

## FIVE COLLEGE OF ENGINEERING INDIVIDUALS NAMED QIT HEALTH INNOVATORS FELLOWS



Five Carnegie Mellon College of Engineering individuals have been named recipients of the QIT Health Innovators Fellowship. The QIT Health Innovators Fellowship is designed to encourage exceptional graduate *students to work in teams and develop innovative and entrepreneurial solutions to important problems in the healthcare industry*. It is offered annually by the Jewish Healthcare Foundation at the foundation's QI2T Center, which was funded by the Allegheny County Community Infrastructure and Tourism Fund. The center focuses on training healthcare professionals to meet the rapidly changing needs of the industry, bringing together experts from multiple disciplines and backgrounds.

"The fellowship has been a tremendous experience thus far as it offers a forum to engage with physicians, entrepreneurs and other students in an attempt to think outside the box when it comes to health care," said Brett Bergman, a QIT fellowship recipient who is working towards his master's degree in Biomedical Engineering (BME) and in Engineering and Technology Innovation Management (E&TIM). "There are no expectations or boundaries, so anything goes—and the most unorthodox ideas tend to be the ones that make the most noise."

QIT fellows attend both speaker and work sessions. The speakers focus on discussing communication and entrepreneurial skills in addition to addressing how to develop IT-solutions to non-IT problems.

"The fellowship provides us with access to mentors that are the best health practitioners and entrepreneurs," says QIT fellow Manish Sharma, a graduate student in the Master of Integrated Innovation for Products & Services program. "It also has enabled connections that are helpful

for other projects in the healthcare domain that I'm currently involved with at CMU. The fellowship will be a great help to me building my career in healthcare."

The students will also develop their own projects, which they work on in teams between sessions. Each of the five College of Engineering students is challenging themselves to find creative solutions that will benefit both patients and hospitals.

The five students and their projects include:

**Brett Bergman**, who is looking to develop a tool that will help doctors and patients better understand the cost of their medical care prior to prescribing or receiving it.

**Varun Deshpande**, who took time off from his bachelor's of science in chemical and biomedical engineering to get hands-on experience at Theratel Technologies, a healthcare startup that is focused on preventing avoidable patient readmissions through automated follow-up and care coordination. His group project has a similar focus to that of Theratel Technologies, and will concentrate on care-coordination and decision-making aids for hip replacement candidates. The team aims to guide these patients through the replacement process and curb unnecessary readmissions. He is returning to Carnegie Mellon in the fall.

**Srinath Vaddepally** (E '12, '13) received his dual master's degree in Engineering and Technology Innovation and Electrical and Computer Engineering and is currently working at Project Olympus, a Carnegie Mellon University innovation center. He is working on the RistCall startup project at Project Olympus, which is designing interactive patient care products that connect patient and nurses in order to capture quality of care, patient safety and patient satisfaction.

**Manish Sharma** will be leading an interdisciplinary team of health professionals to develop a solution for Chronic Obstructive Pulmonary Disease (COPD) prevention and management. He is focusing on improving the doctor-patient engagement through the use of technology.

**Kaihei Takagi**, who is a dual degree E&TIM/BME graduate student, is part of a team developing a web-based matching service of diabetic/pre-diabetic patients and treatment support plans, such as glucose monitoring and nutrition education. This will address one of the problems with current diabetes treatment: patients do not consistently follow their prescribed treatment plans because these plans do not take their preferences and lifestyle into consideration. Although there are many options available, most physicians and hospitals are not currently able to consider what is convenient for each patient on a case-by-case level. Takagi's system is patient-centered, allowing them to proactively choose the plan suited for them.

**Update:** Varun Deshpande's team, Team THR Connect, won the QI2T Health Innovators Fellowship case competition for their healthcare innovation, taking home a prize of \$5,000 on Tuesday, April 8. THR Connect is a mobile and web-based app that links with hospital systems, providing two-way communication between hip replacement patients and physicians. It includes features such as care plans, patient reminders, pre- and post-surgery guidance and a community patient forum.