

Fifth annual conference of the SFB-TRR 195

Monday, Sept 13, 2:00 pm

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Milnor numbers and the “characteristic cohomology” for smoothable, isolated determinantal singularities

In this talk I will report on the recent advances in the investigation of the vanishing cohomology of so-called “isolated determinantal singularities” (IDS); see the preprint [arXiv:2107.01823](https://arxiv.org/abs/2107.01823). The notion of “characteristic cohomology” was recently introduced by J. Damon in [arXiv:1901.02092](https://arxiv.org/abs/1901.02092) and [arXiv:1911.02102](https://arxiv.org/abs/1911.02102), where he also discusses its relation with a candidate for the Milnor number of the given singularity. We will adapt his concepts for our particular setup and give some partial answers to the questions he has raised. In particular, our results allow us now to fully describe the vanishing cohomology of any explicitly given smoothable IDS by purely algebraic methods which can effectively be implemented in symbolic computer algebra systems.