PRESS RELEASE

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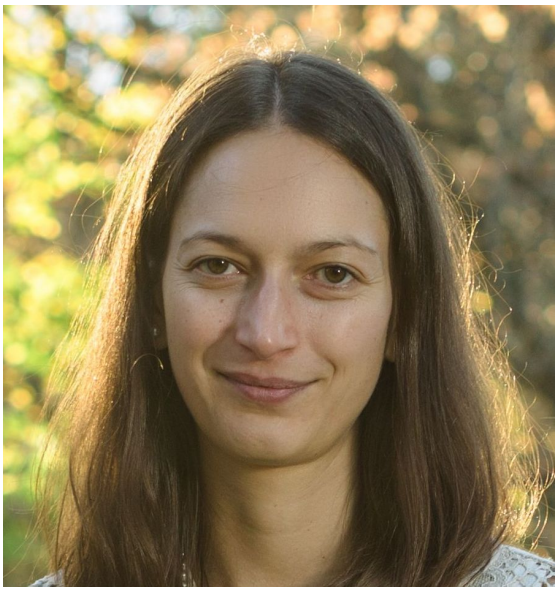
Mihaela Ignatova awarded 2020 AWM-Sadosky Research Prize



AWM will present the fourth AWM-Sadosky Research Prize in Analysis to **Mihaela Ignatova**, Assistant Professor of Mathematics, Temple University at the Joint Mathematics Meetings in Denver, CO in January 2020. Established in 2012, the AWM-Sadosky Research Prize recognizes exceptional research in analysis by a woman early in her career. This prize is in recognition of Ignatova's contributions to the analysis of partial differential equations, in particular in fluid mechanics.

Ignatova received her PhD in 2011 from the University of Southern California and has held appointments at the University of California-Riverside, Stanford University, and Princeton University before assuming her current position at Temple University. She works on challenging analytical questions motivated by fundamental questions in geophysics, fluid dynamics, biology and material science. The breadth of her work is impressive, spanning from unique continuation properties of elliptic and parabolic equations, to fluid-structure interaction problems and to nonlocal models of electroconvection. For example, her work with Kukavica and Ryzhik extends considerably the validity of Harnack inequality to second-order operators with rough drifts.

Her remarkable technical abilities are evident in several of her works, in particular in her study, joint with Peter Constantin, of the critical Surface-Quasi-Geostrophic equation in bounded domains. Ignatova developed a new approach to deal with boundaries, which provides also an alternative approach for the case without boundaries. Ignatova's work on fluid-structure interaction problems, joint work with Kukavica, Lasiecka, and Tuffaha, establishes well-posedness of a system coupling the fluid equations with a wave equation for an elastic structure with a moving free interface, and it is highly nontrivial. This work highlights again Ignatova's outstanding analytical skills, her unusual creativity, and her focus on physically important problems, for which the underlying mathematical analysis is technically extremely challenging.

Her publication record already amassed seventeen highly regarded papers, which appeared in first rate analysis journals, including *Archive for Rational Mechanics and Analysis*, *Communications in Partial Differential Equations*, *Journal of Differential Equations*, and the *SIAM Journal of Mathematical Analysis*.

Ignatova is among the most talented young analysts in fluid mechanics and partial differential equations and is poised to become a leader in the field. She deserves the recognition that the AWM-Sadosky Prize provides.

Established in 2012, the AWM-Sadosky Research Prize recognizes exceptional research in analysis by a woman early in her career. The award is named for Cora Sadosky, a former president of AWM, and is made possible by generous contributions from Cora's husband Daniel J. Goldstein, daughter Cora Sol Goldstein, and friends Judy and Paul S. Green and Concepción Ballester. The biennial presentation of this prize serves to highlight to the community outstanding contributions by women in the field of analysis, to advance the careers of the prize recipients, and to evoke the memory of all that Cora Sadosky exemplified as a mathematician, mentor and friend. Previous recipients of this honor include Svitlana Mayboroda, Daniela De Silva, and Lillian Pierce.

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