TECHNISCHE UNIVERSITÄT WIEN
Institut für Computergraphik und Algorithmen
Arbeitsbereich für Computergraphik

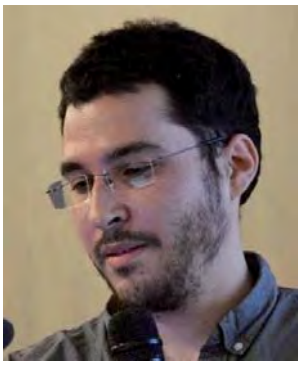
zentrum für virtual reality und visualisierung forschungs-gmbh

OESTERREICHISCHE COMPUTER GESELLSCHAFT
AUSTRIAN COMPUTER SOCIETY

laden gemeinsam zum

GASTVORTRAG

Stéphane Calderon
Telecom ParisTech Paris



“Point Morphology”

Abstract:

We introduce a complete morphological analysis framework for 3D point clouds. Starting from an unorganized point set sampling a surface, we propose morphological operators in the form of projections, allowing to sample erosions, dilations, closings and openings of an object without any explicit mesh structure. Our framework supports structuring elements with arbitrary shape, accounts robustly for geometric and morphological sharp features, remains efficient at large scales and comes together with a specific adaptive sampler. Based on this meshless framework, we propose applications which benefit from the non-linear nature of morphological analysis and can be expressed as simple sequences of our operators, including medial axis sampling, hysteresis shape filtering and geometry-preserving topological simplification.

Biography:

I'm a PhD student from Telecom Paristech under Pr. Tamy Boubekeur supervision. I work on surface reconstruction, shape analysis, points etc ... Two of my hot topics are Mathematical Morphology, Gaussian Mixtures. My one and only publication so far is Point Morphology, a complete point based mathematical morpholgy framework (SIGGRAPH 2014).

Datum: 10. Oktober 2014, 10:30 Uhr s.t.
Ort: TU Wien, Favoritenstr. 9, Stiege 1, 5. Stock, Seminarraum E186