

**Transformations of measures:
analytic and geometric problems**

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The talk gives a survey of recent results on three types of transformations of measures on \mathbb{R}^n related to some basic analytic and geometric problems such as change of variables formulas and isoperimetric inequalities.

First we discuss the so called triangular transformations, which have the form

$$T = (T_1, \dots, T_n),$$

where each component T_k depends only on the variables x_1, \dots, x_k . The second type of transformations concern the Monge–Kantorovich problem of optimal mass transportation. Finally, yet another type of transformations is connected with geometric flows.

All necessary concepts will be explained in the talk; no special knowledge is assumed.