

The 2018 Visualization Career Award

Sheelagh Carpendale

The 2018 Visualization Career Award goes to Sheelagh Carpendale for her work in interactive data exploration, in visualization in novel contexts such as wall and tabletop display, in rigorous qualitative evaluation methods, in bringing aesthetic considerations to the research community, and for her contributions in a wide range of application domains, including medicine, digital humanities, geography, the environment, personal data, and emergency management. The IEEE Visualization & Graphics Technical Committee (VGTC) is pleased to award Sheelagh Carpendale the 2018 Visualization Career Award.

BIOGRAPHY

Sheelagh Carpendale is a professor in the Department of Computer Science at the University of Calgary. She holds a Canada Research Chair in Information Visualization and an NSERC/AITF/SMART Industrial Research Chair in Interactive Technologies. In 2018 Carpendale was inducted in the ACM CHI Academy. She is the recipient of several major awards including the prestigious E.W.R. Steacie Memorial Fellowship from the Natural Sciences and Engineering Research Council of Canada, which is given to the six top scientists nationally across all science and engineering fields and within 12 years of their PhD. She received the British Academy of Film and Television Arts Award (BAFTA) for Interactive Learning for the project, Antarctic Waves, which was developed with BRAUNARTS, the British Antarctic Survey and the London Philharmonic. Other awards include Alberta's ASTech Award for Innovation in Information and Communications Technology and the Canadian Human Computer Communications Society (CHCCS) Achievement Award, which is awarded for contribution to the fields of computer graphics, visualization, or human-computer interaction.

Carpendale has a background in both the arts and the sciences. Graduating from high school with science scholarships, she initially opted to pursue her interests in fine arts through studies at Emily Carr College of Art in Vancouver, British Columbia, and design studies in glass at the Sheridan College School of Design in Oakville, Ontario. During these years she worked professionally in the arts, holding various artist-in-residence positions and teaching at Humber College and other institutions, and was involved in establishing the Harbourfront Arts Centre at York Quay, in Toronto. She subsequently reconnected with her interests in math and science and earned both her B.Sc. and Ph.D. degrees in Computing Science in 1992 and 1999, respectively, from Simon Fraser University.

Sheelagh Carpendale is a founding director of Calgary's Interactions Lab; she directs the Innovations in Visualization (InnoVis) research group and initiated the establishment of the interdisciplinary graduate programs in Computational Media Design. She has published more than 200 refereed journal and conference articles and over a dozen artistic exhibits and installations, in addition to numerous other contributions such as *Sketching User Experiences: The Workbook* (2012 - co-authors Greenberg, Marquardt, and Buxton) that focuses on practical sketch-based approaches



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to innovative design. Carpendale's visualization research focuses on the manipulation of information through interaction; with emphasis on engaging and empowering people through their data. She has a tendency to explore these factors on alternate displays such as large-surface, touch-sensitive displays. She builds on her broad interdisciplinary research expertise — including design, fine arts, ethnography, information visualization, and human computer interaction — to design innovative, people-centred information technologies. Her focus on information visualization, interaction design, and qualitative empirical work includes such projects as: visualizing energy data, decision support for medical diagnosis, constructive visualization, personal visualization, visualizing ecological dynamics, visualizing uncertainty, visualizing social activities, and multi-touch and tabletop interaction. Dr. Carpendale's work draws upon her combined backgrounds in fine arts, design and computer science, benefiting from the rich cross-fertilization of ideas amongst these fields. By studying how people interact with information, images, technology and each other, she seeks to design and develop interactive technologies that support the everyday practices of people.

Carpendale is known as an innovative teacher and supervisor and has also received graduate supervision awards recognizing this. She has graduated a large number of PhD students in the areas of Visualization and HCI. Several of her PhD students and Post Doctoral Fellows have become notable visualization and HCI researchers/professors. Many of them are active members and playing important roles in the international research community. Carpendale often expresses appreciation for the privilege of working with her many outstanding graduate students and collaborators.

AWARD INFORMATION

The IEEE VGTC Visualization Career Award was established in 2004. It is given every year to recognize an individual for a seminal technical achievement in visualization. VGTC members may nominate individuals for the Visualization Career Award by contacting the awards chair, Holly Rushmeier, at vgtc-vis-awards@vgtc.org.