Center for Advanced Manufacturing
Overview

**Background:** The formation of the Discovery Park’s sixth center, the Center for Advanced Manufacturing (CAM), was announced by Purdue President Martin Jischke at the fourth annual Advancing Manufacturing Summit on May 18, 2004, with operations starting on July 1, 2004 under the leadership of John Sullivan, CAM’s current Director. CAM has three full-time staff members: Rich Couch (Director of Engagement), Leza Dellinger (Administrative Assistant), and Steve Shade (Managing Director). The majority of CAM’s research activities are conducted on its behalf in existing manufacturing-related centers and labs in the Colleges of Agriculture, Engineering, Science, and Technology. CAM currently has two affiliated sub-centers; the Center of Excellence for Product Lifecycle Management (PLM), and the Pharmaceutical Technology and Education Center (PTEC). PTEC is led by Rex Reklaitis (Director) and Prabir Basu (Managing Director).

**Discovery Activities:** CAM pursues research in all product and process manufacturing-related programs, but has focused efforts in three primary areas: 1) Product Lifecycle Management, 2) Pharmaceutical Manufacturing, and 3) Machining-related Technologies. The PLM CoE conducts industry-partner funded research with faculty and students in all Purdue colleges and holds semi-annual meetings to review research progress, provide student/industry networking opportunities, and develop future research paths. PTEC conducts research in the areas of process design, development & prediction of product performance, quality and safety from early parameters, Quality by Design, general process design tools that allow integrated design of processes, and issues with scale-up of batch processes. CAM also has close contact with machining-related technology research labs in Mechanical Engineering, Industrial Engineering, and several labs in the College of Technology. CAM is the coordinating center for Purdue’s New Manufacturing Economy Initiative, a $1 million, 1-year seed-grant effort focusing on five manufacturing-related areas. This program has a goal of strengthening Purdue’s competitive position for up to $3 million in state funding to continue and expand efforts in the five focus areas.

**Engagement Activities:** CAM has very active state- and national-level engagement efforts. At the state level CAM, in collaboration with Rolls-Royce, co-founded and leads the Indiana Advanced Aerospace Manufacturers Alliance (IAAMA). The IAAMA has over 60 manufacturers and meets semi-annually to hear from state and national aerospace manufacturers, NASA, and other agencies, develop business and research opportunities, and to raise awareness of Indiana’s aerospace industry. CAM also hosts regional advancing manufacturing summits; CAM will host the fifth and sixth regional summits in Fort Wayne and Southwest Indiana in 2008. CAM held the seventh annual Advancing Manufacturing Summit on May 6th. This annual event draws more than 500 attendees to campus to hear presentations from national leaders such as Allan Hubbard, Al Frink, Eric Mittelstadt, Leo Reddy, John Engler, and others plus speak with students in the poster competition and gain in-depth knowledge in the afternoon parallel sessions. CAM holds memberships in the National Council for Advanced Manufacturing (NACFAM), and the Great Lakes Manufacturing Council.

**Learning Activities:** CAM is a co-PI on a three-year, $1.8 million DOL grant, collaborating with Ivy Tech Community College (PI) by developing new advanced manufacturing courses able to be deployed in traditional classroom settings, onsite, or asynchronously via hand-held media players. The PLM CoE collaborates with faculty in the College of Technology in developing and offering distance-learning courses in digital manufacturing. These courses, currently offered only to The Boeing Company are expected to be expanded to additional companies in the coming semesters. CAM is also working with Engineering Professional Education to offer courses developed through its collaboration with MIT’s Lean Advancement Initiative.