



TOYOTA Production Systems Laboratory

Industrial and Systems
Engineering

Spring 2013.

www.rit.edu/ToyotaLab

Foundation Grant Work Producing Results

This edition of our newsletter highlights activities from the winter and spring quarters of 2012-13. This includes work on 2 grants, numerous visitors, and other activities.

Toyota USA Foundation Grant

This is the 3rd year of the grant, which is focused on creating 27 in-lab and on-line activities — 3 for each of Advanced Manufacturing, Distribution, and Health Care, and each of those at 3 grade levels (5-6, 7-9, and 10-12). We now have significant experience running the 3 manufacturing activities (cycle time, line balancing, and bearings and friction) with a variety of student groups. The lab expansion completed two years ago has enabled us to run 2 lab exercises concurrently a number of times. Two of the three Distribution activities (recycling and work station design) have also been run and tested several times.



National Science Foundation Grant

As part of the Transforming Undergraduate Education in Science, Technology, Engineering, and Mathematics (TUES) initiative, we have developed two laboratory modules implemented in courses taken by students from National Technical Institute for the Deaf (NTID). The goal of this project is to utilize the “A3” approach

to problem solving to improve problem solving skills of students who are deaf or hard of hearing.

Staffing

Four of our student lab assistants have moved on: Srinath Sriram, Tim Schmoke, Rami Abuabara, and Jeff Wojtusik. Students starting or continuing to work in the lab are Atul Ghadge, Sourabh Jain, Sean Murnan, and Christian Lopez.

Record Number of Visitors in the TPS Lab

RIT held its 6th annual “Imagine RIT” festival on May 4. Approximately 30,000 people visited the RIT campus, and of that large group, **1,673** visited the TPS Lab, which is a new record! So, of all the people who came to Imagine RIT, more than 5 % visited the lab. We used the “lego challenge”

car assembly game again this year and 331 “kids” built lego cars very efficiently. To staff this activity for 7 hours required our 4 faculty / staff, 7 student “labbies”, and 19 other volunteer students from the ISE department.

New Lab Capabilities

A multidisciplinary senior design team designed and built two andon systems that are coupled to the 4 station assembly line. We are also installing a belt conveyor which will be used as a moving assembly line. In addition, we are now displaying posters from our major sponsors.

NEWS

- WORK CONTINUES ON THE TOYOTA USA FOUNDATION GRANT, AND AN NSF GRANT.
- THREE LEGO CAR ASSEMBLY LINES RAN AT THE RIT IMAGINE FESTIVAL (331 “KIDS” BUILT CARS!), ALONG WITH A TEST OF AN ON-LINE ACTIVITY
- TWO SETS OF ANDON SYSTEMS HAVE BEEN INSTALLED
- WE ARE INSTALLING A NEW BELT CONVEYOR, WHICH WILL SIMULATE A MOVING ASSEMBLY LINE

QUICK FACTS

NUMBER OF STUDENTS DURING THE PAST ACADEMIC YEAR THAT PARTICIPATED IN LAB EXERCISES	283
NUMBER OF VISITORS TO THE LAB DURING IMAGINE RIT FESTIVAL	1673
NUMBER OF OTHER STUDENTS WHO PARTICIPATED IN LAB EXERCISES	197
NUMBER OF OTHER VISITORS TO THE LAB DURING THE PAST ACADEMIC YEAR	24

