

BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

## THE DERIVED RIEMANN-HILBERT CORRESPONDENCE

**Mauro Porta**

University of Pennsylvania

May 3, 2017, 4:00 – 5:00pm  
Math/Computer Science, Room 148  
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

**Abstract:** In this talk I'll explain how to use ideas from derived analytic geometry to solve a conjecture of Simpson, extending the Riemann-Hilbert correspondence to perfect complexes. The method proposed allows to prove a better result: namely, we prove that the Riemann-Hilbert correspondence remains true in families parametrized by derived bases. Possible applications to nonabelian Hodge theory will be discussed. This talk is based on the preprint arXiv:1703.03907.

See <http://math.bu.edu/research/geom/seminar.html> or contact Lino Amorim ([lamorim@bu.edu](mailto:lamorim@bu.edu)) or Siu Cheong Lau ([lau@math.bu.edu](mailto:lau@math.bu.edu)) for more information.