

# Department of Psychology Distinguished Speaker

**Dr. W. Roland Fleming**

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## Shape Understanding: On the Perception of Growth, Form and Process

Friday March 11, 2:30 pm BioSciences 1103

### Abstract

Using demos and a few recent studies, I will argue that when we view novel objects, the brain uses perceptual organization mechanisms to infer a primitive 'generative model' describing the processes that gave the shape its key characteristics. I will argue that such models facilitate us in many tasks related to shape and material perception, including: (a) identifying physical properties such as viscosity, elasticity or ductility; (b) predicting the object or material's future states as it moves and interacts with other things; (c) judging similarity between different shapes and (d) predicting what other members of the same category might look like, even when we have only seen one or a few exemplars.



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### Biography

Roland Fleming did his undergraduate degree in Psychology, Philosophy and Physiology at Oxford University, graduating with First Class Honours in 1999, and completed his PhD in the Department of Brain and Cognitive Sciences at MIT in 2004. He then served as a project leader at the Max Planck Institute for Biological Cybernetics in Tübingen. Since 2010 he has been the Kurt Koffka Junior Professor of Experimental Psychology at the University of Giessen. In 2012 he was awarded the Faculty Research Prize from the University of Giessen and in 2013 he was awarded the Young Investigator Award by the Vision Sciences Society.