

Webs on surfaces and integrability of geodesic flow

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We present interpretations of integrability of geodesic flow by integrals, quadratic and cubic in momenta, in terms of the web theory. For the flat case, these integrals are just conics and cubics in the dual space. Thus the presented results are generalizations of classical theorems, like Graf & Sauer theorem, to “integrable” metrics of non-constant curvature.