1100-30-180   **Alexander Yu. Solynin*** (`alex.solynin@ttu.edu`), Texas Tech University, Department of Mathematics and Statistics, Broadway and Boston, Lubbock, TX 79409-104. *Conformal invariants and special functions.*

As well known many conformal invariants and other characteristics of planar configurations can be expressed explicitly as combinations of special functions. Typically, such combinations contain Euler's gamma and beta functions, complete and incomplete elliptic integrals, hypergeometric functions, theta functions, etc.

The first goal of this talk is to link certain properties of some special functions with the relevant properties of the conformal invariants.

My second goal will be to draw attention of experts in the area of special functions to some specific open questions concerning behavior of special functions which arose from my work on extremal problems in Complex Analysis and Potential Theory. In many cases resolving a question on special functions will complete a solution of an interesting extremal problem in my area of research. (Received February 07, 2014)