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**Manuela Girotti\*** ([manuela.girotti@colostate.edu](mailto:manuela.girotti@colostate.edu)), Colorado State University, Department of Mathematics, 1874 campus delivery, Fort Collins, CO 80523. *Asymptotics of gap probabilities via Riemann–Hilbert approach.*

Gap probabilities of eigenvalues of notable random matrix ensembles can be effectively studied by the use of Riemann–Hilbert techniques from which important features can be extracted. In particular, using steepest descent methods, the behaviour of gap probabilities in certain critical regimes can be fully and explicitly analyzed. In the talk we will take into consideration two universal processes: the tacnode and the Meijer-G processes. (Received September 06, 2017)