## On functions $K$ and $E$ generated by a sequence of moments

**07.08** **Avner Kiro**
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**Time:** Tuesday 23.07., 15:30 - 16:00, Room HS 5

**Abstract:** For a class of functions $\gamma$ analytic in the sector $\{s \colon |\arg(s)| < \alpha_0\}$ with $\frac{\pi}{2} < \alpha_0 < \pi$, we describe the asymptotic behavior of the analytic function

$$K(z) = \frac{1}{2\pi i} \int_{c-i\infty}^{c+i\infty} z^{-s}\gamma(s)\,\mathrm{d}s,$$

that solves the moment problem

$$\int_0^\infty t^n K(t)\,\mathrm{d}t = \gamma(n+1), \qquad n \geq 0\,,$$

and of the entire function

$$E(z) = \sum_{n\geq 0} \frac{z^n}{\gamma(n+1)}.$$

These two functions naturally appear in various classical problems of analysis. The talk is based on a joint work with M. Sodin.