Abstract: An old open problem in graph drawing asks for the size of the smallest universal point set, a set of points that can be used as vertices for straight-line drawings of all n-vertex planar graphs. We connect this problem to the theory of permutation patterns. We then use this connection to construct a universal point set which is smaller than previously constructed ones by a 9/16 factor.

Background: The talk will be accessible to students with a basic knowledge of combinatorics and graph theory, e.g., those who have taken a course in discrete mathematics. However, the first half of the talk is accessible to a wider audience.

About the speaker: Michael J. Bannister received his Ph.D from the University of California, Irvine in Computer Science and is an Assistant Professor in the Department of Mathematics and Computer Science at Santa Clara University. His research is in the design and analysis of geometric and graph algorithms.

Snacks in MH331B at 2:30 pm
Talks start at 3:00 pm

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