

KEYNOTE TALK  
*Monday, December 12, 2016*  
*1:30 PM – 2:30 PM / (Ballrooms 313 & 316)*

*ISVC 2016: 12<sup>th</sup> International Symposium on Visual Computing*

## **Magic User Interfaces: Interactivity in Immersive Science and Art**

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### **Abstract**

“Beautiful or delightful in such a way as to seem removed from everyday life” – this is how the Oxford English Dictionary defines magical – I can think of no better way to describe the future of visual computing, especially in immersive environments. What will make these environments so compelling is not just the visual quality, but also new tightly coupled, hands-on, data-aware user interfaces that enable us to explore and create in ways we never imagined before. In this talk, I will describe what people might do in these spaces with the aid of user interfaces that are sure to feel, well, magical. These ideas come from experiences collaborating with artists, scientists, engineers, doctors, and humanists at the University of Minnesota Interactive Visualization Lab. I look forward to presenting a number of examples from our current work, which has a special focus on applications to both scientific visualization and art, and discussing with the group how combining visual computing with powerful new interactive techniques can open up a new world of beauty and delight for so many applications of computer science.



**Speaker Bio-Sketch:** Dan Keefe is an Associate Professor in the Department of Computer Science and Engineering at the University of Minnesota. His research centers on scientific data visualization and interactive computer graphics. Keefe’s recent awards include the National Science Foundation CAREER award; the University of Minnesota Guillermo E. Borja Award for research and scholarly accomplishments; the University of Minnesota McKnight Land-Grant Professorship; and the 3M Non-tenured Faculty Award. He shares multiple best paper awards with his students and collaborators, and his research has been funded by the National Science Foundation, the National Institutes of Health, the National Academies Keck Futures Initiative, the US Forest Service, and industry. In addition to his work in computer science, Keefe has also published and exhibited work in top international venues for digital art. Before joining the University of Minnesota, Keefe did post-doctoral work at Brown University jointly with the departments of Computer Science and Ecology and Evolutionary Biology and with the Rhode Island School of Design. He received the Ph.D. in 2007 from Brown University’s Department of Computer Science and the B.S. in Computer Engineering summa cum laude from Tufts University in 1999.