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A determinantal point process governed by an integrable projection kernel is Giambelli compatible

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Abstract. The first main result of this note, Theorem 1.3, establishes the determinantal identities (1.7) and (1.8) for the expectation, under a determinantal point process governed by an integrable projection kernel, of scaling limits of characteristic polynomials sampled at several points. The determinantal identities (1.7) and (1.8) can be seen as the scaling limit of the identity of Fyodorov and Strahov for the averages of ratios of products of the values of the characteristic polynomial of a Gaussian unitary matrix. Borodin, Olshanski and Strahov derived the determinantal identity of Fyodorov and Strahov from the stability of the Giambelli formula under averaging. In Theorem 1.7 the stability of the Giambelli formula under averaging is established for determinantal point processes with integrable projection kernels. The proof of Theorems 1.3 and 1.7 relies on the characterization of conditional measures of our point processes as orthogonal polynomial ensembles.

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