Committee Gold Medal “Guido Stampacchia” 2024

Report

The Committee, composed by Guido De Philippis, Vincenzo Ferone (coordinator), Beatrice Pelloni, Xavier Ros-Oton and Claudia Sagastizábal started its activity on June 15, 2024.

The Committee acknowledges that the regulation and the announcement of the prize state:

> “The prize, a gold medal, will be awarded for significant research in the field of Variational Analysis and Applications to a researcher whose date of birth falls after December 31, 1989 (included). This date will be decreased by one year both for each child born (or parental leave) and for a leave longer than six months due to health reasons.”
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> “The selection board, at its own judgement, may also award the prize to a researcher who has not been nominated.”

The list of candidates (applications and nominations), communicated by UMI secretary, was the following:

- Elia Brué
- Maria Colombo
- Antonio De Rosa
- Hugo Lavenant
- Antoine Song

Before proceeding, the Committee has considered the possibility of expanding the list of candidates. However, after thorough reflection, and considering the candidates' impressive records, the Committee decided not to do so.

On July 8 the Committee has analyzed the above applications and nominations.

After extensive and detailed consideration of all aspects of each candidate’s curriculum, the Commission has decided to award the Gold Medal “Guido Stampacchia” Prize to

Maria Colombo

Motivation:

The Committee unanimously agrees to award Maria Colombo the Gold Medal “Guido Stampacchia” for her sustained groundbreaking research in regularity theory and singularity description of solutions to Partial Differential Equations. Notably, her work includes the following significant contributions:

The construction of non-unique Leray-Hopf solutions for the forced Navier-Stokes equation, in collaboration with Albittron and Bruè.

The construction of singular solutions to the Navier-Stokes equation that remain smooth outside a "small" time set, with Buckmaster and Vicol.

Non-uniqueness results for solutions of ODEs with Sobolev vector fields, together with Bruè and De Lellis.

The regularity theory for minimizers of the double phase functional, together with Mingione.

The coordinator