

Singular limit problems in nonlinear PDEs

CIRM November 26 – 30, 2012

Program

Monday

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| 09:00 – 10:00 | C.-S. Lin: The Liouville equation: a perfect match of elliptic PDE and integrable systems |
| 10:10 – 10:40 | M. Willem: Poincaré inequality and a relative isoperimetric inequality |
| Coffee | |
| 11:10 – 11:40 | V. Bonnaillie-Noël: Nodal domains and spectral minimal partitions |
| 11:50 – 12:20 | M. Grossi: Some results for the Hénon equation in \mathbb{R}^n |
| Lunch | |
| 15:00 – 15:30 | J. Davila: New self-translating solutions for the mean curvature flow |
| 15:40 – 16:10 | P. Esposito: The effect of linear perturbations on the Yamabe problem |
| Coffee | |
| 16:40 – 17:00 | I. Ianni: Sign-changing solutions for the Schrödinger-Poisson-Slater equation, a dynamical approach |
| 17:10 – 17:30 | B. Noris: A remark on natural constraints in variational methods and an application to superlinear Schrödinger systems |
| 17:40 – 18:00 | G. Verzini: Uniform Hölder bounds for strongly competing systems involving the square root of the laplacian |

Tuesday

- 09:00 – 10:00 G. Tarantello: The role of Liouville type systems in the study of non-topological vortices in Chern-Simons theory
- 10:10 – 10:40 A. Farina: Some results on entire solutions of an elliptic system arising in phase separation
- Coffee
- 11:10 – 11:40 Z.-Q. Wang: A new variational approach to some quasilinear elliptic problems
- 11:50 – 12:20 D. Ruiz: Sequences of bump solutions for an interface Nonlinear Schrödinger Equation
- Lunch
- 15:00 – 15:30 A. Pistoia: Steady states with unbounded mass of the Keller-Segel system
- 15:40 – 16:10 C. Gui: Even Symmetry of Axially Symmetric Solutions of the Allen-Cahn Equation
- Coffee
- 16:40 – 17:00 I. Guerra: Solutions for a semilinear elliptic equation in dimension two with supercritical growth
- 17:10 – 17:30 G. Vaira: Positive and sign-changing solutions for the Brezis-Nirenberg problem
- 17:40 – 18:10 W. Reichel: Distributional solutions of the stationary nonlinear Schrödinger equation: singularities, regularity and exponential decay

Wednesday

- 09:00 – 10:00 J. Wei: Entire solutions of Stationary Nonlinear Schrödinger Equation: Old and New
- 10:10 – 10:40 F. Pacella: Results on sign changing solutions of some semilinear parabolic and elliptic problems
- Coffee
- 11:10 – 11:40 K. Tanaka: Multi-bump positive solutions for a nonlinear elliptic problem in expanding tubular domains
- 11:50 – 12:20 G. Fusco: On the asymptotic behavior of symmetric solutions of the elliptic system $\Delta u = W_u(u)$ in unbounded domains
- Lunch

Thursday

- 09:00 – 10:00 E. Séré: Nash-Moser without regularity
- 10:10 – 10:40 B. Ruf: New solutions for Trudinger-Moser critical equations in \mathbb{R}^2
- Coffee
- 11:10 – 11:40 V. Felli: Asymptotic behavior of eigenfunctions at the junction of shrinking tubes
- 11:50 – 12:20 S. Yan: Fully Bubbling solutions for the $SU(3)$ Toda system of mean field type on a torus
- Lunch
- 15:00 – 15:30 M. Kowalczyk: The space of four end solutions to the Allen-Cahn equation in \mathbb{R}^2
- 15:40 – 16:10 T. D'Aprile: Multiple blow-up solutions for singular Liouville-type equations
- Coffee
- 16:40 – 17:10 M. Ould Ahmedou: Critical point at infinity approach to mean field type Equations
- 17:20 – 17:50 S. Peng: Segregated and synchronized vector solutions for nonlinear Schrödinger systems
- 18:00 – 18:30 F. Robert: Sign-changing blow-up for scalar curvature type equations

Friday

- 9:00 – 10:00 F. Bethuel: Slow motion for reaction-diffusion equations with degenerate potentials
- 10:10 – 10:40 J. Byeon: Variational construction of semiclassical standing waves for nonlinear Schrödinger systems
- Coffee
- 11:10 – 11:40 D. Bucur: Isoperimetric inequalities and free discontinuity problems
- 11:50 – 12:20 J. Dolbeault: Singular limit problems related to the Onofri inequality
- Lunch