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By Justin Campfield

A LOCAL GRANTS PROGRAM GIVES STUDENTS REAL WORLD EXPERIENCE THAT COULD LEAD TO THEIR DREAM JOB.

As Jose Recio was earning his master's degree in mechanical engineering at the University of Central Florida (UCF), he thought the chances of finding a challenging and rewarding job opportunity in the Orlando area were, as he put it, "slim to none."

But eight little words — two-phase heat transfer within a spiral evaporator — changed his mind about the region's ability to provide the career opportunities he sought. The phrase isn't the title of a techie self-help book, but that of a research project sponsored by the Florida High Tech Corridor Council's (FHTCC) Matching Grants Research Program. The 11-year-old program fosters applied research between universities and their high-tech industry partners in the development of commercially applicable emerging technologies.

The project gave Recio the opportunity to not only conduct research in an area that intrigued him (after all, who but a mechanical engineer could be interested in analyzing and predicting heat transfer between two fluids in a

PHOTOS BY CHARLES HODGES

IN TOTAL, FHTCC HAS INVESTED $48 MILLION IN 715 RESEARCH PROJECTS THAT PARTNERED THE THREE CORRIDOR UNIVERSITIES — UCF, THE UNIVERSITY OF SOUTH FLORIDA AND THE UNIVERSITY OF FLORIDA — WITH MORE THAN 250 COMPANIES.

spiral channel evaporator?), but most importantly, also allowed him to work side-by-side with the company that would eventually become his first employer. Three months prior to his graduation in 2004, Oviedo-based laser technology company Rini Technologies Inc. (RTI), offered Recio his first job.

Recio's path to high-tech employment highlights an often overlooked benefit of university/industry research such as FHTCC's Matching Grants Research Program — giving students the opportunity to impress would-be employers with their research capabilities and skills.

"It gives students the opportunity to solve real world problems for real world companies before graduation," says Tom O'Neal, UCF's associate vice president for research and commercialization and the university's point person for the FHTCC Matching Grants Research Program. "Often they begin interacting with these companies one-on-one and if they do a good job, there's a good chance that company will want to hire them when they graduate. They've gotten on-the-job training before they were hired."

His time at UCF endeared Orlando to Recio, but he wasn't sure he'd be able to get a job here that would allow him to fully pursue his career goals.

"I grew into and became greatly attached to the Orlando area, which has for me the perfect combination of a younger crowd, plenty of entertainment, great weather and proximity to the coast," says Recio, a Pennsylvania native who has lived all over the world and considers Puerto Rico home. "However, I wasn't about to put those things in front of my career aspirations and had assumed that if I wanted to excel in my career field it would involve a move up North or out West."

But that all changed once Recio joined UCF Professor Dr. Louis Chow's research team on the RTI project.

"In terms of satisfying my desire for a high-tech and challenging experience, the research work conducted as a student with Dr. Chow and RTI was precisely what I was looking for," says Recio. "I realized that it would be possible to combine my career goals and satisfy my living condition and environment preferences."

Aruna Bala's story is very similar to Recio's. Like Recio, Bala's work on a Matching Grants Research Program — she characterized Volume Bragg Gratings — led to a job with OptiGrate, a UCF Research Park-based optics and photonics company.

"It was really helpful in securing a job," says Bala, a native of India who earned her M.S. in electrical engineering from UCF in 2003. "The company's products are unique and people who have prior experience in the technology are what they were looking for. I learned the basics behind their technology."

In total, FHTCC has invested $48 million in 715 research projects that partnered the three Corridor universities — UCF, the University of South Florida and the University of Florida — with more than 250 companies. The partnering companies matched that with more than $103 million, for a combined total of $151 million in applied research in targeted growth industries such as aviation and aerospace; modeling, simulation and training; life sciences and medical technologies; and optics and photonics. A majority of the funds were used to retain students and faculty researchers.

FHTCC President Randy Berridge is certainly proud of those numbers and the economic opportunities they represent, but he quickly notes that they overlook the experiences of Recio, Bala and the more than 1,400 other graduate and doctoral students who have gained invaluable experience, and in many cases jobs, through the program.

"When you think of the benefits of applied research between universities and their high-tech industry partners, two immediately come to mind: the development of new technologies that help companies succeed and keeping faculty skills up-to-date," says Berridge. "But you don't always think of the impact that keeping these great minds in the region has on the local economy. High-tech companies are only as good as their employees, so anything we can do to keep the best and brightest here improves our ability to compete with the Silicon Valleys of the world."

O'Neal takes great pride in the fact that the companies participating in the program are expressing a high level of satisfaction.

"Judging by the number of students that end up working for these companies, they obviously like the quality of the work being provided."