

Fall 2012

How Mathematics Has Changed Hollywood

Wednesday, Oct. 3, 5–6 p.m.

Hoyt Auditorium

Over the past two decades, filmmaking has been completely revolutionized by advances in areas such as computational physics and applied math. Using numerous examples drawn from Pixar's films, this lay audience talk will provide a behind-the-scenes look at the role that mathematics has played in the revolution. *Open to the public*

Wavelets in Computer Graphics

Thursday, Oct. 4, 10–11 a.m. and 1–2 p.m.

Schlegel Hall Rotunda

Wavelets are an important mathematical tool that has found uses in many scientific and engineering disciplines. They are an important technique for use in computer graphics and the closely related field of image processing. In this two-part talk, DeRose will provide an introduction to the theory of wavelets and highlight their use to solve a variety of computer graphics problems. *Two-part lecture series for graduate students and advanced undergraduates*

Lecture Series Sponsored by the Department of Mathematics



G. Milton Wing Lecture Series



Scene from the movie *Brave* (copyright 2012 Disney/Pixar)



Guest Lecturer: Tony DeRose

Tony DeRose is a senior scientist and lead of the Research Group at Pixar Animation Studios. He received a BS in physics from the University of California, Davis, and a PhD in computer science from the University of California, Berkeley. Before joining Pixar in 1996, he was a professor in the Computer Science and Engineering department at the

University of Washington. In 1998, he was a major contributor to the Oscar-winning short film *Geri's game*; in 1999 he received the ACM SIGGRAPH Computer Graphics Achievement Award; and in 2006 he received a Scientific and Technical Academy Award for his work on surface representations. In addition to his research interests, DeRose is also

involved in a number of initiatives to help make math, science, and engineering education more inspiring and relevant for middle and high school students. One such initiative is the Young Makers Program (youngmakers.org), which supports youth in building ambitious hands-on projects of their own choosing.