

Press release

Max-Planck-Institut für Mathematik in den Naturwissenschaften (MPIMIS) Jana Gregor

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Personnel announcements Mathematics transregional, national

International award for Leipzig mathematician Felix Otto

Professor Felix Otto, director at the Max Planck Institute for Mathematics in the Sciences in Leipzig, Germany, has been awarded the Prof. Luigi Tartufari International Prize for Mathematics from the Accademia Nazionale dei Lincei in Rome in the presence of the Italian President. Felix Otto was honored for his numerous contributions to continuum mechanics and to materials science. In particular, his analysis of partial differential equations modelling the flow of a gas in porous rock or those describing a particle under frictional and random forces, was praised.

Founded in 1603, the Accademia Nazionale dei Lincei is the oldest scientific academy in the world, counting Galileo Galiei amongst its first members. The Prof. Luigi Tartufari international prize, established by Maria Tartufari Dalcò, is assigned to Italian and foreign scholars in four different fields of research: Mathematics, Astronomy, Physics and Chemistry, and Geosciences. The candidates are nominated by members of the Accademia dei Lincei and presidents of Italian and foreign Academies.

This years' prize for Mathematics was awarded to Felix Otto with equal merit together with the Italian mathematician Barbara Fantechi. The award was presented on June 22, 2018 in Rome, at the closing ceremony for the academic year 2017/2018. The President of the Italian Republic Sergio Mattarella attended the ceremony.

Felix Otto is an applied mathematician with a focus on materials science. In particular, this includes magnetic storage materials and composite materials. The former is about predicting the domain structure of the magnetization in very thin ferromagnetic films. The latter is about estimating the uncertainty of the effective material behavior like the electrical conductivity. Another research focus is on fluid mechanics, in particular the ubiquitous buoyancy-driven turbulence or the capillarity-driven motion of fluid droplets, which is important for biological and medical applications. Felix Otto makes use of the theory of partial differential equations, perhaps the most central area of applied mathematics, and ensuing numerical simulations.

Felix Otto studied and received his doctorate degree at the University of Bonn, Germany. He continued his scientific work at the Courant Institute New York and at the University of California in Santa Barbara, U.S.A. After receiving several offers for professorships at prestigious American universities, Felix Otto decided for the Chair in Mathematical Physics at the University of Bonn, which he held from 1999 until his change to Leipzig in 2010. From 2002 to 2006 Felix Otto was the speaker of the Collaborative Research Center (SFB) "Singular phenomena and scaling in mathematical models", and from 2006 to 2009 Managing director of the cluster of excellence "Hausdorff Center for Mathematics" in Bonn, Germany.

He is a member of the Academy of Science of the State of Nordrhein-Westfalen, of the Berlin-Brandenburg Academy of Sciences and Humanities, of the German Academy of Sciences Leopoldina and of Academia Europaea. Felix Otto has been awarded the Gottfried Wilhelm Leibniz Prize of the German Research Foundation DFG, the Max Planck Research Prize, the Collatz Prize, the Blaise Pascal medal and an A. P. Sloan Research Fellowship.

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