On the Brin Prize work of Artur Avila in Teichmüller dynamics and interval-exchange transformations. (English summary)

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The paper under review describes the Brin Prize work of Artur Avila. The main results were published in two papers by Avila and his coauthors. In the first one [A. Avila and G. Forni, Ann. of Math. (2) 165 (2007), no. 2, 637–664; MR2299743], it was proved that almost all irreducible interval-exchange transformations that are not rotations are weakly mixing, solving a problem which had a long prehistory. In the second paper [A. Avila and M. Viana, Acta Math. 198 (2007), no. 1, 1–56; MR2316268], the Zorich-Kontsevich conjecture on the simplicity of Lyapunov spectra for the corresponding cocycle was proved. The author explains the context and the significance of those results from the broader point of view, and provides a brief description of the proofs.

References

5. A. Avila and S. Gouzel, Small eigenvalues of the Laplacian for algebraic measures in moduli space, and mixing properties of the Teichmüller flow, arXiv:1011.5472. MR3071503


Note: This list reflects references listed in the original paper as accurately as possible with no attempt to correct errors.