

Year: 2018

Vol.: 93

Fasc.: 3-4

**Title:** Zero-free regions for derivatives of the Selberg zeta-function

**Author(s):** Ramūnas Garunkštis

Let  $Z(s)$  be the Selberg zeta-function associated with a compact Riemann surface. We prove that, for any positive integer  $k$ , there is a constant  $t_0$  such that  $Z^{(k)}(s)$  has no zeros in  $\sigma < 1/2, t > t_0$ . Moreover, we show that the curve  $Z(1/2+it)$  spirals in the clockwise direction for all sufficiently large  $t$ , in the sense that its curvature is negative.

**Address:**

Ramūnas Garunkštis  
Institute of Mathematics  
Faculty of Mathematics and Informatics  
Vilnius University  
Naugarduko 24  
03225 Vilnius  
Lithuania