1052-14-112 **Jürgen Wolfart*** (wolfart@math.uni-frankfurt.de), Math. Seminar der Goethe Universität, Postfach 111932, D-60054 Frankfurt a.M., Germany, and **G. A. Jones** and **M. Streit**. *Wilson's operations on regular dessins and cyclotomic fields of definition.*

Grothendieck's dessins d'enfants can be defined as bipartite graphs embedded into oriented compact surfaces and cutting them into simply connected cells. They determine a unique conformal structure on the surface, even as an algebraic curve defined over a number field. Recent joint work with G.A. Jones and M. Streit (to appear in the Proceedings of the LMS) shows that regularity and certain invariance properties under "Wilson operations" – well known in map theory – decode algebraic information about the curves hidden in the combinatorics of dessins. (Received August 24, 2009)