

## Features

### Interdisciplinary research at Toyohashi Tech: The Tenure Track Program

The Electronics-Inspired Interdisciplinary Research Institute (EIIRIS) at Toyohashi University of Technology (Toyohashi Tech) is the research base for the ten young researchers participating in the Toyohashi Tech Tenure Track Program.

The Toyohashi Tech Tenure Track Program is funding an international group of 10 researchers from a wide range of research backgrounds to collaborate on interdisciplinary research topics for advanced applications that will benefit society. The program lasts five years, during which time the researchers will be evaluated for promotion to tenured positions at Toyohashi Tech.

Here we talk with four of the Tenure Track researchers to learn about their first impressions of the program, which is just getting under way.

Alexander Baryshev has a doctorate from St Petersburg in Russia and specializes in solid-state physics, with a focus on nano-photonics. He came to Japan seven years ago as a post-doctoral researcher at Toyohashi Tech and is now an associate professor of the Tenure Track program. "First I want to get to know all my fellow researchers and learn more about their research backgrounds," says Baryshev. "Then I must find out what connections I can make with them."

Sang Yoon Park is from Seoul, and came to Japan in 2008 to continue research on magnetism after obtaining his doctorate from Hanyang University, South Korea. "After research work at Tokyo Institute of Technology, I was thinking of going on to the US until I heard about EIIRIS," says Park. "My application for the tenure track program was successful and now I am pursuing my research plans at EIIRIS during the five year program."

Nobuo Misawa, a native of Aomori, Japan, has a doctorate from the Graduate University for Advanced Studies, Kanagawa, Japan, and specializes in bio-materials and chemical sensors using living cells, and their integration silicon devices. "The facilities at EIIRIS are excellent. I'm looking forward to continuing my research to make compact bio-chip sensors."

Ryugo Tero hails from Sendai, Japan, and has a doctorate from the University of Tokyo, after which he was a researcher on bio-mimicking systems at the Institute for Molecular Science in Okazaki before joining EIIRIS in October 2010. "My boss at Okazaki gave me a lot of freedom to conduct my own research," says Tero. "Now at EIIRIS, I want to continue my studies in my own lab and build on what I've learnt."

The researchers are satisfied with the living conditions and the pleasant environment of the campus—about 8 km from Toyohashi Station—with green surroundings, break taking views of nearby mountains, and only about 4 km from the Pacific Ocean.

"What is important to note is that the new Institute is designed to foster face-to-face collaboration on a daily bases," says EIIRIS Chief Scientist Adarsh Sandhu, who has 25 years of research experience in Japan and a background in nano-bio-magnetics. Besides collaboration between individuals, he notes that the researchers hold regular meetings to review progress and stay in tune with each other's research.

The researchers agree that the ultimate goal, "is to make one plus one equal three", and thereby create an innovative model for interdisciplinary research.

Electronics-Inspired Interdisciplinary Research Institute (EIIRIS):

- <http://www.eiiris.tut.ac.jp/index.html>

Tenure Track Program:

- <http://www.tut.ac.jp/wakate/staff/index.html> (Japanese)
- [http://www.eiiris.tut.ac.jp/department\\_members/index.html](http://www.eiiris.tut.ac.jp/department_members/index.html) (English)



Some of the members of the Tenure Track program.

From left to right (standing): Alexander Baryshev, Ryugo Tero, Tetsuto Minami, Naoko Yoshida, Sang Yoon Park, and Dzmity Tsetserukou Left to right-sitting: Nobuo Misawa, Hiroshi Okada (Associate Professor of EIIRIS), and Rika Numano