CPA-RBF contraction metrics

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The basin of attraction of an equilibrium (or a periodic orbit) can be determined using a contraction metric. We propose a numerical method to compute and verify an approximated contraction metric for dynamical systems with equilibrium points (or periodic orbits) using Radial Basis Functions and Continuous Piecewise Affine interpolations. In this talk we will focus on computational complexity of the method, and the robustness of the metric with respect to perturbations.