

Fastener and Joining Institute a One-of-a-Kind; Aids Auto Industry, NASA

by Jim Stickford

To much of the public, the subject of fastening and joining no doubt sounds like a silly thing to study, but it's incredibly important to improving manufacturing techniques – and Oakland University (OU) is on the cutting edge of research in this field.

Dr. Sayed Nassar is director of the university's Fastening and Joining Research Institute (FAJRI), which got its start back in 2003. He said it was his idea, which was triggered by the fact that in the late 1980s and early 1990s, Congress was concerned about the quality of bolts in the U.S.

Apparently, Nassar said, the market was being flooded by cheap – both in quality and price – bolts from overseas manufacturers. The cheap bolts were affecting the quality of American defense vehicles. So Congress passed the Fastener Quality Act.

"I thought to myself that if Congress spent that much money on bolts to make sure they were up

to quality standards, they should understand that it takes more than bolts to make a reliable joint," Nassar said.

He had a friend who said that Nassar had a point and should approach Congress for money to study the issue of better fasteners and improve quality.

"I didn't know you could do that," Nassar said. "But I was able to work with the Michigan delegation in Congress.

"It was Senator Levin who sponsored us in terms of funding. He was chairman of the Senate Armed Forces Committee at the time, and later became chairman again when Democrats took back the Senate.

"Anyway, he sponsored our application for funding and it was approved and is processed through TARDEC (the U.S. Army Tank Automotive Research, Development and Engineering Center). We established a research contract and set up FAJRI at Oakland."

Prior to coming to OU, Nassar was at Lawrence Tech University for 17 years. Originally from

Egypt, he got his masters degree and PhD from the University of Cincinnati. He said FARJI does fundamental and applied research into all four major areas of fastening and joining – bolting, adhesive bonding, welding and advanced riveting.

Something like improving adhesives can be very important to the defense industry, Nassar said. For example, by being able to adhere panes of glass together, it's possible to build better transparent armor.

"The applications of improving fastening and joining have tremendous military and civilian applications," Nassar said. "Right now, we have three professors besides myself teaching and 10 masters and PhD students studying here. They come from all over the world – Japan, China, India. Three of the students are from the United States."

While there are people who study fastening and joining in the private sector, FAJRI is the only academic institution that exists solely

for this purpose, Nassar said. He believes it's important to slowly expand their areas of research.

They are currently getting into biomechanics, Nassar said. While that might seem like a strange thing for FARJI to do, it makes sense once you think about it.

"We are working with a neuro-

surgeon, Dr. Jawad Shah, from Flint," Nassar said, "on improving spine screws."

Over time, screws can stop working the way they should, Nassar said. When that happens, the patient will have to be operated on again, which is not really something doctors or patients like.



Dr. Sayed Nassar shows Sen. Carl Levin fastening technology.

Auburn Hills Chamber Awards Come in Silver and Gold

The Auburn Hills Chamber of Commerce honored some of its own at the group's Silver & Gold Awards ceremony, held on Dec. 5 at the Hilton Suites Auburn Hills.

Denise Asker, the chamber's executive director, said she was proud to be associated with companies and people who have worked so hard to improve Auburn Hills.

There were five categories in the Silver awards portion of the ceremony. Three businesses that best represented the ideals in each of the five categories were nominated by fellow chamber members.

Great Lakes Crossing was the winner in the Crittenton Home Care Community Builder category. The award recognizes the member who is noticeably involved in supporting the goals and values of the Auburn Hills community. The other two nominees were Umicore Autocat USA and Genisys Credit Union.

The Oakland University and OU Inc. Innovator of the Year Award went to Gibbs Sport Amphibeans Inc., who beat out Delphi Automotive and Esys Automation.

That award celebrates the company providing the best example of innovation through cutting-edge technologies, processes or products. Gibbs recently opened its world headquarters in Auburn Hills and will manufacture amphibious ATVs.

The Baker College Education Advocate Award acknowledges the member who best embraces and promotes education, training and development. Dung Cao of Delphi was the winner. Sharon Miller of Oakland Community College was also nominated, as was Plante Moran.

The dbusiness Emerging Leader Award celebrates an individual who is making significant contributions to their field, showing great promise within the business community. Megan Robinson of Snelling Staffing Services won that award. Other nominees included Toby Dahm of Hennessey Capital and Melissa Goga of Express Employment Professionals.

The Cornerstone Community Financial Best Business award recognized the business that has shown the most growth and ac-

complishment throughout the year. Hirotec America won, beating out nominees Plex Systems and Plante Moran.

Hirotec specializes in closure tooling equipment for the auto industry.

The Gold portion of the ceremony honored individuals within the Chamber for their work.

Ambassador of the Year went to Debbie Barnowsky of Snelling Staffing Services. The other nominees were Mike Pircer of Advicoach of Michigan and Debbie White of ITT Technical Institute.

The Get it Done Award was given to Kristy Mitchell of Oakland University. She beat out Laurie Renaud of the City of Auburn Hills and Susan Suter of Sound-Wave Music & Arts.

Denise Bellville of Hampton Inn won the Sparkle Award. Other nominees were Margie Lavelanet of Costco Wholesale Auburn Hills and Ann Halatek of Snelling Staffing Services.

Lelli's of Auburn Hills won the Best Taste of Auburn Hills Restaurant Award. Other nominees included Longhorn Steakhouse and Sweets!

Proving that award coordinators have a sense of whimsy, the chamber presented an award for the Most Enthusiastic Golfer. That award went to Sharon Miller of Oakland Community College. Other enthusiastic golfers were Tom Costigan of J. Thomas Jewelers and Dan Wisniewski of Raymond James & Associates.

Kathryn Baker, owner of Advicoach of Michigan, was presented with the Board Member of the Year Award.

"I am a new board member, the Board Member of the Year Award is a new one, so this seems appropriate," Baker said.

"It always feels good to be appreciated, but to be honored by this group of people, who work so hard and so much, is really an honor and makes me want to participate even more.

"We have an exciting slate of events for next year and we will continue to find out what our member businesses need and help them make connections. The Auburn Hills Chamber is doing a great job and I see that only continuing."



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