Sage Days: Algorithms in Arithmetic Geometry

22 – 26 July 2013 *@Snellius*

he goal of this workshop was to bring together mathematicians at diverse career stages to work on the development of the open source computer algebra system Sage and to discuss related mathematical topics. The focus was on the field of arithmetic geometry. In particular, we have chosen to work on finite fields, function fields, Galois representations and semi-stable models of curves.

The participants ranged from PhD students to professors, and from newcomers to Sage to experienced developers. This diversity has proved to be very fruitful during previous Sage Days, and the current edition was no exception.

The talks, of which there were deliberately relatively few, ranged from introducing new users and developers to presenting the latest mathematical research results around the topics of the workshop. Most of the time was spent on actually programming and discussing new implementation projects. Some participants have learned how to use and extend Sage for their own research; others have continued existing Sage projects or started new ones.

Of a list of 48 concrete tasks (bug reports and enhancement requests), 38 have been completed during the workshop or the subsequent months (see http://trac.sagemath.org/wiki/sd51). Most of these improvements are already available in the newest release of Sage.

The format of the workshop at the Lorentz Center@Snellius venue of the has proved to be very suitable for our workshop. The mixture of lectures and mostly group projects was well-received.

The helpfulness, experience and flexibility of the Lorentz Center staff was extremely useful to us, especially since the organizers were not that experienced in organizing workshops. We highly appreciate the way in which the staff of the Lorentz Center have helped us to shape the workshop and their continuing openness to suggestions.

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