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Featured Researcher | Ismail Fidan

Title

Professor Fidan's Research Focuses on Changing the Way We Make and Do Things

Investigator

PI: Ismail Fidan

Funding

More than \$4.6 million during his career at Tech



Innovations in additive manufacturing, commonly referred to as 3-D printing, are changing the way we make and do things. At Tennessee Tech, Professor of Manufacturing Technology Ismail Fidan has put his research focus on the technology that's making its way into everyday life.

"You see its inject in almost every level of industry," Fidan said.

Additive manufacturing is already being used in everything from jewelry making, to patterns for foundries, to creating dental crowns and toys. Research going on now is even looking at how the technology could be used to create food

printers.

"In a few years, we will see printers in fast food industry, restaurants and army sites," Fidan said. "So, it is such a technology that its implementation is growing every day."

Now, Fidan is working toward securing his 10th National Science Foundation grant, all related to additive manufacturing. This would bring the amount of grants funded for his research to more than \$4.6 million during his time at Tech. He has been working in the field for nearly 15 years.

"What I do mostly is additive manufacturing innovation, and I do really enjoy doing it so much," Fidan said. "Using the additive manufacturing, my group and I were able to solve several real-world problems and make a big impact with the implementation of our findings."

Fidan has worked with other institutions to establish an additive manufacturing laboratory framework, including a smartphone app that helps institutions work together, collaborate and share resources for 3-D printing projects.

The things Fidan, his colleagues and students have developed or printed can be found in offices and labs all over Tech's campus and other institutions across the country. One example is a 3-D printed dinosaur replica on display in the iMakerSpace in Volpe Library.

In Spring 2016, Fidan started the Gold Eagle Additively Innovative Virtual Lecture Series, a web-based series of talks given by national and international experts in additive manufacturing. So far, the series has trained more than 500 people in the diverse applications of additive manufacturing.

"All Tennessee Tech administrators have given me full support in my studies," Fidan said. "There is also one thing I always believe: Tennessee Tech is such a place that makes anybody successful as long as you try and try, as we all believe that 'each tunnel has an end.' In this case, the end of your trials at Tech are just a 'full success.' In my case, this has been proven many times with many grant projects and prestigious awards."

Fidan continues to present at conferences and universities across the U.S., sharing his knowledge base to help grow the field he has such interest in.

He is currently working with faculty from across disciplines at Tech to plan an interdisciplinary course on 3-D printing for students and collaborating with *Wohlers Report* as an associate author for an annual publication on 3-D printing that is distributed worldwide.

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