



INNOVATIVE ECONOMY
NATIONAL COHESION STRATEGY



EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FUND



Stipend offer nr 1/MPD/09

Position: Ph.D. student

Number of stipends: 17

Coordinator of consortium: Faculty of Mathematics, Informatics and Mechanics, University of Warsaw

Other partners:

Institute of Mathematics, University of Wrocław

Institute of Mathematics of the Polish Academy of Sciences

Interdisciplinary Centre for Mathematical and Computational Modelling, University of Warsaw

Maximum period of stipend agreement: 4 years

Position starts on : 01.10.2009 or 10.09.2010

Stipend's amount: 3000 PLN/month during stays in Poland and 4500 PLN/month during stays abroad

Pension insurance: yes

Key responsibilities include:

1. Project 1. Structured population models of cell aging and differentiation
2. Project 2. Structured population models in metric spaces
3. Project 3. Diffusion-driven phase separation in binary systems over complex geometries: a qualitative study of dynamical developments
4. Project 4. Diffusion-driven dynamic phase separation in binary systems over complex geometries: a numerical study
5. Project 5. Process stabilization and closed-loop control of nonlinear diffusion-reaction developments in structured populations
6. Project 6. Structured population models for predator-prey interactions. The case of Daphnia and size selective planktivorous fish

7. Project 7. Models of morphogen transport
8. Project 8. The issue of regularity for systems of complex flows based on the Navier-Stokes equations
9. Project 9. Regularity of solutions to nonlinear parabolic systems
10. Project 10. Analytic and numerical study of dislocation dynamics
11. Project 11. Analytic and numerical study of interacting particle systems modelling aggregation: from discrete to continuous models
12. Project 12. Novel massively parallel algorithms for solving nonconforming discretizations of PDEs
13. Project 13. Non-Newtonian fluids with nonstandard rheology
14. Project 14. Spatio-temporal dynamics of structured populations - the growth of epidermis
15. Project 15. Fluid model of crystal plasticity - mathematical properties and computer simulations
16. Project 16. Fundamental problems to equations of compressible chemically reacting flows
17. Project 17. Bio-flows in pipe-like domains: qualitative analysis, reduction to monodimensional models and numerical simulations

Profile of candidates:

1. An academic degree in mathematics or related sciences
2. Interest in mathematical analysis and natural sciences
3. Fluency in English

Required documents:

1. Cover letter with description of candidate's research interests
2. Application form.
3. List of publications and pdf files of all listed papers
4. Two letters of recommendation
5. Transcript of academic records
6. Certificate of the master degree

For more details about the position please visit: <http://mmns.mimuw.edu.pl/>

Principal Investigator: dr hab. Piotr Gwiazda

Address for applications: mmns@mimuw.edu.pl, mmns@math.uni.wroc.pl

Closing date: 10th September 2009

Please include in your offer :

"In accordance with the personal data protection act from 29 th August 1997, I hereby agree to process and to store my personal data by the Institution for recruitment purposes".

The granting institution may seek to contact the best candidates only