



Der Wissenschaftsfonds.



JOHANNES KEPLER  
UNIVERSITÄT LINZ

---

## Online talk series

---

It is a pleasure to announce a guest lecture with the title

# Spectral Theory Sum Rules, Meromorphic Herglotz Functions and Large Deviations

**SPEAKER:** Barry Simon

**TIME:** Tuesday, 21.07.2020, 04:00 – 5:30 pm.

**Abstract:** After defining the spectral theory of orthogonal polynomials on the unit circle (OPUC) and real line (OPRL), I'll describe Verblunsky's version of Szego's theorem as a sum rule for OPUC and the KillipSimon sum rule for OPRL and their spectral consequences. Next I'll explain the original proof of KillipSimon using representation theorems for meromorphic Herglotz functions. Finally I'll focus on relatively recent work of Gamboa, Nagel and Rouault who obtain the sum rules using large deviations for random matrices.

---

The talk series is supported by the **FWF Special Research Program (SFB) Quasi-Monte Carlo Methods: Theory and Applications** and partly funded by the Austrian Science Fund FWF, **Project No. J 4138-N32**.