

geo-dyn2015 : Geometry and dynamics of quasiperiodic structures

Monday November 30th – Tuesday December 1st 2015

Institut Henri Poincaré, Amphi Darboux, Paris

<http://geo-dyn2015.sciencesconf.org/>



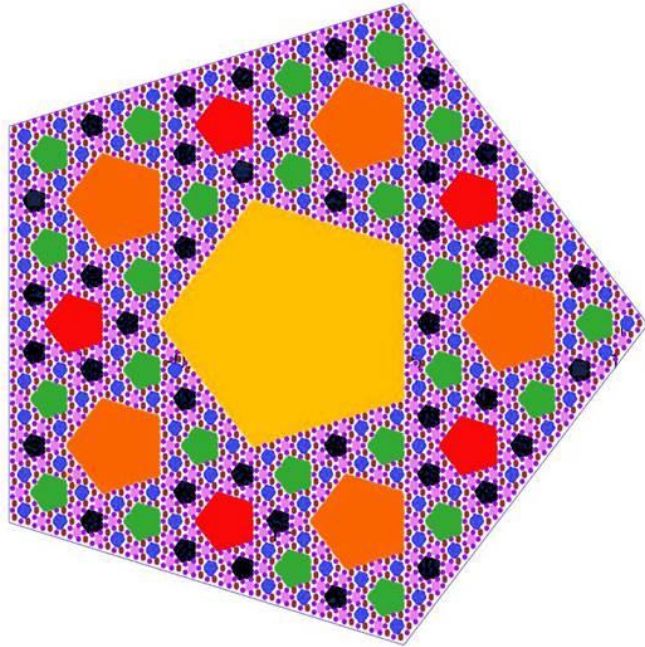
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BIENVENUE à PARIS !

'Fluctuat nec mergitur' ... in memory of the attacks on November 13th 2015

Dear colleagues,

Welcome to the meeting on Geometry and Dynamics of Quasiperiodic Structures. This interdisciplinary workshop aims to present some recent theoretical and experimental developments in quasicrystals and in random systems.

We hope you will enjoy the meeting, share fruitful scientific discussions together, and make that science will continue to enrich our lives.

The organizing Committee

Marianne Impérator-Clerc, *Laboratoire de Physique des Solides, Orsay*

Anuradha Jagannathan, *Laboratoire de Physique des Solides, Orsay*

Jean-Marc Luck, *Institut de Physique Théorique, Saclay*

Rémy Mosseri, *Laboratoire de Physique Théorique de la Matière Condensée, Paris*

Jean-François Sadoc, *Laboratoire de Physique des Solides, Orsay*

Conference secretary: Marie-France Mariotto, *Laboratoire de Physique des Solides, Orsay*

TIME	PROGRAM	Monday November 30th 2015
09:30 - 09:45	Bienvenue/Welcome - Jean Philippe Uzan and Rémy Mosseri	
09:45 - 10:55	Soft Matter QC part 1 -Zeng, Ziherl- chair: M. Impéror-Clerc	
09:45 - 10:20	› Micellar and Columnar Liquid Quasicrystals - <i>Xiangbing Zeng, University of Sheffield, UK</i>	
10:20 - 10:55	› Hard-core/square-shoulder quasicrystals - <i>Primoz Ziherl, University of Ljubljana and Jozef Stefan Institute, Slovenia</i>	
10:55 - 11:15	Coffee break	
11:15 - 13:00	Electrons on tilings - Mortessagne, Kalouguine, Akkermans- chair: S. Aubry	
11:15 - 11:50	› Gap labeling and energy landscape in a 2D quasicrystal: A microwave experiment - <i>Fabrice Mortessagne, Université Nice Sophia Antipolis, France</i>	
11:50 - 12:25	› An ansatz for single electron wavefunctions in quasicrystalline potentials - <i>Pavel Kalouguine, Université Paris Sud, France</i>	
12:25 - 13:00	› Topological properties of Fibonacci quasicrystals : A scattering analysis of Chern numbers - <i>Eric Akkermans, Technion Haifa, Israël</i>	
13:00 - 14:30	Lunch	
14:30 - 15:40	Geometry & topology - Mosseri, Sadoc- chair: N. Rivier	
14:30 - 15:05	› Hard sphere packings in cylindrical geometries : curved space analysis - <i>Rémy Mosseri, Université Pierre et Marie Curie, France</i>	
15:05 - 15:40	› Quasicrystalline Frank-Kasper phases: from metal to micellar structures - <i>Jean-François Sadoc, Université Paris Sud, France</i>	
15:40 - 16:00	Coffee break	
16:00 - 17:45	Structures and diffraction - Grimm, Baake, Meyer- chair: J.M. Luck	
16:00 - 16:35	› Diffraction in Aperiodic Order - <i>Uwe Grimm, The Open University, Milton-Keynes, UK</i>	
16:35 - 17:10	› Spectral notions of aperiodic order - <i>Michael Baake, University of Bielefeld, Germany</i>	
17:10 - 17:45	› Beyond Dirac combs - <i>Yves Meyer, E.N.S. Cachan, France</i>	
17:45 - 18:15	Review – Gratias-	
17:45 - 18:15	› Reminiscences of the early days of quasicrystals - <i>Denis Gratias, Institut de recherche de Chimie de Paris, France</i>	
18:30 - 20:00	Cocktail	

TIME	PROGRAM	Tuesday December 1 st 2015
09:30 - 11:15	Excitations part 1 - Vignolo, Sanchez-Palencia, Andrade chair: M. Duneau	
09:30 - 10:05	› Brillouin zone labelling for quasicrystals - <i>Patrizia Vignolo, Institut Non-Linéaire de Nice, France</i>	
10:05 - 10:40	› Localization of ultracold Bose superfluids in quasiperiodic lattices - <i>Laurent Sanchez-Palencia, CNRS and Université Paris-Saclay, France</i>	
10:40 - 11:15	› Non-Fermi-Liquid Behavior in Metallic Quasicrystals with Local Magnetic Moments - <i>Eric Andrade, Universidade Estadual Paulista, Sao Paulo, Brazil</i>	
11:15 - 11:30	Coffee break	
11:30 - 12:40	Excitations part 2 - Piéchon, Fuchs- chair: J. Vidal	
11:30 - 12:05	› Multifractal properties of the Fibonacci chain: Energy Spectrum and Wavefunctions - <i>Frédéric Piéchon, Université Paris Sud, France</i>	
12:05 - 12:40	› Orbital magnetic susceptibility of a quasicrystal - <i>Jean-Noël Fuchs, Université Paris Sud and Université Pierre et Marie Curie, France</i>	
12:40 - 14:00	Lunch	
14:00 - 15:45	Soft Matter QC part 2 - Lifshitz, Pansu, Roth- chair: C. Oguey	
14:00 - 14:35	› Controlled self-assembly of periodic and quasiperiodic cluster crystals. - <i>Ron Lifshitz, Tel Aviv University, Israël</i>	
14:35 - 15:10	› Can soft particles assemble in quasicrystals ? - <i>Brigitte Pansu, Université Paris Sud, France</i>	
15:10 - 15:45	› Colloids in quasiperiodic laser fields: experiments and simulations - <i>Johannes Roth, Universität Stuttgart, Germany</i>	
15:45 - 16:05	Coffee break	
16:05 - 17:15	Excitations part 3 - Mihalkovic, de Boissieu- chair: G. Trambly de Lassardière	
16:05 - 16:40	› AlMnPd and CdYb icosahedral quasicrystal structure families: state of the art and open questions - <i>Marek Mihalkovic, IPSAS-Bratislava, Slovakia</i>	
16:40 - 17:15	› Structure and dynamics of quasicrystals. - <i>Marc de Boissieu, SIMAP Grenoble, France</i>	
17:15 - 17:30	Concluding session - R. Lifshitz, M. de Boissieu -chair: A. Jagannathan	