

André Lichnerowicz Prize in Poisson geometry – 2018

The André Lichnerowicz Prize in Poisson geometry was established in 2008. It is awarded for notable contributions to Poisson geometry, every two years at the *International Conference on Poisson Geometry in Mathematics and Physics*, to researchers who completed their doctorates at most eight years before the year of the Conference.

The prize is named in memory of André Lichnerowicz (1915-1998) whose work was fundamental in establishing Poisson geometry as a branch of mathematics. It is awarded by a jury composed of the members of the scientific/advisory committee of the conference.

The prize for the year 2018 was awarded to:

Brent Pym and Chelsea Walton

on July 16, 2018 at the Fields Institute, Toronto

Brent Pym received his Ph.D. at the University of Toronto in 2013, under the direction of Marco Gualtieri. He has held postdoctoral positions at McGill, Oxford, and Edinburgh, and recently accepted an assistant professorship in the Department of Mathematics and Statistics at McGill University. In his thesis work, Pym classified the noncommutative deformations of complex projective 3-space, proved the 4-dimensional case of the Bondal conjecture about Fano Poisson manifolds, and jointly with Gualtieri and Li, developed the theory of the Stokes groupoids on Riemann surfaces. In recent work, Pym developed the notion of an elliptic singularity for a holomorphic Poisson structure and used it to obtain some of the only available classification results in dimension greater than three. He has also developed the notion of a holonomic Poisson manifold (joint with Schedler), bringing the theory of perverse sheaves into the mainstream of Poisson geometry. In additional joint works, Pym has contributed to the enumerative geometry of noncommutative spaces, and to the theory of Dirac structures and Courant algebroids as objects in shifted symplectic geometry.

Chelsea Walton completed her Ph.D. in 2011 at the University of Michigan, under the direction of Toby Stafford and Karen Smith. Following postdoctoral stays at the University of Washington, at MSRI, and at MIT, she took on an assistant professorship at Temple University in Philadelphia in 2015. In July 2018, she joined the Mathematics Department at the University of Illinois at Urbana-Champaign at the rank of associate professor with tenure. Walton has written several important works in Poisson Geometry, in addition to being a well-established expert in Noncommutative algebra and Quantum groups. Her work in Poisson Geometry includes a deep investigation of the 3-D and 4-D Sklyanin algebras, especially those that are module-finite over their center. Joint with Wang and Yakimov, Walton showed that these are close analogues of Poisson algebras, namely Poisson Z-orders, which carry Poisson structures on the center. Walton, in joint work with several collaborators, has written a deep series of works on actions of Hopf algebras on commutative and noncommutative domains, showing that semisimple Hopf actions generally factor through group algebra actions, and also investigating the difficult non-semisimple case. She also gave a negative answer to the long-standing conjecture about whether the universal enveloping algebra of the Witt algebra is noetherian (joint with Sierra).