Dynamics (oral presentation), Boston (USA), 2015
- Congrès Français de Mécanique (oral presentation), Lyon (France), 2015
- XVIII Rencontres du Peyresq (short oral presentation), Peyresq (France), 2014
- Journées de la Physique Statistique (short oral presentation), Paris (France), 2012 & 2013
- Rencontres du Non-Linéaire (poster presentation), Paris (France), 2012 & 2013
- APS Division of Fluid Dynamics (oral presentation), San Diego (USA), 2012

Other:

- B. Saint-Michel M, [L'écoulement de von Kármán comme paradigme de la physique statistique hors de l'équilibre](#), *thèse de l'Université Pierre et Marie Curie (2013)*.
- B. Saint-Michel, B. Dubrulle, C. Wiertel, V. Padilla and F. Daviaud, [Inéquivalence d'ensemble d'états stationnaires dans un écoulement de von Kármán](#), *Comptes-rendus des RNL (2013)*.
- E. Herbert, B. Saint-Michel, F. Daviaud, B. Dubrulle and V. Padilla, [Spectres spatio-temporels d'un écoulement turbulent de von Kármán](#), *Comptes-rendus des Rencontres du Non-linéaire (2012)*.