

# Faculty team up, win award for customer service study



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A research paper written by two professors of the Colleges of Engineering and Business at UNT have won the 2012 Distinguished Track Award at the Decision Science Institute's annual conference.

The authors, engineering technology senior lecturer Leticia Anaya and in format ion technology and decision sciences professor Nicholas Evangelopoulos, have worked on the project for more than two years.

"This is what happens when these colleges collaborate," Anaya said. "It was very exciting. I didn't expect it [given all the papers submitted]."

There were 91 papers submitted from all over the world at the DSI November conference. There were about 1,000 people attending the conference, with 10 categories in which to compete. This also marks the second time in nearly 10 years that UNT has received this award since

Robert Pavur won in 2005. Anaya's and Evangelopoulos' category was Management Science, Operations Research, Statistics.

It began with Anaya's dissertation, to which Evangelopoulos was the chairman.

The paper, "Classification of Customer Complaints using Latent Dirichlet Allocation (LDA)," was written to report the findings on their study. The study compared the performance of humans against computers to determine the effectiveness of providing customer service.

In the study, a pizza restaurant was simulated to compare the human and computer results. Anaya and Evangelopoulos both had their students submit more than 2,000 customer reviews.

Some students acted as managers, and classified the reviews themselves, while the LDA classified the same reviews.

"We found that man had an accuracy of 93 percent, and the computer had an accuracy of 76 percent," Evangelopoulos said. "And researchers all over the world are continuously working to raise that number."

The paper also received praise from a notable editor.

"It was very nice," Evangelopoulos said. "The editor-in-chief of 'Decision Sciences,' a very prestigious journal, invited us to submit an updated paper, which we have titled 'Man v. Machine, Paper of Classification Performance on Customer Feedback.'"

UNT only submits about 10 papers annually to this conference.

"These types of awards demonstrate our faculty commitment to excellence in scholarship," said Mary Jones, Department Chair and professor of information systems. "Conducting meaningful research adds to the broader knowledge base in the field which contributes not only to future research, but enhances our collective understanding upon which we draw to teach our students."

With today's technology, using a computer to sift through the information a human would have to has many benefits.

"Now companies gather thousands and thousands of comments online, from places like Facebook and Twitter, so it's more applicable today," Anaya said. "This technology can be extended to any other documents too, from emails to legal briefings."