

JED 2017

18^{èmes}

Journées de l'Ecole Doctorale
Carnot-Pasteur



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18^{ème} Journées de l'Ecole Doctorale Carnot-Pasteur

Dijon, France
May 18-19, 2017

OFFICIAL PROGRAM

Dijon, May 2017

Welcome to JED 2017!

For 18 years now the Carnot-Pasteur PhD School Days conference is hosted in France, either in Dijon or in Besançon. It gathers PhD students in various fields of Physics, Chemistry, and Mathematics. This conference is the opportunity for students of the Carnot-Pasteur PhD School to share their work with students and researchers working in different topics, and perhaps start new collaborations with people next door you may not have met before.

After this long tradition, we are happy to welcome you here at the University of Bourgogne at the JED 2017. We hope that you can use this experience to find your way into the scientific world, and extend your view over your field and other disciplines.

The scientific program covers 5 invited talks, 38 talks by PhD students, and 22 posters. Beyond that the coffee breaks and the Conference Buffet will give you the possibility to get to know new people.

We wish you an interesting conference.

Your organization committee

Amélie Wannebroucq, Rémi Bignalet-Cazalet, Vincent Dorier, Manon Lamy, Léa Radal, Hugo Varguet.

Table of contents

Conference schedule	9
Chemistry	11
Physics	15
Mathematics	17
Abstracts	19
Chemistry talks	19
Physics talks	39
Mathematics talks	53
Chemistry posters	65
Physics posters	85
Mathematics posters	91

Conference schedule

Thursday, May 18

- 8:30 am **Welcome reception**, Salle du Conseil de l'UFR Sciences et Techniques (Bât. Sciences Mirande - 9 av. Alain Savary, Dijon)
- 9:20 am **Opening of the JED**, Amphithéâtre Steinbrunn, ESIREM
- 9:30 am **Presentation of Fondation Carnot by Christophe Finot**
- 9:45 am **Clara Desgranges**, SAFRAN
Design d'alliages
- 10:45 am **Frédéric Cherioux**, Université de Franche-Comté
Auto-assemblages supramoléculaires sur une surface de silicium dopé au bore
- 12:00 pm **Lunch break**, Restaurant Montmuzard (2nd floor)
- 2:00 pm **Céline Reylé**, Université de Franche-Comté
Gaia: cartographie de la Voie Lactée en 3 dimensions
- 3:00 pm **Pierre Cartier**, IHÉS
Henri Poincaré, de la Mécanique Céleste au Procès Dreyfus
- 4:00 pm **Julien Leclaire**, Université de Lyon 1
Tri et recyclage moléculaire des ressources: du concept bioinspiré au procédé eco-efficient
- 5:00 pm **Poster Session**
- 6:00 - 7:30 pm **Conference Buffet**

Friday, May 19

8:30 am **PhD Talks**, Session A

10:15 am **Poster Session**

11:00 am **PhD Talks**, Session B

12:20 pm **Lunch break**, Restaurant Montmuzard (2nd floor)

1:45 pm **PhD Talks**, Session C

3:05 pm **Coffee break**

3:15 pm **PhD Talks**, Session D

4:30 pm **Poster Session**

5:00 pm **Award ceremony and closing remarks**

You will find the detailed schedules of the talks for each discipline in the next pages. We will provide pins to fix the posters in the hall of the building (please do not exceed A0 poster size).

Chemistry schedule

Amphitéâtre Steinbrunn, ESIREM

Talks: 15 min. + 5 min. discussion.

Session A

- 8:30 am **Nicolas Roosz**, *Encapsulation of silica nanoparticles with a semiconductor polymer*
- 8:50 am **Vivek Thakare**, *Multifunctional systems for cancer therapy and diagnosis*
- 9:10 am **Nasser Mohamed Said**, *Controlled assembly of Maghemite nanoflowers and Gold nanoparticles for combining Magnetic Hyperthermia and Radiotherapy*
- 9:30 am **Fadoua Sallem**, *Synthesis, characterizations and functionalization of titanate nanotubes for biomedical applications*
- 9:50 am **Amélie Wannebroucq**, *Hétérojonctions à base de phtalocyanines fluorées substituées en tant que transducteurs conductimétriques pour capteurs d'ammoniac*

Session B

- 11:00 am **Antonin Jaillet**, *Design d'aminophosphine-phosphinites au niveau des atomes de phosphore pour la mise au point de catalyses asymétriques*
- 11:20 am **Alexis Loiseau**, *Versatile nanocarriers for the treatment of prostate cancer: vectorization of radiosensitizing agents by titanate nanotubes*

11:40 am **Thibault Minervini**, *Theoretical study of the interactions between cisplatin and thiol-containing biological molecules*

12:00 pm **Bouزيد Naidji**, *Influence of pressure on the phenomenon of acoustic cavitation in ionic liquids: electrochemical study*

Session C

1:45 pm **Chloé Rotty**, *Electropolishing study of 316L stainless steel in deep eutectic solvents*

2:05 pm **Valentin Quesneau**, *Corroles de cobalt pour la détection sélective de monoxyde de carbone*

2:25 pm **Sylvain Lorand**, *Development of a dense molybdenum parts with a controlled microstructure prepared by SPS*

2:45 pm **Armand Kanjer**, *Influence of mechanical surface treatments on high temperature oxidation of Beta-Titanium alloys*

Session D

3:15 pm **Andreea Crisbasan**, *Metallocene catalyzed growth of TiO₂ nanostructures by MOCVD*

3:35 pm **Maxime Berthaud**, *High temperature corrosion of titanium alloys with NaCl for aircraft applications*

3:55 pm **Iheb Bouzid**, *Surfactant foams for enhanced In Situ oxidation of PAHs*

4:15 pm **Florian Roy**, *Organic layers self-assembling: Influence of high frequency ultrasound*

Posters

Angélique Jallais, *Reactivity of arsenic containing compounds on recovery masses. Role of the active phase*

Annette Luce, *In vitro hazard assessment of nanoparticles developed for biomedical applications*

Antoine Fournier, *Imidazolium and Potassium Hydrogen Carbonate Salts as Eco-friendly Organocatalysts for Oxazolidinone Synthesis*

Audrey Trommenschlager, *Syntheses of new Gold(I) BODIPY-imidazole bimetallic complexes as potential anti-inflammatory and anticancer trackable agents*

Charmarke Moussa, *Elaboration de films polymères par électrochimie. Applications dans le domaine des capteurs*

Coline Canovas, *s-Tetrazine: a “clickable” platform for site-specific dual-labeling of proteins*

Elizaveta Korzhova, *Effect of membrane modification by polymer deposition on membrane charge and filtration performances*

Farhan Bouraleh Hoch, *Nanoprobes combining MRI and PET*

Jacques Pliquet, *Development of BODIPY-platforms for designing traceable metal based anti-cancer drugs*

Joaquim Mahé, *Mise au point de méthodes de caractérisation physico-chimique d'une pectine faiblement méthylée (27-33%)*

Johan Guilbaud, *Heteroaryl thioethers and sulfones synthesis through C–S coupling using palladium catalysis*

Maxence Giraudet, *Séparation de mélanges gazeux binaires Hydrogène + Deutérium par adsorption sur la zéolithe NaX à 77 K*

Mickael Mateos, *Electrochemical deposition of aniline derivatives for conductometric gas sensors*

Nicolas Schmitt, *Direct measurement of traces of actinides in solution by non-destructive alpha spectrometry*

Oana Moncea, *Air Stable primary diamondoid phosphines*

Océane Florès, *Design of radiotractable water soluble Ti-based complexes*

Quentin Bonnin, *CH-Activation and unexpected rearrangements in cationic titanocenes*

Physics schedule

Room 115A, Wing D

Talks: 20 min. + 5 min. discussion.

Session A

- 9:00 am **Adrien Agreda**, *Electrical Command of the Nonlinear Photoluminescence of Plasmonic Gap Antennas*
- 9:25 am **Hugo Varguet**, *Dressed states of a quantum emitter strongly coupled to a metal nanoparticle*
- 9:50 am **Dmitrii Rusakov**, *Optimization of aluminum deposition for dielectric loaded surface plasmon waveguides operating at telecom wavelengths*

Session B

- 11:00 am **María Barrios**, *Computational investigation of the ionic conductance and peptide translocation through nanopores of MoS₂ membranes*
- 11:25 am **Paul Grassein**, *Simulation of NMR local monitoring of the unfolding of gpW*
- 11:50 am **Guillaume Nasello**, *Etude du disque épais de la Voie Lactée à partir d'un modèle de synthèse de populations stellaires*

Session C

- 1:45 pm **Khalid Hamraoui**, *Sur le contrôle de l'orientation des molécules: applications dans le cas d'une toupie symétrique*
- 2:10 pm **Quentin Ansel**, *Optimal control of spins inside a cavity and dequantization*
- 2:35 pm **Saal Yalouz**, *The excitonic qubit coupled with a phonon bath on a star graph : anomalous decoherence and coherence revivals*

Session D

- 3:15 pm **Cédric Thomas**, *Identification of contaminants on excipients using MS-AFM. Impact on the interactions drug-carrier*
- 3:40 pm **Raphaël Selon**, *In depth investigation of metallic samples using Scanning Microwave Microscopy (SMM)*
- 4:05 pm **Manon Lamy**, *Le dioxyde de titane : un matériau photonique prometteur pour les télécommunications optiques*

Posters

Vincent Dorier, *Reverse engineering control for molecular Bose-Einstein condensation*

Jean-Baptiste Dory, *Ternary and quaternary Ge-S-Se-Sb-Te amorphous chalcogenide thin films for mid-infrared applications*

Adrien Fusaro, *Self-polarization attraction in telecommunication optical fibers*

Emmanuel Klinger, *Study of the forbidden at zero B-field atomic transitions of Rb using the Selective Reflection from a nanocell*

Mathematics schedule

Room René Baire, 4th floor, Wing A

Talks: 20 min. + 5 min. discussion.

Session A

9:25 pm **Colin Petitjean**, *Norm attainment in the space of vector valued Lipschitz functions*

9:50 am **Karine Jaber**, *Lattice reduction algorithms*

Session B

11:00 am **Mohamed Elmi**, *Detection of multiple change points by the Filtered Derivative and False Discovery Rat*

11:25 am **Olga Assainova**, *The inverse scattering method and ‘dbar’ problem*

Session C

1:45 pm **Zhen Ho**, *Simple statistical models for multivariate regular variation*

2:10 pm **Mario Shannon**, *Partially hyperbolic diffeomorphisms in 3-dimensional manifolds*

2:35 pm **Olga Gorynina**, *Time and space adaptivity of the wave equation discretized in time by a second order scheme*

Session D

3:15 pm **Rémi Bignalet-Cazalet**, *Homaloidal curves in positive characteristic*

3:40 pm **Emilio Vilches**, *Nonsmooth Lyapunov pairs for differential equations and perturbed sweeping processes*

Poster

Cyrrus Ngoua Ella, *Connaissances mobilisées*