

Curriculum Vitae

Personal Details

Name: Lars Kastner

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Education

2005 – 2009 Diploma Student at the Free University in Berlin

2009 – present Grad Student at the Free University in Berlin

2010 – present Member of the Berlin Mathematical School (BMS)

Work Experience

2008 – 2009 Tutor at the mathematical institute of the Free University in Berlin

2009 – 2010 Employee of the CRC 647 (Collaborative research center “Space time matter”)

2009 – present Member of the CRC 647

2011 – present Employee of the DFG Priority Program SPP 1489

Selected conferences and workshops

November 2007 North German Algebraic Geometry Seminar (NoGAGS) in Hannover, Germany.

January 2009 Workshop “Toric Geometry” in Oberwolfach, Germany.

August 2010 Macaulay2 Workshop in Colorado Springs, USA.

August 2010 Summer School in Algorithmic Mathematics in Berlin, Germany.

September 2010 International Congress on Mathematical Software (ICMS) 2010 in Kobe, Japan.

March 2011 Polymake Workshop in Darmstadt, Germany.

May 2011 MEGA 2011 in Stockholm, Sweden. Talk on “Computing generators of multigraded algebras”.

April 2012 Workshop “Toric Geometry” in Oberwolfach, Germany.

June 2013 Conference “Arithmetic algebraic geometry (AAG2013)” in Berlin, Germany. Responsible for registration and website.

August 2013 SIAM 2013 in Fort Collins, Colorado, USA. Talk on “Using Polyhedral Divisors in Algebraic Geometry”.

January 2014 Macaulay2 Workshop, Berkeley, USA.

March 2014 Experimental Methods in Computational Algebra, Hannover, Germany. Talk on “Ext from a toric viewpoint”

July 2015 Workshop and conference: Current Trends on Gröbner Bases, Osaka, Japan

Publications

Articles

- [1] F. Hinkelmann, L. Kastner, and M. Stillman. “A Web Application for Macaulay2”. In: *Journal of Software for Algebra and Geometry* (submitted). Available at <https://github.com/fhinkel/InteractiveShell>.
- [2] K. Altmann and L. Kastner. “Negative deformations of toric singularities that are smooth in codimension two.” English. In: *Deformations of surface singularities*. Berlin: Springer; Budapest: János Bolyai Mathematical Society, 2013, pp. 13–55. arXiv: 1109.3344.
- [3] N. O. Ilten and L. Kastner. “Calculating generators of multigraded algebras.” English. In: *J. Symb. Comput.* 51 (2013), pp. 22–33. arXiv: 1203.5382.

Software projects

InteractiveShell	Framework for offering mathematical software online to rid the user of the installation process. Written in Javascript and NodeJS. Authored by Franziska Hinkelmann, me and Michael Stillman, see [1]. Uses Docker and Vagrant to offer containers with the desired software to online visitors. A version running Macaulay2 may be found at http://web.macaulay2.com .
Macaulay2	Computer algebra system developed by Michael Stillman and Daniel Grayson. I am currently one of the maintainers of the ‘Polyhedra’ package for computations involving discrete objects.
polymake	Software framework for computations involving discrete objects. Together with Benjamin Lorenz I am author of the application <code>ideal</code> for interfacing Singular, as well as of the application <code>fulton</code> for toric geometry.
Singular	Computer algebra system developed by Gert-Marting Greuel and Gerhard Pfister. I am a co-author of the library <code>multigrading.lib</code> for computations involving multigraded rings.

Programming experience

Mathematical Software: Macaulay2, polymake, Singular.

Programming: I have written code in C, C++, Java, Javascript, and Perl.

Administration: I am familiar with several Linux distributions. Furthermore I have worked with virtualization and container techniques, such as lxc, Docker and Vagrant.

Berlin, August 2, 2015