



THE WEIZMANN INSTITUTE OF SCIENCE
FACULTY OF MATHEMATICS AND COMPUTER SCIENCE

Vision and Robotics Seminar

Room 1 ,Ziskind Building
on Thursday, Dec 24, 2015
at 12:15

Shai Avidan
Tel Aviv University

Best-Buddies Similarity for Robust Template Matching

Abstract:

We propose a novel method for template matching in unconstrained environments. Its essence is the Best-Buddies Similarity (BBS), a useful, robust, and parameter-free similarity measure between two sets of points. BBS is based on counting the number of Best-Buddies Pairs (BBPs)- pairs of points in source and target sets, where each point is the nearest neighbor of the other. BBS has several key features that make it robust against complex geometric deformations and high levels of outliers, such as those arising from background clutter and occlusions. We study these properties, provide a statistical analysis that justifies them, and demonstrate the consistent success of BBS on a challenging real world dataset. Joint work with Tali Dekel, Shaul Oron, Miki Rubinstein and Bill Freeman