

Directions on Partial Differential Equations

Ferrara, November 6-9, 2003

Thursday, november 6

Afternoon Session

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|-------------|------------------------|---|
| 15:00-15:30 | <i>Opening Session</i> | |
| 15:40-16:15 | M. G. Garroni | Sharp estimates for Green's functions: singular cases |
| 16:15-16:50 | P. I. Plotnikov | On compactness properties of C^∞ solutions to the compressible Navier-Stokes Equations |

Coffee Break

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|-------------|---------------------------|--|
| 17:05-17:40 | L. Rodino | Analytic and Gevrey solutions of non-linear partial differential equations |
| 17:40-18:15 | I. Sh. Mogilevskii | The stationary flows for a certain type of non-Newtonian fluids |

Friday, november 7

Morning Session

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|-------------|-----------------------|---|
| 9:00-9:35 | T. Ruggeri | The entropy principle: from continuum mechanics to hyperbolic systems of balance laws |
| 9:35-10:10 | G. Mulone | Stabilizing effects in dynamical systems: linear and nonlinear stability conditions |
| 10:10-10:45 | P. L. Gurevich | Elliptic problems with non local conditions near the boundary |

Coffee Break

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|-------------|---------------------------|---|
| 11:00-11:35 | H. Beirão da Veiga | On $W^{2,s}$ regularity to some boundary value problems for flows with gradient dependent viscosity |
| 11:35-12:10 | H. Fujita-Yashima | Some aspects of the equation for a viscous gas with the Coriolis force |
| 12:10-12:45 | F. Rosso | Dynamics of droplets in an agitated dispersion with multiple breakage |

Afternoon Session

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|-------------|------------------------|--|
| 15:00-15:35 | N. N. Uraltseva | Regularity for parabolic free boundary problems. |
| 15:35-16:10 | P. Colli | Models and problems for phase transitions with microscopic movements |
| 16:10-16:45 | R. Salvi | Some two-phase problems in fluid mechanics |

Coffee Break

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|-------------|------------------------|---|
| 17:00-17:35 | A. Corli | The Riemann problem for metastable reversible reactive flows |
| 17:35-18:10 | G. I. Bizhanova | On the solvability of the free boundary problems describing phase transition with supercooling effect |

Social Dinner

Saturday, november 8*Morning Session*

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|-------------|---------------------|--|
| 9:00-9:35 | G. Gilardi | On some phase transition models of Penrose-Fife type |
| 9:35-10:10 | M. Cicognani | Optimal well-posedness of the Cauchy problem for evolution equations with C^N coefficients |
| 10:10-10:45 | A. Ascanelli | The Cauchy problem for a class of p -evolution equations |

Coffee Break

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|-------------|----------------------|---|
| 11:00-11:35 | S. Spagnolo | Local solvability for systems of non principal type |
| 11:35-12:10 | M. A. Vivaldi | Transmission problems with highly conductive fractal layers |
| 12:10-12:45 | E. Mascolo | Regularity of vectorial integrals with non standard growth |

Afternoon Session

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|-------------|----------------------|--|
| 15:00-15:35 | M. Primicerio | Modelling oxygen perfusion of a living tissue by a network of capillaries |
| 15:35-16:10 | P. Maremonti | Asymptotic properties of solutions of the Navier-Stokes equations in half-spaces |
| 16:10-16:45 | G. Guidoboni | On the compressible Bénard problem |

Coffee Break

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|-------------|-------------------------|---|
| 17:00-17:35 | B. P. Nicolaenko | 3D Euler equations with weakly aligned large initial vorticity in bounded domains |
| 17:35-18:10 | A. S. Mahalov | Mathematical problems of 3D rotating turbulence |
| 18:10-18:45 | E. Stepanov | Optimal urban networks and pricing policies |

Sunday, november 9*Morning Session*

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|-------------|------------------------|--|
| 9:00-9:35 | D. S. Tartakoff | Smoothness of solutions of PDE's |
| 9:35-10:10 | E.V. Frolova | Free boundary problem for a layer of inhomogeneous fluid |
| 10:10-10:45 | M. Guidorzi | A sharp attainment result for nonconvex variational problems |

Coffee Break

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|-------------|------------------------|---|
| 11:00-11:35 | M. E. Bogovskii | A new approach to deriving global estimates for strong solutions of the Navier-Stokes equations |
| 11:35-12:10 | I. V. Denisova | Stability of an infinite flexible beam under the fluid flow with exponential profile |
| 12:10-12:45 | T. N. Shilkin | Classical solvability of the coupled system modelling a heat-convergent Poiseuille-type flow |