

ACM SIGGRAPH Announces 2011 Technical Award Winners

ACM SIGGRAPH will present its 2011 awards during the Keynote session on Monday, August 8, at 11:00 am in Vancouver. Technical awardees are: Jim Kajiya, Steven Anson Coons Award; Rick Szeliski, Computer Graphics Achievement Award and Olga Sorkine, Significant New Researcher. The technical awardees, along with Charles Csuri, recipient of the Award for Lifetime Achievement in Digital Art, will give their talks on Monday, August 8, 2011 at 2:00 pm.



Significant New Researcher Award

SIGGRAPH is proud to recognize Olga Sorkine as the 2011 recipient of the Significant New Researcher Award. Her outstanding early contributions to the field of geometry processing, particularly her highly influential graduate research on differential coordinates, and her subsequent work on interactive mesh editing have already had a huge impact; her recent entry into new areas like color harmonization, video retargeting, and visualization demonstrate her breadth.

Sorkine grew up in Tel Aviv, and got her B.Sc. (2000) and Ph.D. (2006) from Tel Aviv University, after which she spent two years in a postdoctoral appointment at the Technical University of Berlin. She then took an Assistant Professor position at New York University, and as of 2011 has joined the faculty at ETH Zurich. She received an Alexander von Humbolt Fellowship in 2006, and the Eurographics Young Researcher award in 2008.

The idea behind differential coordinates is to represent the geometry of meshes by encoding locally-defined details rather than absolute positions of mesh vertices. This approach can be viewed as generalizing gradient domain representations for images to meshes in three-space, and leads to versatile geometric modeling and processing techniques. This generalization presents significant challenges, many of which were addressed in a series of papers that Sorkine co-authored in 2004-2007, such as "Laplacian surface editing" (SGP 2004), "Linear rotation-invariant coordinates for meshes" (SIGGRAPH 2005), and "As-rigid-as-possible surface modeling" (SGP 2007). In work on detail preserving deformation, she and her coauthors showed that the optimization problems that arise can be solved at interactive rates, and applied the technique to such problems as character animation, sketch-based shape editing, and image

manipulation.

The theme of interactivity in mesh processing has continued with her more recent work on FiberMesh (SIGGRAPH 2007) and iWires (SIGGRAPH 2009). FiberMesh is an artist-friendly system that allows users to create and edit 3D models using an arbitrary collection of sketched curves, and iWires makes manipulation of man-made objects far easier by discovering and preserving important design features such as symmetries.

Sorkine has also demonstrated enormous breadth of interests; in just the last two years she's produced papers on image and video retargeting, reverse tone mapping, volumetric modeling, and visualization.