Abstract: This lecture features examples of geometry’s dominating influence in the automotive manufacturing process. The lecture begins with the design and manufacture of sheet metal components that motivated advances in mathematical applications for computer-aided design. Many examples of the manufacturing process motivate a discussion of the mathematics developed for describing automotive components. The discussion includes applying the same mathematics to robotics. The lecture also relates the previous geometric constructions with computational geometric aspects of generating finite element meshes for three dimensional analysis of automotive components. The lecture ends with the award winning video “Ballet Robotique.”

Tuesday, January 22 at 3:45 in Roop 103
refreshments at 3:30