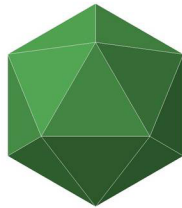




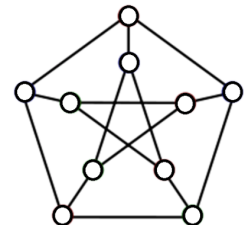
## Department of Mathematics 2017–18 Colloquium Series Colloquium Announcement

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**Igor Dolgachev, University of Michigan**  
*The Petersen Graph and the Icosahedron*



This talk will discuss relationships between two fascinating objects: the regular Icosahedron, and the Petersen graph. The Icosahedron has been known since antiquity. The Petersen graph is familiar as a useful example in graph theory; it is less known that it is realized in projective geometry via a Desargues configuration of 10 lines and 10 points, and as such it is related to the theory of algebraic surfaces and Cremona transformations. Each has a large symmetry group: the symmetric group  $S_5$  in the case of the Petersen graph and the alternating group  $A_5$  in the case of the Icosahedron. The same symmetry of other objects in algebraic and hyperbolic geometry relates them to the Petersen graph and the Icosahedron.



**Date:** Thursday, September 14, 2017

**Time:** 4:00–5:00 pm

**Location:** Alavi Commons (6625 Everett Tower)  
Main Campus  
Western Michigan University

Refreshments will be served beginning at 3:50 pm.

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For more information about the Department Colloquium Series visit [wmich.edu/math/colloquium](http://wmich.edu/math/colloquium). Email inquiries may be directed to [gene.freudenburg@wmich.edu](mailto:gene.freudenburg@wmich.edu).