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Press release

13 August 2014

Two Fields Medals 2014 awarded to ERC laureates

The 2014 Fields Medals were awarded today to four outstanding mathematicians, of whom two are grantees of the European Research Council (ERC): Prof. Artur Avila (Brazil-France), an ERC Starting grant holder since 2010, and Prof. Martin Hairer (Austria) has been selected for funding under an ERC Consolidator grant in 2013. They received the prize respectively for their work on dynamical systems and probability, and on stochastic analysis. The other two laureates are Prof. Manjul Barghava (Canada-US) and Prof. Maryam Mirzakhani (Iran). The Medals were announced at the International Congress of Mathematicians ([ICM](#)) taking place from 13 – 21 August in Seoul, South Korea.

On the occasion of the announcement, ERC President Prof. Jean-Pierre Bourguignon, a mathematician himself, said: *“On behalf of the ERC Scientific Council, I would like to congratulate warmly all four Fields Medallists for their outstanding contributions to the field of mathematics. My special congratulations go to Artur Avila and Martin Hairer, who are both brilliant scientists supported by the ERC. We are happy to see that their remarkable talent in the endless frontiers of science has been recognised. The Fields Medals awarded today are also a sign that the ERC continues to identify and fund the most promising researchers across Europe; this is true not only in mathematics but in all scientific disciplines.”*

EU Commissioner for Research, Innovation and Science, Máire Geoghegan-Quinn, said: *“I would like to congratulate the four laureates of the Fields Medal announced today. The Fields Medal, the highest international distinction for young mathematicians, is a well-deserved honour for hardworking and creative young researchers who push the boundaries of knowledge. Today’s award recognises the achievements of two Europe-based mathematicians – Artur Avila and Martin Hairer – who are supported by the European Research Council. This is one more sign that the ERC, which supports excellent science*



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through competitive funding under Horizon 2020, has become a reference in the EU's quest for high-quality research and innovation."

The Fields Medals are awarded by the International Mathematical Union (IMU) once every four years to up to four mathematicians under the age of 40. The Prize recognises and rewards young mathematicians who have made major contributions to the field of mathematics and who hold promises for future achievements. Since 1936, 52 mathematicians have been honoured, of whom already two ERC grantees Prof. Stanislav Smirnov (2010) and Prof. Elon Lindenstrauss (2010). A third ERC grantee, Prof. Simon K. Donaldson was also awarded the Medal in 1986, before getting his ERC grant (2009).

See the full ERC [programme](#) at the 2014 ICM and visit the ERC booth no. 4-3.

Background

Dr Artur Avila Cordeiro de Melo is a Brazilian and French mathematician, working on dynamical systems and spectral theory. At the age of 16, he won a Gold Medal at the 1995 International Mathematical Olympiad and got his PhD at the age of 21. He received a CNRS Bronze Medal in 2006 and he won the Herbrand Prize from the Académie des Sciences de Paris in 2009. He is currently Directeur de recherche at CNRS (Université Pierre-et-Marie-Curie in Paris and Instituto de Matematica Pura ed Applicada, in Rio-de-Janeiro). With the ERC 'QUASIPERIODIC' grant which he received in 2010, Dr Avila is studying the theory of dynamical systems – i.e. the area of mathematics describing the complex behaviour of motions defined by differential or difference equations. (Read [ERC story](#)).

Host institution: Centre national de la recherche scientifique (CNRS), France

ERC project: Dynamics of quasiperiodic type (QUASIPERIODIC)

ERC funding: € 1 million for five years

ERC call: Starting grant 2010

Webpage: w3.impa.br/~avila/

Prof. Martin Hairer is an Austrian mathematician based at the University of Warwick (UK). He is a specialist of stochastic analysis, one of the branches of modern mathematical physics, and in particular stochastic differential equations. In 2013, he was awarded an ERC Consolidator grant for his 'CRITICAL' project, in which he plans to study the behaviour of systems at, or near criticality. The results of his work could yield insight in many parts of mathematics, and lead to the development of a new field in mathematics, by developing a theory of 'regularity structures'. Prof. Hairer is also the recipient of several awards, including the 2008 Philip Leverhulme Prize. He has been a Fellow of the Royal Society since 2014.

Host institution: University of Warwick (UK)

ERC project: Behaviour near criticality (CRITICAL)



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ERC funding: € 1.5 million for five years

ERC call: Consolidator grant 2013

Webpage: www.hairer.org/

See other stories on ERC grantees attending the ICM on this webpage:
erc.europa.eu/erc-stories

Note to the editors

Set up in 2007 by the EU, the European Research Council (ERC) is the first pan-European funding organisation for frontier research. It aims to stimulate scientific excellence in Europe by encouraging competition for funding between the very best, creative researchers of any nationality and age. The ERC also strives to attract top researchers from anywhere in the world to come to Europe.

From 2007 to 2013 under the seventh EU Research Framework Programme (FP7), the ERC's budget was €7.5 billion. Under the new EU research programme (2014-2020), *Horizon 2020*, the ERC has a substantially increased budget of over €13 billion. Since its launch, the ERC has funded over 4,500 researchers.

The ERC consists of an independent Scientific Council and an Executive Agency. The Scientific Council, the ERC's governing body, is composed of 22 distinguished scientists and scholars, including the ERC President. They define the scientific funding strategy and methodologies, and act on behalf of the scientific community in Europe to promote creativity and innovative research. Prof. Jean-Pierre Bourguignon has been the ERC President since 1 January 2014. The ERC Executive Agency implements the ERC component of *Horizon 2020* and is led by Director Pablo Amor.

For more information:

ERC website
<http://erc.europa.eu>

ICM website
www.icm2014.org

ERC Press Contacts:

Magda Kufrej
Tel: +32 229 87930
erc-press@ec.europa.eu

Maud Scelo
erc-press@ec.europa.eu