



UAA College of Engineering
UNIVERSITY of ALASKA ANCHORAGE



UAA Professional Development Seminar Series

**A Multi-Process Approach Towards
Manufacturing of High-Performance
Magnesium Alloy Parts**

Presented by Dr. Lukas Bichler, Professor of
Mechanical Engineering, University of
Toronto

Material designers and engineers in the transportation industries often seek to increase the utilization of magnesium alloys in their products and applications. However, mass production of complex parts is often challenging, leading to significant compromises in material performance or part geometry. In this presentation, the recent progress on the methods to overcome technological challenges related to the manufacturing process are discussed. Also, the refinement of microstructure of automotive magnesium alloys with ceramic additives prepared by Spark Plasma Sintering (SPS) process will be discussed and related to hot tearing.

Dr. Lukas Bichler received his Ph.D. degree in Mechanical Engineering (specializing in Manufacturing, Materials and Solid Mechanics) from Ryerson University, Toronto. Upon graduation, he received NSERC-Postdoctoral fellowship, tenured at the Department of Materials Science and Engineering at the University of Toronto. Dr. Bichler established two laboratories at UBC focusing on multi-process approach to materials development: Metalcasting laboratory for advancement of magnesium and aluminum alloys, and Spark plasma sintering laboratory for advanced ceramic, metallic, nano and functionally graded materials and composites:

Friday, November 13th, 2020

11:45 am-12:45 pm

Online Via [YouTube Live](#)