

**Serguei Shimorin**, (Sweden)

*Branching point area theorems for univalent functions*

Area methods are a classical tool in the theory of univalent functions. Such topics as Grunsky, Goluzin, or Schiffer-Tammi inequalities are in fact different modifications of the Polynomial Area Theorem which in turn reduces to an appropriate application of the Green formula.

In the talk, we discuss a new type of area theorems obtained by considering branching point compositions with univalent functions. As a result, we obtain a new series of sharp integral inequalities. We discuss also branching point versions of Grunsky and Goluzin inequalities. The main point of the study is an analysis in the two-sided Dirichlet space on the unit circle supplied with the natural indefinite inner product.