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**Elliptic hypergeometric integrals, 4d superconformal indices
and 2d spin systems**

Elliptic hypergeometric integrals (introduced by the speaker in 2000) represent the top known level of special functions of hypergeometric type. They describe superconformal indices of four-dimensional supersymmetric gauge field theories and partition functions of certain two-dimensional spin systems. In this picture, symmetries of elliptic hypergeometric integrals describe 4d Seiberg dualities and Kramers-Wannier type duality transformations in solvable 2d models of statistical mechanics, and all this is related also to the integral Bailey transformation and the Yang-Baxter equation.