

## **Multidisciplinary Design Optimization Methods towards Engineering Applications**

Multidisciplinary Design Optimization (MDO) is a powerful approach that revolutionizes the traditional engineering design process by considering multiple disciplines concurrently. Unlike conventional methods that treat each discipline in isolation, MDO integrates various engineering domains such as structural, thermal, and aerodynamic analyses, enabling the optimization of complex systems for improved performance and efficiency. By harnessing advanced computational algorithms and interdisciplinary collaboration, MDO facilitates the creation of innovative solutions that meet diverse objectives and constraints, making it an indispensable tool in modern engineering practice. MDO finds application across a wide range of sectors, including Aerospace, Automotive, Energy, Biomedical, Advanced Manufacturing and other prominent industries.

At the Advanced Research Laboratory for Multifunctional Lightweight Structures (ARL-MLS), "Multidisciplinary Design Optimization Methods towards Engineering Applications" is a pioneering project aimed at equipping Master of Engineering students with advanced tools and techniques to tackle complex engineering challenges. Through a fusion of diverse disciplines such as mechanical, electrical, and civil engineering, students will delve into optimization strategies to enhance the design process and maximize performance across multiple domains. By integrating theory with hands-on applications, this project empowers students to innovate and solve real-world problems effectively, preparing them to excel in the dynamic field of engineering.

Interested applicants are encouraged to send a Cover Letter and a Resume to Prof. Kamran Behdinan ([kamran.behdinan@utoronto.ca](mailto:kamran.behdinan@utoronto.ca)). Shortlisted applicants will be interviewed.

**Start Date:** Immediately