

Maria Grazia Notarangelo

Curriculum Scientifico

Personal Information

Name Maria Grazia Notarangelo
Date and place of birth 07/02/1985, San Giovanni Rotondo (Fg), Italy
Nationality Italian
Home Address 4, via Trepiccioni, Vieste (FG)

Address 42, P.le R. Ardigó, Roma (00142)
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Current Position

November 2010–to date PhD in "Modelli e Metodi Matematici per la Tecnologia e la Società", *Dep. SBAI, Sapienza, University of Rome, Rome*, .
I am waiting to defend my PhD thesis.
Thesis: A Mathematical model of intracellular transport: role of microtubules and Ran cycle in the nucleocytoplasmic plasmids transport in gene therapy anti-tumor.
Advisor: Roberto Natalini, Director IAC-CNR, Rome

Education

February 2008–October 2010 Master Degree in Applied Mathematics, *Dep. Mathematics "G. Castelnuovo", Sapienza, University of Rome, Rome*, .
Thesis: Equazione di Vlasov in presenza di un campo singolare.
Advisor: Marlo Pulvirenti, Full Professor in Mathematical Physics (University of Sapienza).
Vote: 108.
September 2004–February 2008 Degree in Mathematics, *Dep. Mathematics "G. Castelnuovo", Sapienza, University of Rome, Rome*, .
Thesis: Problemi di Integrabilità nella Meccanica Anolonomica.
Advisor: Piero Negrini, Full Professor in Rational Mechanics (University of Sapienza).
Vote: 105.

Experience

Vocational
a.a 2013/14 Tutor of the course: "Matematica", Master in "Scienze dell'Alimentazione e Nutrizione Umana", Prof. G. Brettl, *Campus Biomedico University, Rome*.
Tutor of the course: "Analisi Matematica", Master in Industrial Engineering, Prof. M.Papi, *Campus Biomedico University, Rome*.

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- a.a 2012/13 Tutor of the course: "Analisi Matematica", Degree in Industrial Engineering, Prof. M. Papi, *Campus Biomedico University*, Rome.
 Tutor of the course: "Geometria", Degree in Aerospace Engineering, Prof. A.Delfrá, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Geometria", Degree in Electronic Engineering, Prof. P.Maroscia, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Geometria", Degree in Civil Engineering, Prof. L.Piccolella, *Sapienza, University of Rome*, Rome.
- a.a 2011/12 Tutor of the course: "Geometria", Degree in Aerospace Engineering, Prof. A.Delfrá, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Geometria", Degree in Construction Engineering, Prof. B.Nelli, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Analisi Matematica 1", Degree in Clinical Engineering, Prof. A.Pistola, *Sapienza, University of Rome*, Rome.
- a.a 2010/11 Tutor of the course: "Geometria", Degree in Aerospace Engineering, Prof. A.Delfrá, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Geometria", Degree in Environmental and Geomatic Engineering, Prof. D.Salvitti, *Sapienza, University of Rome*, Rome.
 Tutor of the course: "Geometria", Degree in Electronic Engineering, Prof. S.Capparelli, *Sapienza, University of Rome*, Rome.
- September 2010–October 2010 Teacher of the course: "Precorso di Matematica per la Facoltà di SMFN", *Sapienza, University of Rome*, Rome.
- a.a. 2009/10 Lab Assistant at "Centro di Calcolo", Dep. Mathematics "G. Castelnuovo", *Sapienza, University of Rome*, Rome.

Languages

English Upper intermediate.
 Deutsche Beginner.

Numerical Software

Matlab, C++, Latex.

Research Interest

The area of my research is applied mathematics and numerical methods. My interests focus on developing mathematical multi-domain models to describe biological phenomena. In my PhD-thesis work, I studied how optimize the transport of cancer vaccine into the cell. The main modelling techniques involved are the use and analysis of partial differential equations. I use Matlab for numerical simulations. It has been necessary to understand and clarified the mechanisms that regulate the transport process and interaction of the vaccine with other proteins presented in a cell. I collaborated with biologists, among which Emanuela Signori of Laboratory of Molecular Pathology and Experimental Oncology, CNR-IFT, Rome, Italy, and Laboratory of Molecular Medicine and Biotechnology, CIR, University Campus Bio-Medico of Rome, Rome, Italy. I am much interested in biological problems and in the analysis of data.

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Publication

1. Notarangelo MG, Natalini R, Signori E. Gene Therapy: The Role of Cytoskeleton in Gene Transfer Studies Based On Biology and Mathematics. *Current Gene Therapy* Vol 14, 2, 121-127.
2. Notarangelo MG, Natalini R. A Mathematical model of intracellular transport: role of microtubules and Ran cycle in the nucleocytoplasmic plasmids transport. (In preparation).

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