PROGRAM

All lectures will be held in Auditorium 232, Amado Mathematics Building

Wednesday, 5 March

08:15-09:10   Registration

09:10-09:15   Greetings

09:15-10:00   Yanyan Li
   Gradient estimates for elliptic equations and systems from composite material

10:00-10:45   Robert McCann
   Extremal doubly stochastic measures and optimal transportation

10:45-11:15   

11:15-12:00   Wilfrid Gangbo
   A symplectic form on the set of probability measures

12:00-12:45   Vladimir Oliker
   The Aleksandrov problem of existence of convex hypersurfaces with given integral Gauss curvature and optimal mass transport on S^n

12:45-14:45   Lunch break

14:45-15:30   Futoshi Takahashi
   Asymptotic nondegeneracy of the least energy solutions to an elliptic problem with the critical Sobolev exponent

15:30-16:15   Gabriella Tarantello
   The role of Onofri type inequalities in the symmetry properties of extremals for the Caffarelli-Kohn-Nirenberg inequality in 2D

16:15-16:45   

16:45: 17:30 Yaniv Almog
Stability of the normal state of superconductors in the presence of electric currents

17:30: 18:15 Abbas Bahri
Homology for contact forms via Legendrian curves.

18:45 Reception hosted by the Center for Mathematical Sciences

Thursday, 6 March

09:00-09:45 Juan Soler
Dispersive properties and variational approach to solutions of relativistic and non-relativistic gravitational Vlasov models

09:45-10:30 Danielle Hilhorst
Peak solutions of a chemotaxis-growth system

10:30-11:15 Piotr Biler
Chemotaxis models with nonlocal diffusion

11:15-11:45 Coffee

11:45-12:30 Mónica Musso
Bubbling along geodesics for a semilinear supercritical elliptic problem in bounded domains

12:30-13:15 Takashi Suzuki
An analytic approach to the normalized Ricci flow equation

13:15-15:00 Lunch

15:00-15:45 Manuel del Pino
Bump lines in $\mathbb{R}^2$
15:45-16:30  Xavier Cabre
*Saddle shaped solutions of bistable diffusion equations in all of* $\mathbb{R}^{2m}$

16:30-17:00

17:00-17:45  Peter Sternberg
*Critical points via gamma convergence*

20:00  Conference Banquet

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**Friday, 7 March**

09:00-09:45  Henri Berestycki
*Generalized fronts for reaction-diffusion equations in non-homogeneous media*

09:45-10:30  Mikhail Feldman
*Free boundary problems in shocks analysis*

10:30-11:15  Yann Brenier
*Boussinesq equations and optimal transport models*

11:15-11:45

11:45-12:30  Maria Esteban
*Critical magnetic fields for the magnetic Dirac-Coulomb operator*

12:30-13:15  Tristan Rivière
*Analysis aspects of Willmore surfaces*
Saturday, 8 March

**Excursion**

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Sunday, 9 March

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
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<tbody>
<tr>
<td>09:00-09:45</td>
<td>Tadeusz Nadzieja</td>
<td>Blow up solutions in nonlocal evolution problems</td>
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<td>09:45-10:30</td>
<td>Benoît Perthame</td>
<td>Structured population dynamics: the method of generalized entropy</td>
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<td>10:30-11:00</td>
<td>Adimurthi</td>
<td>Hardy-Rellich inequality and existence of first eigenvalues</td>
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<td>11:00-11:45</td>
<td>Nelly André</td>
<td>On a minimization problem with a mass constraint involving a potential vanishing on two curves</td>
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<td>12:30-14:15</td>
<td><strong>Lunch</strong></td>
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<td>14:15-15:00</td>
<td>Irene Fonseca</td>
<td>Surfactants in foam stability: a phase field model</td>
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<td>15:00-15:45</td>
<td>Dmitry Golovaty</td>
<td>An effective model for ferronematic liquid</td>
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<td>15:45-16:15</td>
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<td>16:15-17:00</td>
<td>David Kinderlehrer</td>
<td>New perspectives on texture evolution</td>
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Monday, 10 March

09:00-09:45  Michel Chipot
Convergence of the solution of elliptic problems in strips

09:45-10:30  Albert Fathi
Denjoy-Schwartz and Hamilton-Jacobi

10:30-11:00

11:00-11:45  Leonid Berlyand
Solutions with vortices of a semi-stiff boundary value problem for the Ginzburg-Landau equation

11:45-12:30  Lia Bronsard
Global minimizers for anisotropic superconductors

12:30-14:15  Lunch

14:15-15:00  Etienne Sandier
A variational problem for vortex lattices in superconductivity

15:00-15:45  Sylvia Serfaty
From the Ginzburg-Landau energy to lattice problems: upper bound and study of the limiting energy

15:45  Concluding Remarks