

Grasp Moduli Spaces, Gaussian Processes, and Multimodal Sensor Data

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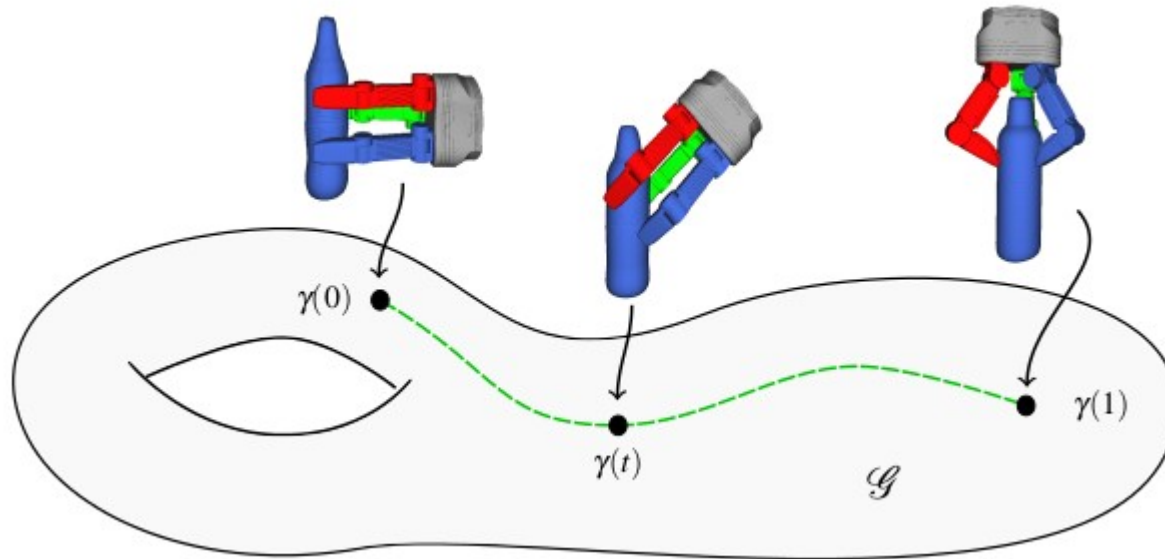
Centre for Autonomous Systems
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Stockholm, Sweden

R:SS Workshop on Information-Based Grasp and Manipulation Planning
Berkeley, California, 13 July 2014



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Grasp Moduli Spaces



grasp transfer and generalization

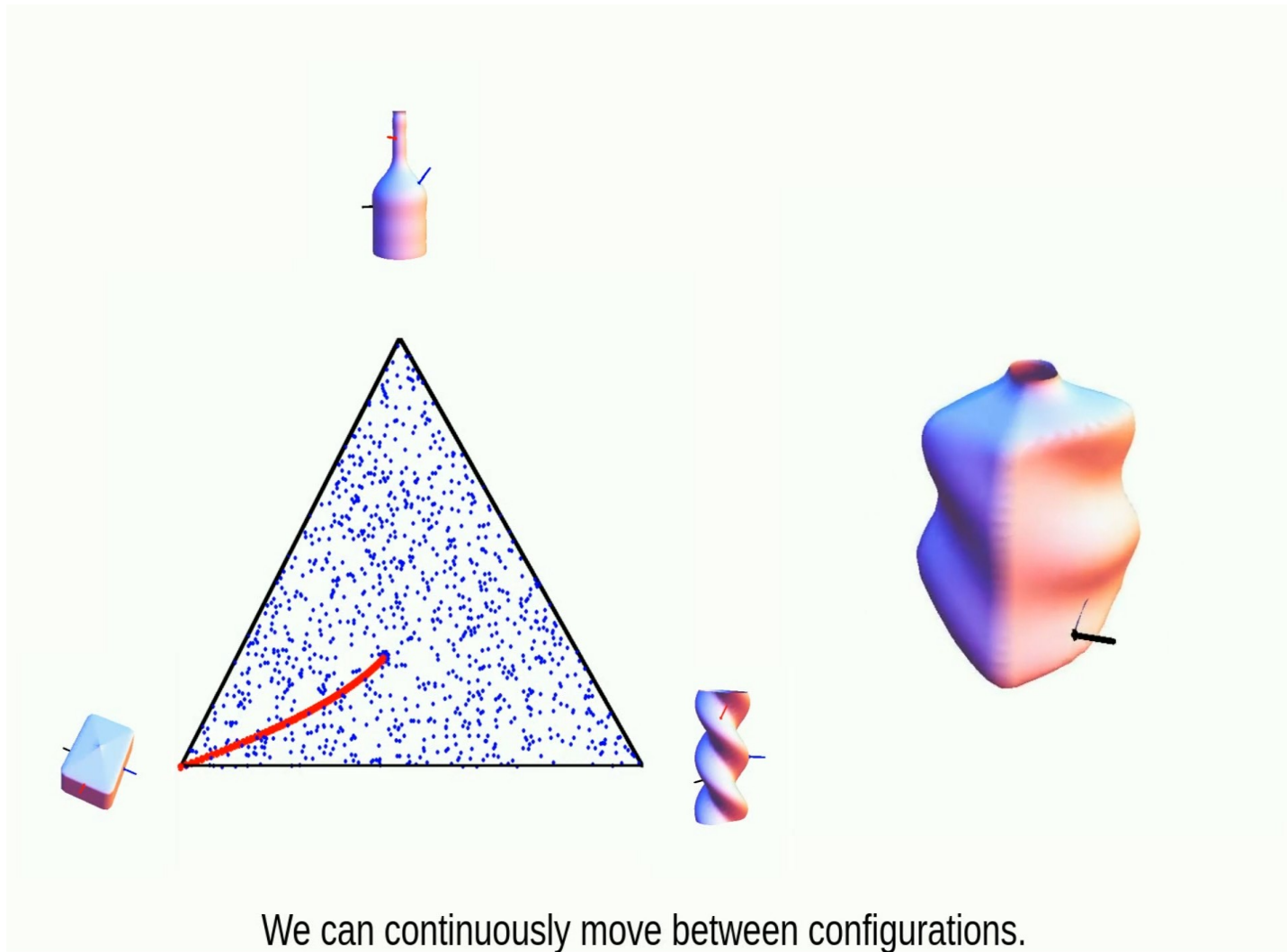
metric space

grasp optimization

probabilistic reasoning

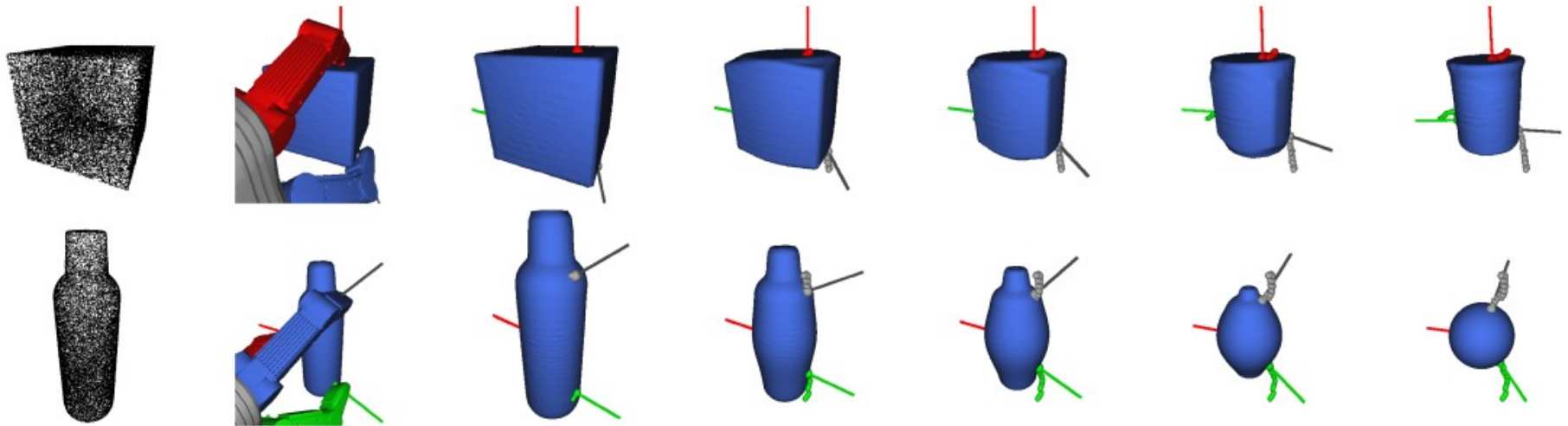
guarantees on grasp stability

Grasp Moduli Spaces



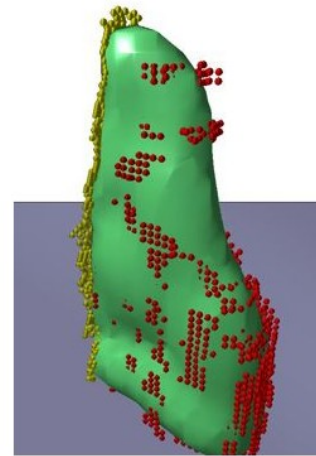
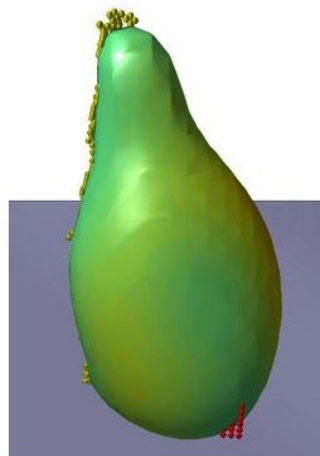
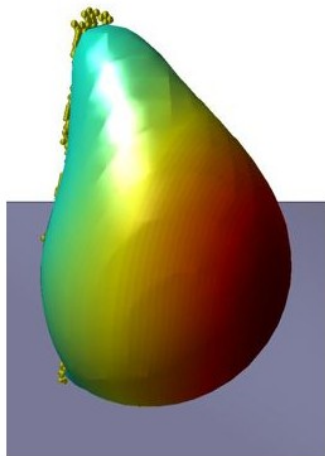
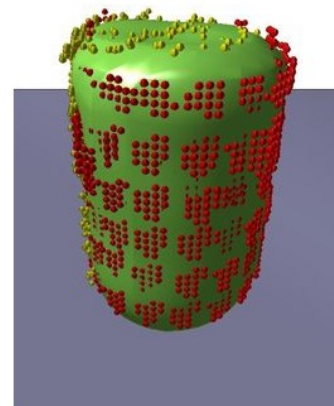
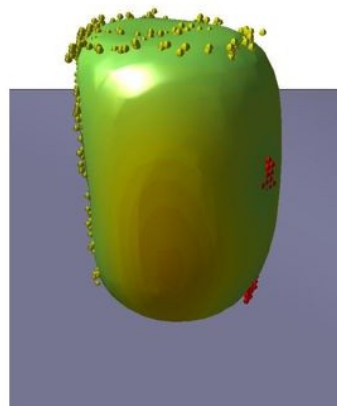
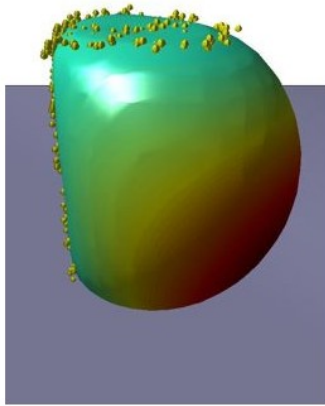
“Grasp Moduli Spaces”, F. T. Pokorný, K. Hang, D. Kragic, R:SS 2013

Spherical Harmonics



“Grasp Moduli Spaces and Spherical Harmonics”
F. T. Pokorny, Y. Bekiroglu, D. Kragic, IEEE ICRA 2014

Implicit surfaces and GPs



“Enhancing visual perception of shape through tactile glances”
M. Björkman, Y. Bekiroglu, V. Högman, D. Kragic. In IEEE/RSJ IROS 2013

Grasp Moduli Spaces and GPs

