Uniform Distribution and the Riemann Zeta-Function

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Recent applications of uniform distribution theory to the Riemann zeta-function provide new insights in the analytic behaviour inside the critical strip. It has been shown that, for every fixed complex number a, the imaginary parts of the solutions to the equation $\zeta(s) = a$ (in ascending order) are uniformly distributed modulo one. Furthermore, it has been proved that the argument of $\zeta(1/2+it)$ for t from an arithmetic progression is uniformly distributed modulo π if there are not too many ordinates of zeta zeros in this arithmetic progression.

(Some of the results are joint work with Dr. Selin Selen Özbek from Antalya.)