



Berlin  
Mathematical  
School

## BMS Kovalevskaya Colloquium

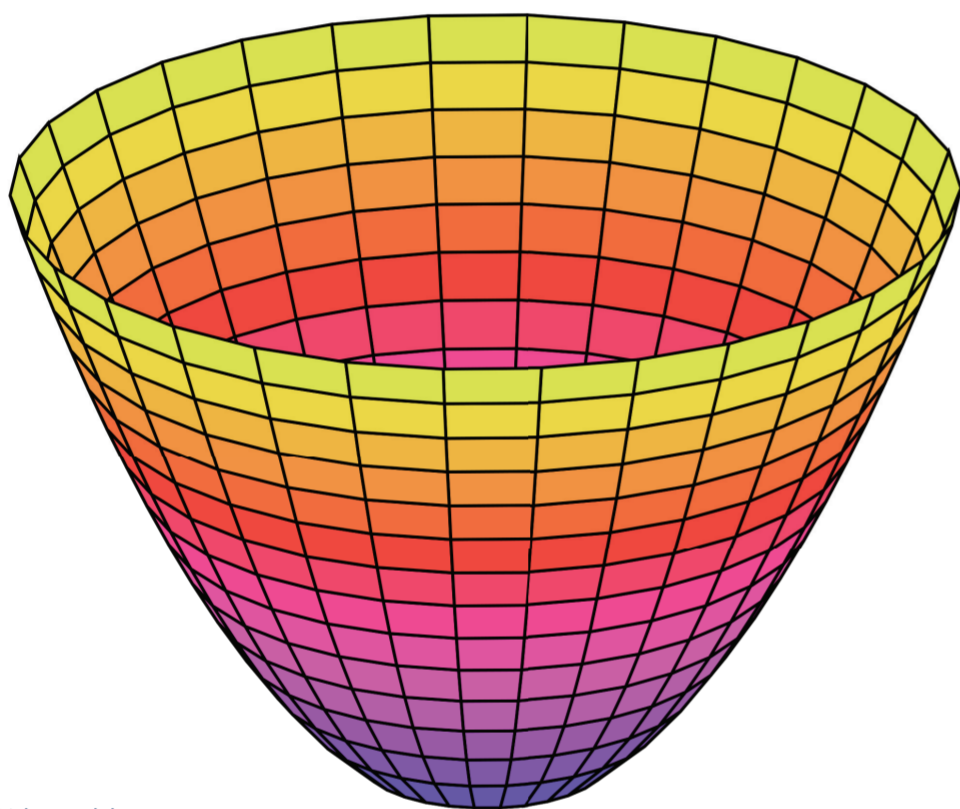
Friday 31 January 2014 at 14:15

*Tea & Cookies starting at 13:00*

BMS Loft, Urania, An der Urania 17, 10787 Berlin

### Lillian B. Pierce

*(HCM Bonn)*



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### Bringing the Carleson operator out of Flatland

Must the Fourier series of an  $L^2$  function converge pointwise almost everywhere? In the 1960's, Carleson answered this question in the affirmative by studying a particular type of maximal singular integral operator that has since become known as a Carleson operator. In the past 40 years, a number of important results have been proved for generalizations of the original Carleson operator.

In her talk, Pierce will introduce the Carleson operator and survey several of its generalizations. She will then describe new joint work with Po-Lam Yung (Oxford) that introduces curved structure to the setting of polynomial Carleson operators.

Lillian B. Pierce is a Bonn Junior Fellow at the Hausdorff Center for Mathematics in Bonn. Pierce works in analytic number theory, harmonic analysis, and their intersection. She completed her doctorate at Princeton University in 2009 and was subsequently a National Science Foundation postdoctoral fellow at the Institute for Advanced Study in Princeton, and a Marie Curie Incoming International Fellow at Oxford University.