

Oberseminar zur Algebra

Lehrstuhl A für Mathematik

Prof. Dr. Gabriele Nebe, Prof. Dr. Julia Hartmann

und

Seminar

Computational Algebra

Lehrstuhl D für Mathematik

Prof. Dr. Eva Zerz, Dr. Viktor Levandovskyy

Vortragsankündigung

Zeit und Ort: **Di., 8.12.2009, 10:00 – 11:00** in Fo 8, Kármán Gebäude

Vortragender: **Prof. Dr. Roberto La Scala, Universität Bari, Italien**

Titel: **Algorithms and strategies for computing
minimal free resolutions**

Inhalt: We study algorithms based on the theory of Gröbner bases for computing free resolutions of modules over polynomial rings. We propose a technique which consists in the application of special selection strategies to the Schreyer algorithm. The resulting algorithm is efficient and, in the graded case, allows a straightforward computation of a minimal free resolution. These methods generalize to factor rings, skew commutative rings, and some non-commutative rings. Finally, the proposed approach is compared with other algorithms by means of an implementation developed in the systems MACAULAY2 and SINGULAR.

Wir laden alle Interessierten herzlich zu diesem Vortrag ein.