1163-11-1335 **Ana Caraiani*** (a.caraiani@imperial.ac.uk), 53 Redcliffe Close, Old Brompton Road, London, SW59HZ, United Kingdom. *An excursion through the land of shtukas.*

The Langlands program is an intricate network of conjectures that connect number theory to other areas of pure mathematics and even parts of theoretical physics. These conjectures play a fundamental role in our understanding of arithmetic over global fields, such as the field of rational numbers or the field of rational functions on a curve over a finite field.

Vincent Lafforgue made a deep breakthrough in the global Langlands program over function fields: he gave a general construction of the "automorphic to Galois" direction of the Langlands correspondence. This connects spectral data attached to Hecke operators on the automorphic side with representations of the absolute Galois group of the function field. Lafforgue dreamed up additional symmetries, known as excursion operators, on the automorphic side, and used them as a guide towards the correct Galois representation. I aim to explain what all of this means and then discuss several exciting, even more recent developments in the field. (Received September 15, 2020)