

# **Ministry of Higher Education and Scientific Research (Tunisia)**

## **International Conference of Mathematics**

### ***Evolution Equations and Functional Inequalities***

**Home page:**

**<http://www.math.univ-toulouse.fr/EVOL/Workshop%20May%202010>**

**May 3 – 7, 2010**

Hôtel Abou Nawas, Hammamet (Tunisia)

#### **With the collaboration of the following institutions:**

**Ministry of Higher Education and Scientific Research (Tunisia)**

**University Tunis El Manar**

**University Paul Sabatier (Toulouse)**

**University Paris Dauphine**

**Université Virtuelle de Tunis**

**Agence nationale de la recherche (France)**

**Tunisian Mathematical Society**

**Faculty of Sciences of Tunis.**

#### **Scientific Committee :**

**D. Bakry (Toulouse), F. Bolley (Paris), H. Chebli (Tunis), J. Dolbeault (Paris), A. Fitouhi (Tunis El Manar), I. Gentil (Paris), H. Ouerdiane (Tunis El Manar), B. Zegarlinski (Toulouse)**

#### **Local Organizing Committee:**

**Wided Ayed ( 7 Novembre Carthage), Abdessatar Barhoumi (Sousse), Radhouan Boukhris (EPAM), Sonia Chaari (Tunis) , Skander Hachicha (Sousse), Rached Hachaichi (Tunis El Manar), Sameh Horrigue (Gabes), Narjess Khalifa (Nabeul), Habib Ouerdiane (Tunis El Manar).**

**SCHEDULE**  
**Monday, May 3**

08:15 - 09:00 **Opening ceremony + Registration**

**Chair: D. Bakry**

9:00 -9: 45 **J. Dolbeault** : Taux de décroissance optimaux des solutions de l'équation de diffusion rapide et inégalités fonctionnelles

10 :00-10 :45 : **L. Miclo** About convergence of second order Markov chains

10: 45-11:00 Coffee break

11: 00-13:00 **Working session**

13: 00 Lunch Break

15: 00-16: 30 **J.A. Carrillo**: Critical mass classical Keller-Segel model versus Critical Fast Diffusion

16h30-15: 00: Coffee break

**Chair: F. Bolley**

17 :00-17 : 30 **A. Barhoumi** : From first order to second order \* Lie algebras

17 :45-18 :15 **S. Chaari** : Mesures de surface en dimension infinie

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**Tuesday, May 4**

**Chair: I. Gentil**

9:00 -9: 45 **F. Bolley**: titre à préciser

10 :00-10: 45 **G. Savaré** Optimal transport and Fokker-Planck equations with monotone drifts

10h45-11h : Coffee break

11: 00-13:00 : **Working session**

13: 00 Lunch Break

15: 00-16: 30 : **J.A. Carrillo**: Critical mass classical Keller-Segel model versus Critical Fast Diffusion

16h30-17:00 : Coffee break

**Chair: B. Zegarlinski**

17 :00-17 : 30 **Sameh Horigue**: Quantum operators, properties and applications

17 : 45- 18 :15 **Habib Rebei**: On the square of white noise

**Wednesday, May 5**

**Chair: H. Ouerdiane**

9:00 -9: 45 **K.T. Sturm**: Monotone Approximation for the Wasserstein Diffusion

10:00 -10: 45 **A. Joulin**: Commutation relations for birth-death processes

10: 45-11: 00 : Coffee break

11: 00-13:00 **Working session**

13: 00 Lunch Break

14:00 excursion

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**Thursday, May 6**

**Chair: Karl-Theodor Sturm**

9:00 -9: 45 **W. Hebisch**: Coercive inequalities on step two nilpotent groups

10 :00-10 :45 **J. Bertrand** : Prescription de la courbure de Gauss par transport de masse

10: 45-11:00 : Coffee break

11: 00-13: 00 **Working session**

13: 00 Lunch Break

15: 00-16: 30 **M. Hairer** : Hypocoellipticity in infinite dimensions

16h30-15h: Coffee break

**Chair: G. Savaré**

17 :00-17 : 30 **A. Riahi** : Fractional Pascal white noise and harmonic analysis on configuration spaces.

17 :45-18 :15 **Hafedh Rguigui** Quantum Euler Operator And Associated Convolution  
Differential Equations

## Friday, May 7

**Chair: J. Dolbeault**

9:00 -9: 45 **S. Peszat**: On Lévy-Ornstein-Uhlenbeck processes

10 :00-10 :45 : **J. Lehec** : A stochastic formula for the entropy and applications

10: 45-11: 00 : Coffee break

11: 00-13:00 **Working session**

13: 00 Lunch Break

15: 00-16: 30 : **M. Hairer** : Hypocoellipticity in infinite dimensions

### List of Participants :

Wided Ayed (Nabeul)  
Dominique Bakry (Toulouse)  
Abdessattar Barhoumi (Sousse)  
Ali Ben Amor (Gafsa)  
Nedra Belhaj Rhouma (Tunis)  
Jérôme Bertrand (Toulouse)  
Francois Bolley (Paris-Dauphine)  
Michel Bonnefont (Toulouse)  
Radouhan Boukhris (IPAM)  
Isabelle Catto (Paris-Dauphine)  
Eric Carlen (Rutgers University)  
José Antonio Carrillo (Barcelona)  
Houcine Chebli (Tunis)  
Maria da Conceicao Carvalho (Lisboa)  
Philippe Carmona (Nantes)  
Sonia Chaari (Bizerte)  
Djélil Chafaï (Marne-la-Vallée)  
Mounir Dahoudi (Tunis)  
Nizar Demni (Bizerte)  
Jean Dolbeault (Paris-Dauphine)  
Aymen Ettaib (Tunis)  
Ahmed Fitouhi (Tunis)  
Pierre Fougères (Toulouse)  
Sarah Frikha (Kairouan)  
Nathael Gozlan (Marne-la-Vallée)  
Ivan Gentil (Paris-Dauphine)  
Soumaya Gheryani (Gafsa)  
Arnaud Guillin (Clermont-Ferrand)  
Skander Hachicha (Sousse)  
Rached Hachaichi (Tunis)  
Martin Hairer (Warwick University)  
Waldek Hebisch (Wroklaw)  
Hichem Hajaiej (Monastir)  
Sameh Horrigue (Gabes)  
Souheyl Jendoubi (Tunis)+  
Alderic Joulin (Toulouse)

Narjes Khalifa (Nabeul)  
Agnes Lagnoux (Toulouse)  
Joseph Lehec (Paris-Dauphine)  
Christian Leonard (Nanterre)  
Patrick Maheux (Orléans)  
Noureddine Mhadbi (Tunis)  
Laurent Miclo (Toulouse)  
Georg Menz (Bonn)  
Clément Mouhot (ENS Paris)  
Mahel Mosbah ( Bizerte)  
Bruno Nazaret (Paris-Dauphine)  
Habib Ouerdiane (Tunis)  
Guiseppe Savaré (Pavia)  
Karl-Theodor Sturm (Bonn)  
Chiraz Trabelsi (Tunis)  
Szymon Peszat (Warszawa)  
Ioannis Papageorgiou (Toulouse)  
Habib Rebei (Gabes)  
Hafedh Rguigui (Monastir)  
Anis Riahi (Gabes)  
Zongmin Qian (Oxford)  
Liming Wu (Clermont-Ferrand)  
Pierre-Andre Zitt (Dijon)  
Boguslaw Zegarlinski (Toulouse)  
Olfa Zribi (Tunis).







