

ALBERTO SICILIA

Centre for Computational Chemistry.
Department of Chemistry, University of Cambridge.
Lesfield Road, Cambridge CB2 1EW, UK.

Spanish Citizen
Born: 2/October/1981
Email: as2050@cam.ac.uk
Phone: +44(0)1223336471

EDUCATION

- 2009, **Ph.D. in Theoretical Physics.**
Université Pierre et Marie Curie, Sorbonne Universités, Paris.
- 2006, **Master in Theoretical Physics of Complex Systems.**
Université Pierre et Marie Curie, Sorbonne Universités, Paris.
- 2004, **B.S. in Physics.**
Universidad Complutense, Madrid.

EMPLOYMENT

- 2009-2011, **Cambridge University.**
Postdoctoral Research Associate at the Centre for Computational Chemistry.
- 2006-2009, **Université Pierre et Marie Curie, Sorbonne Universités.**
Research Assistant at the Laboratoire de Physique Théorique et Hautes Energies.
- 2005, **École Normale Supérieure Paris.**
Research Assistant at the Laboratoire de Physique Statistique.

UNIVERSITY TEACHING EXPERIENCE

- 2011, **African Institute for Mathematical Sciences - Senegal** Lecturer,
 - Computer Simulations.
- 2009-2011, **Cambridge University**, Teaching Assistant,
 - Statistical Mechanics.
- 2006-2009, **Université Paris Nord**, Teaching Assistant,
 - Mathematics I: Algebra and One-Variable Calculus.
 - Mathematics II: Multivariable Calculus and Differential Equations.
 - Physics I: Optics and Mechanics.
 - Physics II: Electricity and Magnetism.

VISITING SCHOLAR

- Sept.-Dec./2009, **Johannes Gutenberg Universität**, Condensed Matter Theory Group.
- Feb./2009, **King's College London**, Mathematics Department.
- Jul.-Aug./2008, **Boston University**, Physics Department.
- Feb./2008, **The University of Manchester**, Theoretical Physics Group.

RESEARCH SCHOOLS ATTENDED

- Isaac Newton Institute for Mathematical Sciences, Cambridge (UK). *Principles of the Dynamics of Non-Equilibrium Systems*.
- École de Physique d'été des Houches (France). *Complex Systems*.
- Panamerican Advanced Study Institute, Mar del Plata (Argentina). *From disorder to complex systems*.
- Max Planck Institute for the Physics of Complex Systems, Dresden (Germany). *Physics of Fluctuations far from Equilibrium*.
- Institut Henri Poincaré, Paris (France). *Statistical Physics Out of Equilibrium*.
- Tata Institute of Fundamental Research, Bangalore (India). *School on Glass Formers and Glasses*.

INVITED TALKS AND SEMINARS

- Invited Seminars:
 - Condensed Matter Group, LPTHE, Paris (France).
 - Physics Department, University of South California, Los Angeles (USA).
 - LPT/LPTMS Joint Seminar, Université d'Orsay (France).
 - Department of Theoretical Physics, Universität Saarbrücken (Germany)
 - Dietrich's Group Seminar, Max Planck Institute for Metal Research, Stuttgart (Germany).
 - Mathematics Department, King's College, London (UK).
 - Theoretical Chemistry Department, Weizmann Institute of Science, Rehovot (Israel).
 - Statistical Mechanics and Complexity Center, Rome (Italy).
 - SISSA/ICTP Condensed Matter Joint Seminar, Trieste (Italy).
 - Theoretical Physics Department, Fribourg (Switzerland).
 - Statistical Physics Group, CEA, Saclay (France).
 - Condensed Matter Theory Group, Johannes Gutenberg Universität, Mainz (Germany).
 - School of Physics and Astronomy, University of Edinburgh (UK).
- Talks in Conferences:
 - StatPhys 23, International Meeting on Statistical Physics, Genova (Italy).
 - XV Fises Meeting on Statistical Mechanics, Salamanca (Spain).
 - 10th Seminar on Computational Physics, Granada (Spain).
 - Journées de Physique Statistique 2009, Paris (France).

PUBLICATIONS

1. M. P. O. Loureiro, J. J. Arenzon, L. F. Cugliandolo, A. Sicilia. *Curvature-driven coarsening in the two dimensional Potts model*, Phys. Rev. E 81, 021129 (2010)
2. M. Picco, R. Santachiara, A. Sicilia. *Geometrical properties of parafermionic spin models*, Journal of Statistical Mechanics: Theory and Experiment P04013, (2009)

3. A. Sicilia, Y. Sarrazin, J. J. Arenzon, A. J. Bray, L. F. Cugliandolo. *Geometry of phase separation*, Phys. Rev. E. 80, 031121 (2009).
4. A. Sicilia, J. J. Arenzon, I. Dierking, A. J. Bray, L. F. Cugliandolo, J. Martinez-Perdiguero, I. Alonso, I. C. Pintre. *Experimental test of curvature-driven dynamics in the phase ordering of a two dimensional liquid crystal*, Phys. Rev. Lett. 101, 197801 (2008).
5. A. Sicilia, J. J. Arenzon, A. J. Bray, L. F. Cugliandolo. *Geometric properties of two-dimensional coarsening with weak disorder*, EPL 82, 10001 (2008).
6. A. Sicilia, J. J. Arenzon, A. J. Bray, L. F. Cugliandolo. *Domain growth morphology in curvature driven two dimensional coarsening*, Phys. Rev. E 76, 061116 (2007).
7. J. J. Arenzon, A. J. Bray, L. F. Cugliandolo, A. Sicilia. *Exact results for curvature-driven coarsening in two dimensions*, Phys. Rev. Lett. 98, 145701 (2007).
8. A. Sicilia, J. J. Arenzon, I. Dierking, A. J. Bray, L. F. Cugliandolo, J. Martinez-Perdiguero, I. Alonso, I. C. Pintre. *Domain growth in 2d: exact results, simulations and experiments*, AIP Conference Proceedings 1091, 162 (2009).
9. J. J. Arenzon, A. Bray, L. F. Cugliandolo, A. Sicilia. *Exact results for two-dimensional coarsening*, Eur. Phys. J. B 10.1140 (2008).
10. A. Sicilia. *Domain and hull-enclosed area distributions in two-dimensional coarsening*, Physica A 386, 674 (2007).
11. M. P. O. Loureiro, J. J. Arenzon, L. F. Cugliandolo, A. Sicilia. *Coarsening in the Potts model: out-of-equilibrium geometric properties*, Journal of Physics: Conference Series 246, 012022 (2010).

PREPRINTS

12. G. Biroli, L. F. Cugliandolo, A. Sicilia. *Kibble-Zurek mechanism and infinitely slow annealing through critical points*, arXiv:1001.0693.

HONORS & AWARDS

- Invited Lecturer. *Summer College on Nonequilibrium Physics: from Classical to Quantum Low Dimensional Systems*. International Center for Theoretical Physics, Trieste (Italy).
- Visitor Fellowship for Outstanding PhD student, Weizmann Institute of Science (Israel).
- PhD. Fellowship, Ministère délégué a la Recherche (France).
- Master of Research Scholarship, Ministère délégué a la Recherche (France).

OTHER PROFESSIONAL ACTIVITIES

- Referee for Physical Review Letters, Europhysics Letters, Journal of Statistical Mechanics Theory and Experiment, The European Physical Journal B, Condensed Matter and Complex Systems, Physical Review E.
- Co-advisor of the Master Thesis of Yoann Sarrazin (Université Pierre et Marie Curie) and Marco Baity (École Normale Supérieure).

COMPUTER SKILLS

- Supercomputing/High Performance Computing, Massive Parallel Programing, GPGPU.
- Linux/Unix scripting, Fortran, Python, Mathematica, Latex.

LANGUAGES

- Spanish (native), French (fluent), English (fluent).

THEATER

- Studies:
 - 2007-2008, Drama student, Le Cours Peyran Lacroix, Paris.
 - 2006-2007, Drama student, École International Voie de l'Acteur, Paris.
- 50+ performances in Spain, UK, France, Belgium & Morocco.
- Theater Instructor at Théâtre de la Cité Universitaire International de Paris.

VOLUNTEERING

- 2011, Aiducation International, Cambridge Chapter.
- 2007, Theater courses in Bobo Dioulasso, Burkina Faso.
- 2007, Theater courses for children in social exclusion, CDE, Rouen.

REFERENCES

- Prof. Leticia F. Cugliandolo, Ph.D. advisor.
Université Pierre et Marie Curie, Sorbonne Universités, Paris.
Phone: +33(0)144277399
Email: leticia@lpthe.jussieu.fr
- Prof. Daan Frenkel
Department of Chemistry, University of Cambridge.
Phone: +44(0)1223336377
Email: df246@cam.ac.uk