

Motivazione della commissione

The Committee, composed by Stefano Bianchini, Adriana Garroni (President), Ugo Gianazza, Joel Spruck, Gabriella Tarantello, awards Valentino Tosatti as recipient of the “Renato Caccioppoli” Prize. He has distinguished himself as one of the best geometric analysts of his generation. He works on the geometry of complex, Hermitian and symplectic manifolds by developing deep and original analytic techniques to solve the underlying fully nonlinear elliptic equations or related geometric flows. This is something of an understatement for like his mentor S.-T. Yau, Tosatti has a deep knowledge and interest in all aspects of analysis, geometry and topology and applications to physics. We mention a striking example of his recent work. If M is an n -dimensional compact complex manifold, there is always a special class of Hermitian metrics α called Gauduchon. Tosatti (with Szekelyhidi and Weinkove) prove there is always such a metric with prescribed volume form. They find the solution by solving a large class of fully nonlinear second order elliptic equations on a Hermitian manifold. When M is Kaehler ($da = 0$), this follows from Yau’s solution of the Calabi conjecture.