Gold Medal "Guido Stampacchia" 2021

The selection committee awards the seventh Gold Medal Guido Stampacchia to Xavier Ros-Oton.

Ros-Oton, an ICREA Research Professor and a Full Professor at the Universitat de Barcelona, is a world leader in elliptic PDEs and variational theory.

Among the most important contributions of Ros Oton and his collaborators are
- sharp boundary regularity for fully nonlinear nonlocal elliptic equations;
- smoothness of stable solutions to semilinear elliptic PDEs;
- regularity of free boundaries for integro-differential kernels;
- fine structure theorems for free boundaries in obstacle problems.

His work has led to the development of several new and fundamental techniques, including blow-up methods for nonlocal operators, decay estimates for stable solutions to elliptic PDEs, and new interplays between geometric measure theory and monotonicity formulas for obstacle problems.

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