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Squark Pair Production at NLO

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A lot of effort is and will be put in the search for supersymmetric particles at the LHC. For the interpretation of the experimental data precise theoretical predictions are crucial. The work presented in the talk contributes to this effort by providing NLO corrections to the pair production of squarks of the first two generations in a flexible partonic Monte Carlo program. In contrast to previous works no assumptions regarding the squark masses have been made and the different subchannels have been treated independently. The Monte Carlo framework allows investigating the impact of the supersymmetric QCD corrections at NLO on arbitrary distributions for squark pairs decaying into a quark and the lightest neutralino.

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