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Abstracts of Short Communications and Posters

Section:

3. Number Theory and Arithmetic Algebraic Geometry

1991 MS Classification: 14H25, 14H30
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Riemann surfaces with many automorphisms
A compact hyperbolic Riemann surface X (equivalently, a smooth complex algebraic curve of genus $g > 1$) has *many automorphisms* if any proper small deformation X_ϵ of X has strictly less automorphisms than X. They have several other interesting characterizations, e. g. by their universal covering groups which are normal subgroups of Fuchsian triangle groups, or by regular Grothendieck dessins, or by normal Belyi functions. As algebraic curves, they are defined over number fields, and every smooth algebraic curve defined over a number field has finite covers with many automorphisms. There are interesting consequences for arithmetic fundamental groups, i. e. for the action of the absolute Galois group on curves or dessins.