

# ***L*-FUNCTIONS: NONLINEAR TWISTS AND CONVERSE THEOREMS**

ALBERTO PERELLI (University of Genova)

ABSTRACT: After a brief survey of nonlinear twists and converse theorems for the *L*-functions of the Selberg class  $\mathcal{S}$ , we present a new result on the characterization of the solutions  $F \in \mathcal{S}$  of the Hecke-type functional equation

$$\left(\frac{\sqrt{q}}{2\pi}\right)^s \Gamma(s + \mu)F(s) = \omega \left(\frac{\sqrt{q}}{2\pi}\right)^{1-s} \Gamma(1 - s + \bar{\mu})\overline{F(1 - \bar{s})}$$

in the case of conductor  $q = 5$ , where  $\mu \geq 0$  and  $|\omega| = 1$  (joint work with J. Kaczorowski).