Personal Data

Name: Raul De Maio
Address: Via A. Scarpa, 14, Palazzina B, Roma, 00161
email: raul.demaio@sbai.uniroma1.it

Work Experience

Current
November 2015 - current
Ph.D. Candidate at S.B.A.I. Department - La Sapienza, Rome
Predictive models for traffic on road networks
Research Topics: multiscale modeling for vehicular traffic, optimal control of traffic flows on networks, mean field game theory.
Supervisors: Prof. F. Camilli (La Sapienza) and Prof. A. Tosin (Politecnico of Turin).

Sep-Dec 2017
Visiting Researcher at Inria-Sophia Antipolis, Nice
Optimal control of traffic and simulations
Research on control theory for vehicular traffic on networks via multiagents systems (self-driving cars) and traffic lights. Numerical simulations on networks. Additional research: MDE theory, generalized pushforward and multiscale calibration.

Sep 2017 and 2016
Lecturer for preparatory courses at La Sapienza, *Faculty of Information Engineering*
Held lessons for new students in Engineering on analysis subjects.

Nov-Dec 2016
Lecturer for Analysis II at La Sapienza, *Management Engineering*
Lecturer and examiner for second year students. Held lessons on ODE's theory.

Jul-Sep 2016
Consultant for FindYourDoc, Lecco
Occasional collaboration supervised by FindYourDoc and ConsorzioC2T to solve problems for an italian PMI company.

Education

October 2015
Master Degree in Applied Mathematics, **La Sapienza University**, Rome
110/110 *summa cum laude* | Major: Analysis and Modeling
Thesis: "Multiscale models for vehicular traffic"
Advisor: Prof. A. Tosin and Prof. E. Montefusco

Mar 2015
Athens Program at **ParisTech Telecom**, Paris

Oct 2014 - Feb 2015
Erasmus+ Semester at **TuM**, Munich

July 2013
Bachelor Degree in Mathematics,**La Sapienza University**, Rome
110/110 *summa cum laude*,
Thesis: "Cucker-Smale model: consensus without leaders"
Advisor: Prof. M. Pulvirenti

Scholarships and Certificates

Sept 2017
Scholarship for researching in France on "Big Data, Smart Cities and IoT" offered by the French Government (€2200 ca.)

June 2017
Grant for Young Researcher by La Sapienza, project: OptiCoNet, Optimal Controls on Networks and Multi-scale models for vehicular traffic,(€2000 ca.)

Languages

Italian:	Mothertongue
English:	Fluent
German:	Basic Knowledge

Computer Skills

Basic Knowledge:	sql, R (mainly Machine Learning Packages), Matlab, Linux, LaTeX
Intermediate Knowledge:	Python (Numpy, Scipy, Scikit, Matplotlib), C++, Excel, Word, PowerPoint

Publications and Preprints

F. Camilli, R. De Maio, A. Tosin, *Transport of measures on Networks,* Net.Het.Med. Vol. 12, No. 2, June 2017

F. Camilli, R. De Maio, A. Tosin, *Measure-valued solutions to transport equations on networks with nonlocal velocity*, Journal of Diff. Equations, Vol. 264, no. 12, 2018

S. Cacace, F. Camilli, R. De Maio, A. Tosin, *A measure theoretic approach to traffic flow optimization on networks*, submitted preprint

Conferences and Workshops

17 Jan 2018	**Department Seminar** at PoliTo (guest of A. Tosin)
15 Dec 2017	**Contributed Talk** at WorkShop on Fractional Calculus (La Sapienza - Rome)
3 Oct 2017	**Department Seminar** at INRIA - Sophia Antipolis (guest of P. Goatin)
6 - 8 Sep 2017	**Contributed Talk** at XVII Italian Meeting on Hyperbolic Equations (IperPV2017), Pavia
14 - 16 June 2017	*Mean Field Game and Related Topics*, Rome
15 - 19 May 2017	*Emerging PDE models in Socio-Economic Sciences*, Warwick
6 - 10 Mar 2017	**Contributed Talk** at *Transport Modeling and Management: Vehicles and Crowds*, Rome
28 Nov - 2 Dec 2016	*Pde Models for Multiagents Phenomena*, Rome
4 - 9 Sep 2016	*Summer School Agorà: Scienza Comunicazione Società*, La Morra
4 - 8 July 2016	Summer School CIME, *Nonlocal and nonlinear diffusions and interactions: new methods and directions,* Cetraro
9 - 11 Mar 2016	AnCoNet, *Analysis and Controls on Networks*, Padua