Message from the Chair
Dr. S. Manian Ramkumar

Thank you for taking time to read the Manufacturing, Mechanical and Electrical Engineering Technology (MMET) Department’s first newsletter. We are proud to be able to reach out to you, through this medium. You all have and continue to contribute in many ways to the success of the MMET department.

Our plan is to provide a newsletter two times a year, one in May and one in November, to keep you abreast of what is happening at your alma mater.

It has been a year since I took over as the Department Chair and I have cherished every moment of it. I have served this department in various capacities for 23 years and many of you probably know me from the classes you have taken or working with me as a teaching or research assistant. My primary goal is to make this department and our three programs the best and most highly recognized engineering technology programs in the country, with a strong focus on experiential learning. We strive to graduate lifelong learners with the ability to adapt, grow and succeed in a highly competitive engineering workplace.

The MMET department continues to support applied engineering curriculum in automated manufacturing, mechanical design, electrical and mechanical systems integration, product life cycle engineering and management, and conventional and alternative energy systems development. Our dedicated faculty and state-of-the-art laboratories provide the experiential learning environment for our students. With recent investments of approximately $300,000 in new equipment we have upgraded many of the labs. Full time placements upon graduation have ranged in the 95% to 98%, a fact that the department can be extremely proud of.

Faculty Spotlight
Dr. Mark Olles, a 2001 graduate of RIT’s Mechanical Engineering Technology program, joined the faculty as its newest member in 2013. He has been instrumental in revamping the freshman curriculum. His research interest is in biomedical engineering, and his current biomedical research project is studying the joint reaction forces at the Distal Radio-Ulnar joint (DRUJ).

The DRUJ is the small joint in the wrist, near the hand, between the radius and ulna. The project is in collaboration with Orthopedic Surgeons from the University of Rochester Medical Center. The aim of this study is to develop a non-destructive method of measuring DRUJ joint reaction force (JRF) and to use this method to compare two different methods of ulnar shortening in a setting of ulnar impaction syndrome. Ulnar impaction syndrome is a degenerative condition in which the ulnar head abuts the carpal bones and causes ulnar sided wrist pain. Ulnar shortening is the preferred surgical method to relieve patients from such symptoms. Dr. Olles strongly believes in bridging the disconnect between the medical field and the engineering profession.

Announcements & Upcoming Events

- Commencement Ceremonies
  May 23 - 24, 2014

- Professor Robert Merrill will be retiring at the end of the spring semester. Join us in congratulating him on his 42 years of service at RIT.
  In honor of Professor Merrill, our department has set up a scholarship fund for students who demonstrate excellence in engineering. To contribute to the fund or for more information, contact Stephanie Chapman at srcmet@rit.edu or 585-475-6174.

- Professor Betsy Dell named ‘Up & Coming Businesswoman’ by Rochester Women’s Network

- Dr. James Lee was awarded a grant in the amount of $182,000 to investigate performance and emissions of an air cooled, propane fueled engine. The grant was awarded by the Propane Education and Research Council, with supporting grants from Delphi Inc. and Kohler Engine Company.
Laboratory Spotlight - Product Innovation and Commercialization

William Leonard

This lab is the rapid-prototyping hub of the MMET Department. Here both students and industry can have 3D models of their projects printed to test size ratio and realize the viability of the design in question. A 3D model can reveal issues that a 2D drawing does not show. It is far easier and less costly to create a CAD file and print such a model prior to sending a design off to manufacture, now knowing it is a workable solution.

The MMET department has recently acquired two rapid prototyping systems. The first one is the UPrint system which is a Fused Deposition Modeling System (miniaturized hot melt glue gun). This rapid prototyper is a smaller build box but provides greater accuracy (0.010" strand) with a slightly quicker build and has a dissolvable support material as opposed to a break away material (difficult to remove).

The second one is the Objet system which sprays a curable liquid to a specific shape (layer) and is hardened or cured by ultraviolet light. This is a new technology for us and is further being investigated as to its process restrictions and rules. It is another dissolvable support media system. The first step is to waterjet the uncured material from the part and then to submerge it in a cool sodium hydroxide bath. As we learn more about the dissolvable systems, we can further our support portfolio to movable assemblies.

Student Spotlight

Benjamin Schafer

Ben, an MMET senior, was recently chosen to represent our department as our campus delegate for the graduation ceremonies.

I chose to come to RIT specifically for the Engineering Technology program and the institute’s involvement with the co-op program. The MMET program takes a very unique approach in educating engineers. All of the friends I have in engineering programs at other schools do not get the same opportunities for experiential learning. Classes are not just about the theory of how something works. Professors bring real-world examples that they have encountered in industry, such as the success or failure of a system, and give it to the students to analyze why the design is successful or not.

The MMET department takes pride in the equipment and software that is used in the labs because it directly relates to the real world. Equipment is not purchased just because it is state of the art. The equipment that is purchased is, if not the same, very similar to the equipment used in industry. This all makes the transition from school to the working world much smoother, and directly relates to the success that is carried along with the RIT Mechanical Engineering Technology title.

The most valuable aspects of the MMET program are the freedom, quality, and depth of the lab assignments, and the requirement of a full year of co-op experience. The freedom to choose projects that appealed to my interests rather than being forced to do a project that a professor picked for me was something I greatly valued. I feel that this freedom helps keep the students interested and involved in the program, while the required co-op program further enhances the overall experience. While we are being taught by some of the best professors, nothing prepares you better for the real world than the real world itself. The co-op experience gives MMET students an advantage over a large majority of students from other colleges.

Co-op Opportunities

We still have many engineering students looking for a co-op this summer or summer/fall. They are available in all disciplines. For more information, contact Maureen Arquette (program coordinator for career services) at 585-475-5081 or mpaocse@rit.edu.

Adjunct Opportunities

Our department is seeking qualified candidates to teach manufacturing and mechanical courses. Join our MMET Department team and help educate future engineers. Contact Stephanie Chapman (srcmet@rit.edu) to submit your resume.

Connect with us

* For LinkedIn users, you can find our department’s page by searching with our group name: RIT - Manufacturing, Mechanical, Electrical Mechanical Engineering Technology group

* Visit our website here