BIOGRAPHY

James R. Hadley
BSME, MME
Engineering Associate, Munro & Associates, Inc.

James Hadley brings a wide range of experience and knowledge to Munro & Associates, Inc.'s clients from his engineering and program management experience through positions in research & development (R&D), advanced design, and testing on projects including automotive systems, composite material research, medical assistive technologies, and robotic design. His expertise resides in R&D engineering, product engineering, innovative design techniques, and interdisciplinary team management.

At Munro & Associates, James has acted as Project Manager and Technical Lead for several projects including teardown and redesign analysis for products ranging from small subassemblies to complete vehicles. A published example of these analysis efforts can be seen through his team's work with the Air Force Research Lab (AFRL) Defense-wide Manufacturing Science & Technology (DMS&T) division to advance the capabilities and awareness of producibility modeling tools to reduce cost and complexity in the defense products. As Project Manager, he directed a team of associates in the creation and demonstration of new advanced affordability and producibility modeling tools and methods. These tools and methods were demonstrated on DRS Technologies' On-Board Vehicle Power (OBVP) system. Through utilization of Affordability and Producibility (AP) modeling tools and methods, the system was able to achieve greatly reduced costs and complexity, and develop a new potential system controller design that could reduce its size by 45% and cost by 63%. Published material detailing some of the AP tools and methods developed during the project include the producibility and confidence indices technical paper at 2011 GVSETS, the project overview presentation at 2011 DMC, and the 2011 release of the free AP Roadmap software. In addition to this project, James' responsibilities at Munro & Associates have included leading workshops to improve the design and manufacturing of a product, detailed business case analysis for new design and manufacturing ideas of products and processes, and benchmarking of competitive products and technologies.

Prior to joining Munro & Associates in 2010, James held the position of Project Manager and Technical Advisor for the Composite Materials Research Team at the University of Detroit Mercy (UDM). As Project Manager, he directed a team of graduate and undergraduate engineers at UDM assigned to the research and development of an aluminum foam polymer composite (AFPC) and coordinated development of the AFPC with Ford Advanced Research Lab engineers assisting

the project. His responsibilities included the design, testing, and analysis to develop various AFPC materials and their manufacturing processes, design of predictive theoretical models, and publish and present AFPC research at ASME and SAMPE engineering conferences.

Prior to that research position, James worked for Delphi in 2006, first in the Integrated Closure Systems Test Lab, and then in the Advanced Seatbelt Design Group, both located in Troy, Michigan. In his Test Engineer position he was responsible for designing, manufacturing, programming, and operating durability testing robots for testing and analysis of several product designs using environmental conditioning. In his Advanced Design Engineer position he was lead engineer on next generation retractor design benchmarking analysis, lead engineer in human factors study on effects of driver movement on the seat belt system, designed and operated testing systems for human factors study, and tested and analyzed the design of several seat belt systems.

James began his engineering experience through academic design projects at the University of Detroit Mercy in 2005. While completing his degree he was active in several design projects. Project leadership roles included lead mechanical engineer for the design of an Intelligent Ground Vehicle Competition (IGVC) robot and project manager for a senior design project developing medical assistive technology.

James has earned a Bachelor of Science Degree in Mechanical Engineering and a Master Degree in Mechanical Engineering (Concentration in Mechatronics) from the University of Detroit Mercy and an Associates of Science Degree from Oakland Community College. He is a member of Tau Beta Pi (National Engineering Honor Society), Pi Mu Epsilon (National Math Honor Society), and American Society of Mechanical Engineers (ASME).