



Department of Mathematics
University of Rome Tor Vergata



MATH@TOV
Excellence Project 2018-2022
NEWSLETTER
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Presentation

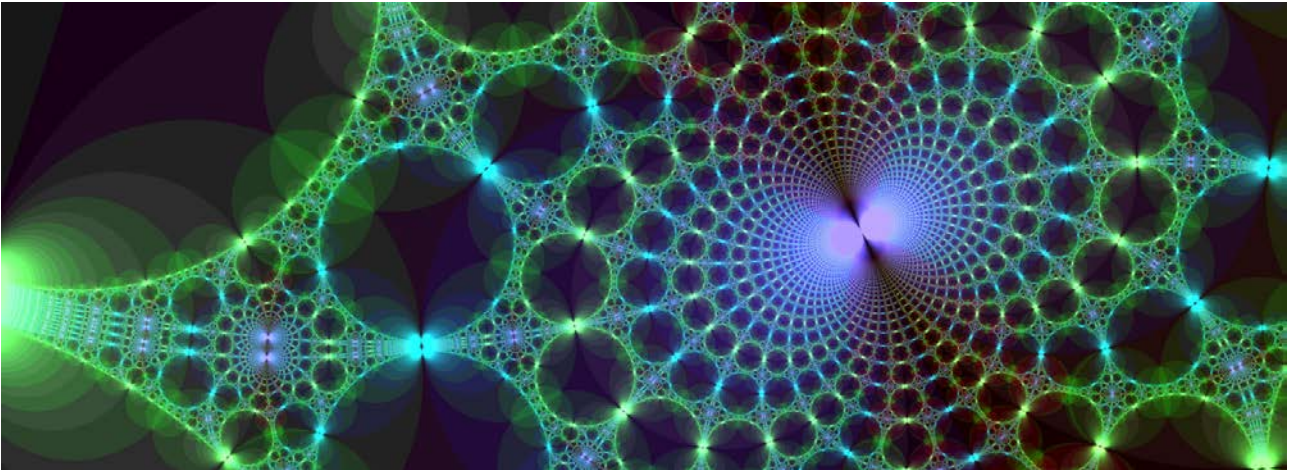
The Department of Mathematics of the University of Rome Tor Vergata is distinguished by first class research, often motivated by applications from theoretical physics, astronomy, aerospace, finance, technology and medical science, a high level educational system, and the organisation of events in the context of the so-called third mission of the University. For details we refer to the Department's website, <http://www.mat.uniroma2.it>.

The Department aims to increase its leading role in research, math education and math culture. The recently awarded national Excellence Project 2018-2022, denoted by MATH@TOV, offers the opportunity to face new challenges, and its main objectives are

- foster new collaborations between staff members on advanced research themes
- hire excellent staff members, able to participate in multiple research projects
- stimulate the interaction with excellent math groups, both in public research institutions and industry, and transform the Department into a strategic asset for the development of highly advanced mathematics and its application to specific problems
- increase the international visibility of the Department
- improve the Master and PhD Programmes in Mathematics
- intensify the spreading of Math Culture.

See the web page of the project MATH@TOV: <http://www.mat.uniroma2.it/Progetto/>

Recruitment



Call for interest

The Department of Mathematics at the University of Rome Tor Vergata invites expressions of interest for Senior (Tenure-Track) Assistant Professor ('RTD-B') and Tenured Associate Professor positions in any area of Pure and Applied Mathematics.

Who we are:

Our Department has been consistently ranked in top positions within Italy and Europe in Research Assessment Exercises held over the last decade; it is the only Italian institution ranking in the top 100 worldwide for Mathematics according to the ARWU ranking of 2017. Moreover, the Department has been recently ranked first in Italy and hence financed by the Italian Ministry of Education, University and Research (MIUR) under the program "Departments of Excellence" for the period 2018-2022. More information about the Department and this program can be found at

<https://www.mat.uniroma2.it/>
see also <http://www.mat.uniroma2.it/Progetto/>

What we offer:

Associate Professor is a tenured position. Applicants should have an established track-record of publications in top international journals and evidence of leadership and recognition in the international academic community, including grant applications and project management. Standards of excellence in teaching are also expected. The initial gross salary of an Associate Professor is around 50k Euros per year. The net amount after taxes depends on the total personal income, the composition of the family and other parameters. To apply for an associate professorship in Italy, the candidates must hold the "Abilitazione Scientifica Nazionale" (Italian National Habilitation) as Associate Professor, or must have been declared eligible by the Italian Ministry of University and Research (MIUR), or must be currently employed in an equivalent position in Italy or in a foreign Department.

Senior (Tenure-Track) Assistant Professor (RTD-B) is for three years. Subject to evaluation, the position will be converted in a tenured Associate Professorship. Applicants for this position must have at least three years of experience after PhD completion, and an already established research record. The initial gross salary is around 38k Euros per year.

A four-year tax exemption on 90% of the salary is available according to the Italian tax law for those candidates who have been residing outside Italy for 2 years or more. All positions will start not earlier than 2019. Moreover, the MIUR Excellence Grant will provide special funds to attract PhD students and PostDocs to join the Department and host large scientific events as well as other activities such as PhD courses, seminars and workshops.

Procedure:

Applicants should express their interest by sending an email to progetto@mat.uniroma2.it, including a Curriculum Vitae and a list of publications. The subject of the email should be Associate-surname or RTDB-surname. Selected candidates could be invited for a seminar. There are no restrictions regarding the nationality of the applicants.

Please note that this is a call for interest, not a job vacancy announcement; i.e., this call is only a preliminary stage aimed to collect expressions of interest, and it is not a formal application for positions. On the basis of the collected EoIs, the Department will decide whether or not to open a position in specific subdisciplines. Academic positions in Italy can only be awarded through a public competition or direct appointment. The Department will contact the applicants to inform them about the opening of the formal positions and the required documentation.

For additional information, please contact us at: progetto@mat.uniroma2.it

Research



Beside short term visiting professors, the project is funding a rich activity of long term (from 1 month to 3 months) visiting professors in the framework of the Department PhD program. Next visitors are listed below.

- [Han Peters](#), University of Amsterdam, Amsterdam (The Netherlands), January 2019,
Course: Holomorphic Dynamics
- [Christos Efthymiopoulos](#), Research Center for Astronomy and Applied Mathematics, Athens (Greece) January-February 2019
Course: Normal forms, Nekhoroshev's Theorem, Celestial Mechanics
- [Paolo Antonini](#), SISSA ,Trieste (Italy), January-February 2019
Course: The Atiyah-Singer index theorem
- [Hervé Gaussier](#), Institut Fourier, Grenoble (France), November 2018-January 2019
Course: Gromov's hyperbolic geometry in Complex Analysis
- [Tom Lyche](#), Department of Mathematics, UiO, Oslo (Norway), September 2018
Course: Multivariate splines and simplex splines
- [Andrey Piatnitski](#), The Arctic University of Norway, Narvik (Norway), May 2018
Course: Introduction to the homogenization of singularly perturbed operators

The project is funding a wide activity of advanced lectures/schools. Next events are listed below.

1) EMS LECTURES SUMMER SCHOOL - 16, 17, 18 July 2018

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The 2018 European Mathematical Society Lecturer Prof. Gigliola Staffilani (MIT, USA) will deliver a general Colloquium on Tuesday July 17 and a PhD course on July 17 and 18. These lectures will be supplemented by a course of Prof. Nicola Visciglia (University of Pisa) on July 16 and 17.

Titles of the courses:

- Gigliola Staffilani (MIT - 2018 EMS Lecturer): On the long time dynamics for the defocusing nonlinear Schrödinger equations.
- Nicola Visciglia (Univ. Pisa): Scattering theory for the nonlinear Schrödinger equation in the euclidean setting.

2) PISA-HOKKAIDO-ROMA2 Summer School on Mathematics and Its Applications 2018

Venue: Centro di Ricerca Matematica Ennio De Giorgi, Pisa

Date: 27 August - 8 September 2018

Web page: <http://www.crm.sns.it/event/432/>

The school aims to provide up-to-date intensive mini courses in several pure and applied mathematical research domains: financial mathematics and dynamics, numerical methods, mathematical physics, geometry. The School is part of a more general plan for scientific collaboration between the Hokkaido University, the Department of Mathematics of the University of Pisa and the Department of Mathematics of the University of Rome Tor Vergata to stimulate the exchange of students and the development of scientific research.

Organizers: Prof. Stefano Galatolo, Univ. Pisa, Prof.ssa Simona Settepanella, Hokkaido Univ., Japan, Prof. Alfonso Sorrentino, Univ. Rome Tor Vergata.

Courses:

- Matrix functions and network analysis (Prof.ssa Paola Boito, Univ. di Pisa)
- Dispersive estimates and application (Prof. Piero D'Ancona, Sapienza Univ. di Roma)
- Matrix functions and network analysis (Prof. Federico Poloni, Univ. di Pisa)
- Discrete Morse Theory (Prof.ssa Simona Settepanella, Hokkaido University).
- Infinite Ergodic Theory (Prof. Claudio Bonanno, Univ. di Pisa)
- Introduction to Schubert varieties (Prof.ssa Martina Lanini, Univ. di Rome Tor Vergata)
- The KAM theorem, following the original approach designed by Kolmogorov (Prof. Ugo Locatelli, Univ. di Rome Tor Vergata)
- Global Analysis - the heat kernel, old and new (Prof. Jun Masamune, Hokkaido University)

3) ROME-MOSCOW SCHOOL OF MATRIX METHODS AND APPLIED LINEAR ALGEBRA, 2018 EDITION

Description of the school: The sixth edition (2018 edition) of the summer school "Rome-Moscow school of Matrix Methods and Applied Linear Algebra" is organized under an Agreement (signed in 2009 and renewed in 2014) of didactic-scientific collaboration between the Lomonosov Moscow State University (LMSU) and the University of Rome Tor Vergata (TVRU). The school will take place during a whole month, two weeks in Moscow and two weeks in Rome, offering to young students a long time for learning and thinking over the arguments proposed, not limited to short courses of seminars. The school proposes advanced scientific topics and the opportunity of entering in direct contact with people and institutions of excellence in the field.

Attending with good profit the courses of the school is equivalent to acquire credits of university curriculum activity. See also <http://www.mat.uniroma2.it/~tvmsscho> and the enclosed announcement.

Moscow part:

Dates: July 28 - August 11,

Places: Faculty of Computational Mathematics and Cybernetics (CMC) of LMSU, and "Marchuk" Institute of Numerical Mathematics of the Russian Academy of Sciences (INM-RAS)

Rome part:

Dates: September 9 - September 23

Place: Department of Mathematics of the University of Rome Tor Vergata

Lecturers, Courses and Seminars:

The Lecturers of the main courses will be 4-5 from Russian universities, 4-5 from Italian universities, and 1-2 from universities of other countries. For names and affiliations of the Lecturers, and for information on the Courses-Seminars they will hold during the school, see http://www.mat.uniroma2.it/~tvmsscho/Rome-Moscow_School/2018/pages/lect_course.php

Organizers:

Professors Eugene E. Tyrtshnikov, eugene.tyrtshnikov@gmail.com (Director of INM-RAS, Professor and Chairman of the Faculty CMC-LMSU), and Carmine Di Fiore, difiore@mat.uniroma2.it (Associate Professor of Numerical Analysis in the Dept of Mathematics of the University of Rome Tor Vergata)

Supporters:

LMSU and TVRU universities, International Relations Offices; INM-RAS, Gruppo Analisi Numerica of TVRU, INdAM (Istituto Nazionale di Alta Matematica), and Department of Mathematics of TVRU - MIUR Excellence Department Project

High level teaching activities



MATH@TOV is offering a unique opportunity to improve substantially the Master Programme in Pure and Applied Mathematics and make it internationally competitive.

- 1) MATH@TOV will fund possible research trips for students enrolled in the Curriculum of Excellence of the Master Programme in Pure and Applied Probability at Tor Vergata. The Curriculum of Excellence involves additional training activities, consisting of in-depth studies, seminars, or participation in external courses, according to a programme that will be tailored to each student.
- 2) MATH@TOV has funded 5 additional scholarships for the winners of the research start-up contest published by the National Institute of High Mathematics "Francesco Severi" and reserved for students enrolled in the first year of the Master Programme in Pure and Applied Mathematics at Tor Vergata (such students will automatically be enrolled in the Curriculum of Excellence).
- 3) MATH@TOV will fund up to 10 degree prizes, for an amount of 2,000.00 euros each, for master's graduates in Pure and Applied Mathematics at Tor Vergata who have produced a master thesis that contains at least one of the following requirements: a relevant original result; an efficient implementation and/or a particularly significant numerical experimentation; a clear and in-depth presentation of highly relevant results.

In addition, Master's students in Pure and Applied Mathematics at Tor Vergata and especially students following the Curriculum of Excellence, can take advantage of the PhD courses financed by MATH@TOV (see the appropriate section).

General activities



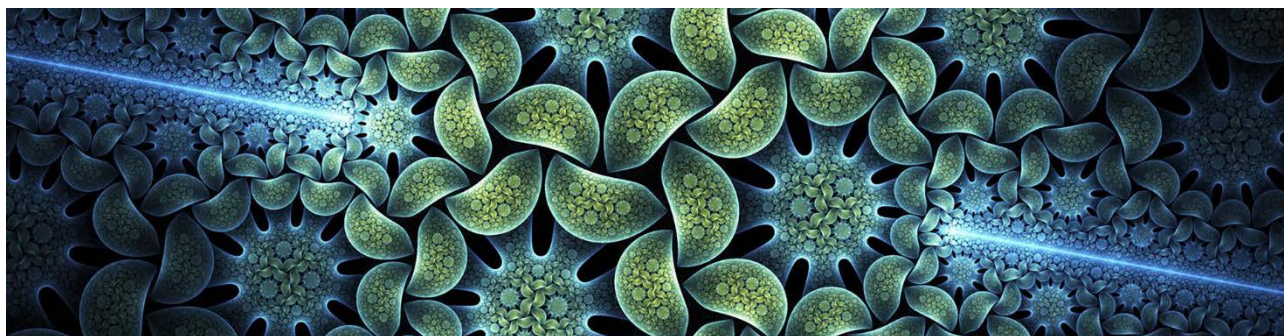
EUREKA Lectures

As part of the EUREKA project, coordinated by the Township of Rome, the Department of Mathematics organized a series of lectures entitled: "Mathematics at Tor Vergata: from ancient thought to musical symmetries", 8-15-22-29 May 2018, Foyer Teatro Valle, Rome.

There were 4 lessons on different aspects of Mathematics: from ancient thought to the equilibrium of Nash, from the calculus of probabilities to symmetries in music, art and science. The conferences were held by prof. P. Baldi, A. Porretta, P. Salvatore, P. Zellini.

More info at <http://www.eurekaroma.it/item/universita-tor-vergata/>

Third mission



The Department of Mathematics hosts a local unit of the Piano nazionale Lauree Scientifiche (PLS, National Science Degree Plan) for the years 2016, 2017, 2018; it participates to the national initiative "Liceo Matematico", with the support of U.M.I. and PLS. It also collaborates with the Sciences Macroarea Tor Vergata to a laboratory activity for high school students, as part of the event "Notte del ricercatore" and with the Accademia dei Lincei to several laboratories for teachers.

The Department of Mathematics collaborates with the Mathematics Olympics Project coordinated by U.M.I. in the academic year 2017/18; it hosted a team competition in the European Girls' Mathematical Olympics.

The Department of Mathematics has also organized:

- the "Mathematical models for traffic", workshop for secondary school students, as part of the "Stage at Tor Vergata", an initiative of the Physics Department;
- the second edition of the "Autumn School 2017" (3 - 15 October 2017) for secondary school teachers;
- the course "The root-square extraction: an ancient algorithm to deal with the cognitive difficulties that hinder the understanding of its fundamental properties", for secondary school teachers (November 2017);
- the Geogebra laboratory for secondary school teachers, on the didactic use of Geogebra dynamic geometry software;

During the opening ceremony of the XXXIV UMI-CIIM Conference (Bari, 6 - 8 October 2017) Prof. G. Anichini delivered the Stefania Cotoneschi Award 2017, promoted by the UMI, to the PhD student in Mathematics, Daniele Pasquazi.

From 18 to 21 July 2018, Dept. of Math. hosted the 5th edition of the Mediterranean Youth Mathematical Championship (<http://www.mymc.it/2018/>), under the patronage of the Italian National Commission for UNESCO and with the collaboration of various organizations: on July 19, it hosted a math competition between teams, each representing a nation overlooking the Mediterranean Sea; on July 20, the Award Ceremony has been take place at the MIUR, at the presence of the Segretario Generale Enrico Vicenti of the Italian National Commission for UNESCO and of Dr. Federico Cinquepalmi (MIUR).