Jérôme CRASSOUS

Date of Birth	March 17th, 1967 in Amiens (France)
Nationality	French
Family status	Married, 3 children
Professional address	Institut de Physique de Rennes UMR CNRS 6251 Université de Rennes1 Campus de Beaulieu Bâtiment 11A 35042 Rennes Cedex
Phone	
Email	
Web	http://perso.univ-rennes1.fr/jerome.crassous/main.phtml
Position	Associate Professor (PR2) at University Rennes 1, 28th section

Education and Carrier

1985-1987	Studies in Lille
1987-1991	Student at ENS Lyon
1990	Agrégation de Physique (rank: 5th). National Teaching Examination
1991	Scientific researcher for the national military service at Onera Meudon
1992-1995	PhD Thesis at the ENS Lyon, supervisor E.Charlaix "*Study of a liquid bridge of nanometric curvature. Static and dynamic properties*"
1997-1998	Post-doc, ETH Zürich, Pr. P. Schurtenberger
1995-2005	Associated Professor (Maître de conférenecs) at ENS Lyon
2003-2004	CNRS delegation
2004	Habilitation à diriger les recherches, Université Lyon I, "*Some experiments on interfaces and adhesive contacts*"
2005-	Professor at University Rennes 1, 28th section
2009-2010	CNRS delegation

Main Research Interests

See Publications list for references

- Granular Matter
  - -Solid[A26,P5]
  - -Dense flows[A21,P7]
  - -Impact[A25,A24,A18,P6]
- Light Scattering
  - -Colloidal system characterisation[A28,A27;A22,B1]
  - -With granular materials[A23,A20,A19,A17,A15]
- Capillary Condensation & confined fluids
  - -Surface force apparatus, confined fluids[A14,A13,A10,A9,A8,A5,A2,A1,P4,P1]
  - -Effect of capillary condensation on adhesion[A12,A11,A7,A6]
- Wetting
  - -Contact angle and friction hysteresis [A4,A3,P2]
  - -Equilibrium of liquid vapour interfaces[A29,A16,P3]

• Consultant for societies Varioptic (varioptic.com) et LS instruments (lsinstruments.ch)

Administrative tasks : Committees

• Recruiting commissions. Member of « commission de spécialistes » ENS Lyon (1996-1998), Ecole Centrale Lyon (1998-2003), Univ. Orsay (2004-2005), University Rennes (2005-2008), Prag University Rennes 1 (2010), Selecting comity University Rennes 1 (2011)
• Member of Administration board l'ENS Lyon (2000-2003)
• Member of Section of Physic, UFR-SPM, University Rennes 1 (2009-2012)
• Member of UFR-SPM, University Rennes 1 (2011-)

PHD Students

• Benjamin Cross (2001-2004) co supervisor Jean-Paul Rieu
Benjamin is now Associated profeessor at LEGI UMR 5519, Grenoble, France
• Marion Erpelding (2007-2010) co supervisor Axelle Amon
Marion is now in post-doc in the group of professor Flekkøy, University of Oslo, Normay

---

Member of PhD thesis Commitee

Nicolas Richet (University Rennes, 2011)
Antoine Seguin (University Orsay, 2010)
Rim Harich (University Pierre et Marie Curie, 2010, referee)
Nadjim Moumini (LEMTA, 2010, referee),
Gael Pallares (University Montpellier, 2010, referee)
Alexis Burdeau (University Pierre et Marie Curie, 2009, referee)
Jean-Maxime Roux (University Grenoble, 2009, referee),
Laurence Serreau (University Paris VI, 2006)

Teaching

-Responsible of the physic at the preparation centre of University Rennes 1 for "Agrégation de Physique"
-Practical works at preparation centre for "Agrégation de Physique" ENS Lyon.
-Physics teaching at preparation centre for "Agrégation de Physique" ENS Lyon.
-Physics teaching at preparation centre for "Agrégation de Physique" University Rennes 1
-Master M1, CM, "Soft Matter" ENS Lyon.
-Master M1, TD "Advanced optic" ENS Lyon.
-Master M2, CM "Low Reynold Hydrodynamic" University Rennes 1
-License L3, CM "Continuous mechanics" University Rennes 1
-License L3, CM "Statistical Physic" University Rennes 1-ENS Ker Lann

---

Publications
Articles

The publications are available on the webpage
http://perso.univrennes1.fr/jerome.crassous/main.phtml

[A29] *The capillary force between wetted nanometric contacts and its application to Atomic Force Microscopy*, Jérôme Crassous, Matteo Ciccotti, and Elisabeth Charlaix, Langmuir (2011)

[A28] "*Two-mode dynamics in dispersed systems: the case of particle-stabilized foams studied by diffusing wave spectroscopy*", Antonio Stocco, Jérôme Crassous, Anniina Salonen, Arnaud Saint-Jalmes and Dominique Langevin, P.C.C.P. (2010)

[A27] "*Investigating acoustic-induced deformations in a foam using multiple light scattering*", M. Erpelding, R.-M. Guillermic, B.Dollet, A. Saint-Jalmes and J. Crassous, Phys. Rev. E 82 021409 (2010)

[A26] "*Mechanical response of granular media : New insights from diffusing-wave spectroscopy*", M. Erpelding, A. Amon and J. Crassous, Europhys. Lett. 91 18002 (2010)

[A25] "*Sphere penetration by impact in granular medium : A collisional process*", A.Seguin, Y.Bertho, P.Gondret & J.Crassous, Europhys. Lett. 88 44002 (2009)

[A24] "*Granular Medium impacted by a projectile: Experiment and Model*", A.Valance & J.Crassous, Eur. Phys. J. E 30, 43 (2009)

[A23] "*Diffusive Waves in a Dilating Scattering Medium*", J.Crassous, M.Erpelding & A.Amon, Phys. Rev. Lett. 103, 013903 (2009)

[A22] "*Multispeckle diffusing wave spectroscopy of colloidal particles suspended in a random packing of glass spheres*", P.Snabre & J.Crassous, Eur. Phys. J. E 29, 149 (2009)

[A21] "*Rheology of Confined Granular Flows: Scale Invariance, Glass Transition, and Friction Weakening*", P.Richard, A.Valance, J.-F.Métayer, P.Sanchez, J.Crassous, M.Louge & R.Delannay, Phys. Rev. Lett. 101, 248002 (2008)

[A20] "*Experimental study of a creeping granular flow at very low velocity*", J.Crassous, J.-F.Métayer, P.Richard & C.Laroche, J. Stat. Mech. P03009 (2008)

[A19] "*Diffusive Wave Spectroscopy applied to the spatially resolved deformation of solid*", M.Erpelding, A.Amon & J.Crassous, Phys. Rev. E. 78, 046104 (2008)

[A18] "*Impact of a Projectile on a Granular Medium Described by a Collision Model*", J.Crassous, D. Beladjine & A.Valance, Phys. Rev. Lett. 99, 248001 (2007)

[A17] "*Diffusive Wave Spectroscopy of a random close packing of spheres*", J.Crassous, Eur. Phys. J. E 23 145 (2007)

[A16] "*Adhesion forces between wetted solid surfaces*", E.Charlaix & J.Crassous, J.Chem.Phys. 122 184701 (2005)

[A15] "*Probing Creep Motion into Granular Materials with Light Scattering*", L.Djaoui & J.Crassous, Granular Matter 7 185 (2005)

[A14] "*Rheological Properties of a Highly Confined Film of Lyotropic Lamellar Phase*", B.Cross & J.Crassous, Eur. Phys. J. E 14, 249 (2004)

[A13] "*Glissement Hydrodynamique d'un liquide simple à l'interface solide-liquide*", C.Cottin-Bizonne, S.Jurine, J.Baudry, J.Crassous, F.Restagno & E.Charlaix, La Houille Blanche 5, 116 (2003)

[A12] "*Slow Kinetics of Capillary Condensation in Confined Geometry*", F.Restagno, L.Bocquet, J.Crassous & E.Charlaix, Colloids and Surfaces A 206, 69 (2002)

[A11] "*Adhesion between weakly rough beads*", F.Restagno, J.Crassous, C.Cottin-Bizonne & E.Charlaix, Phys. Rev. E 65 ,042301 (2002)

[A10] "*A new surface forces apparatus for nanorheology*", F.Restagno, J.Crassous, E.Charlaix, C.Cottin-Bizonne & M.Monchanin, Rev. Sci. Instr. 73, 2292 (2002)

[A9] "*An investigation of the boundary condition at hydrophobic and hydrophilic interfaces*", C.Cottin-Bizonne, S.Jurine, J.Baudry, J.Crassous, F.Restagno & E.Charlaix, Eur. Phys. J. E 9, 47 (2002)

[A8] "*A new capacitive sensor for displacement measurement in a surface-force apparatus*", F.Restagno, J.Crassous, E.Charlaix & M.Monchanin, Mes. Sci. Technol. 12, 16 (2001)

[A7] "*Humidity effect on static aging of dry friction*", J.Crassous, L.Bocquet, S.Ciliberto & C.Laroche, Europhys. Lett. 47, 562 (1999)

[A6] "*Moisture-induced ageing in granular media and the kinetics of capillary condensation*", L.Bocquet, E.Charlaix, S.Ciliberto & J.Crassous, Nature 396, 735 (1998)

[A5] "*NanoScale Investigation of Wetting Dynamics with a Surface Force*", J.Crassous, E.Charlaix & J.-L.Loubet, Phys. Rev. Lett. 78, 2425 (1997)

[A4] "*Hysteresis and recovery length in a dry friction experiment*", J.Crassous, S.Ciliberto, E.Charlaix & C.Laroche, Jour. Phys. II 7, 1745 (1997)

[A3] "*Contact angle hysteresis on a heterogeneous surface : resolution in the limit of a slightly deformed contact line*", J.Crassous & E.Charlaix, Europhys. Lett. 28, 415 (1994)

[A2] "*Capillary condensation between high energy surfaces. An experimental study with a surface force apparatus*", J.Crassous, E.Charlaix & J.-L.Loubet, Europhys. Lett. 28, 37 (1994)

[A1] "*Experimental study of a nanometric liquid bridge with a surface force apparatus*", J.Crassous, E.Charlaix, H.Gayvallet & J.L.Loubet, Langmuir 9, 1995 (1993)

Chapter of books

[B1] "*PCS Particule Sizing in Turbid Suspensions : Scope and Limitations*", F.Scheffold, A.Shalkevich, R.Vavrin, J.Crassous & P.Schurtenberger, in Particle Sizing and Characterization, Ed Theodore Provder and John Texter (2004), <a href="Publis/ACS-Sizing.2004.pdf"> ISBN:0-8412-3859-6

Conference Proceedings

[P7] "Rheology of confined granular flows", P. Richard, A. Valance, J.-F. Métayer, J.Crassous, M. Louge & R. Delannay, IUTAM-ISIMM Symposium on Mathematical Modeling and Physical Instances of Granular Flows,

[P6] *G ranular Medium Impacted by a Projectile: Experiment and Mode*l, J.Crassous & A.Valance,

Powder & Grains 2009 : Proceedings of the 6th International conference on micromechanical of granular media,

[P5]"*Interferometric measurements of small deformations of granular materials*", M.Erpelding, A.Amon & J.Crassous, Powder & Grains 2009 : Proceedings of the 6th International conference on micromechanical of granular media,

[P4]"*Propriétés rhéologiques d'une phase lamellaire hautement confinée*", B.Cross, J.Crassous, Actes du colloque du Congrès de la société française de rhéologie (2004)

[P3]"*Liquid lens based on electrowetting : a new adaptative component for imaging applications in consumer electronics*", J.Crassous, C.Gabay, G.Liogier and B.Berge, Proc. SPIE 5639 143 (2004)

[P2]"*Experimental study of friction between surfaces with macroscopic asperities*", J.Crassous, E.Charlaix, S.Ciliberto & C.Laroche, proceedings du Workshop HLRZ "Friction, Arching and Contact Dynamics", Grassberger Ed, (World Scientific, Singapore, 1997)

[P1]"*Adhesion force between high energy surfaces in vapor athmosphere*", J.Crassous, E.Charlaix, J.L.Loubet, Fall meeting of Material Research Society, Proceedings Vol 366, 33, (1995)

Misc

[M2]"*Propriétés hydrodynamiques au voisinage d'une surface*», Élisabeth Charlaix, Cécile Cottin-Bizonne, Jérôme Crassous, Samuel Leroy, Frédéric Restagno, Audrey Steinberger, Reflets de la Physique (2011)

[M1 "*Liquides confinés et machines à forces de surfaces*", J.L.Loubet, E.Charlaix, J.Crassous, A.Tonck, Bulletin de la S.F.P., p.7., juillet 1994