

# VBAC 2019

## *GIT, wall-crossings and moduli spaces*

**24-28 June 2019**

**Aarhus University, Sandbjerg Estate  
Sønderborg, Denmark**

### Speakers

Dylan Allegretti, University of Sheffield  
Barbara Bolognese, University of Sheffield  
Dan Halpern-Leistner, Cornell University  
Lisa Jeffrey, University of Toronto  
Anne-Sophie Kaloghiros, Brunel University London  
Frances Kirwan, University of Oxford  
Margherita Lelli-Chiesa, University of L'Aquila  
Diletta Martinelli, University of Edinburgh/  
Glasgow Margarida Melo, Università Roma Tre  
Laura Schaposnik, University of Illinois at Chicago  
Constantin Teleman, UC Berkeley  
Orsola Tommasi, University of Padova  
Richard Wentworth, University of Maryland  
Carlos Simpson, University of Nice

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### Abstract

The construction and study of moduli spaces has been of central importance in algebraic geometry for more than 50 years and can be traced back to the mid 19th century with Riemann's initial study of the moduli space of curves. A key element in this study was the introduction of geometric invariant theory (GIT) by Mumford in the 1960s, thus introducing the concept of stability and providing a general method for the algebraic geometric construction of moduli spaces. Both GIT and the study of moduli spaces have developed ever since. Moduli spaces depend on choices of ample line bundle and their variation with respect to these choices leads naturally to the idea of wall-crossings, a concept which was developed initially by Kontsevich, and then by the work of many people became a major research area.

The three themes of this workshop are thus intimately related and constitute today an extremely active area of research with strong ties to current very active areas of mathematical physics, such as the study of various gauge theories and string theory.