

2014 Sehnert Lecture

Movies and Math – Past, Present, and Future



Prof. Michael Dorff
Brigham Young University



7:30 p.m.

October 6th, 2014

Otto Budig Theater

University Center

Northern Kentucky University

What's your favorite recent movie? *Frozen*? *The Avengers*? *Avatar*? *Transformers*? What do these and all the highest earning Hollywood movies since 2000 have in common? Mathematics! You probably didn't think about it while watching these movies, but math was used to help make them. In this presentation, we will discuss how math is being used to create better and more realistic movies. Along the way we will discuss some specific movies and the mathematics behind them. We will include examples from Disney's 2013 movie *Frozen* (how to use math to create realistic looking snow) to Pixar's 2004 movie *The Incredibles* (how to use math to make an animated character move faster). Come and join us and get a better appreciation of mathematics and movies. [Questions? Email math@nku.edu or call the Math/Stat Depart at 859-572-5377.]

Michael Dorff is a professor of mathematics at Brigham Young University. He earned his Ph.D in 1997 from the Univ. of Kentucky in complex analysis, has published about 35 refereed papers, and has given about 250 talks on mathematics. He is interested in undergraduate research, in non-academic careers in mathematics, and in promoting mathematics to the general public. Currently, he directs or co-directs three NSF funded programs: CURM (the Center of Undergraduate Research in Mathematics), MAA's RUMC (Regional Undergraduate Mathematics Conferences), and PIC Math (Preparation for Industrial Careers in the Mathematical Sciences). He was a Fulbright Scholar in Poland, a Fellow of the AMS, and received a Deborah and Franklin Tepper Haimo Award from the MAA. He is married with 5 daughters. In any free time he has, he enjoys reading, running, and traveling.