Berliner Colloquium für wissenschaftliche Visualisierung

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Curves and Surfaces with Rational Geometric Properties

Prof. Zbyněk Šír

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Dienstag, 26. Mai 2015 um 17:15 Uhr
Zuse-Institut Berlin (ZIB), Takustraße 7, 14195 Berlin
Großer Hörsaal (Rundbau, Erdgeschoss)

This talk will be devoted to the study of rational geometric objects possessing special rational properties.

In particular, we focus on rational curves and surfaces with rational offsets, rational curvature functions, rational convolutions with other objects, rational normal fields and frames.

In the univariate case, we also study curves with polynomial or rational speed, which are traditionally called Pythagorean hodograph curves. In the bivariate case, we investigate surfaces with rational area element which are called, by analogy, Pythagorean hodograph surfaces.