High order Crouzeix-Raviart elements in two- and higher dimension.

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In our talk we present Crouzeix-Raviart elements of general polynomial degree k in two and higher dimension. We employ this space for the velocity discretization of the Stokes problem while the pressure is discretized by discontinuous polynomials of degree k-1. We prove estimates of the discrete inf-sup constant which are explicit in k and the mesh width h and report on progress in higher dimension

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