Takafumi Aoki
Tohoku University, Vice President

Takafumi Aoki received the BE, ME, and DE degrees in electronic engineering from Tohoku University, Sendai, Japan, in 1988, 1990, and 1992, respectively.   He is currently a professor at the Graduate School of Information Sciences (GSIS), Tohoku University.   Since 2012, Aoki has been appointed as the Vice President of Tohoku University.   His research interests include theoretical aspects of computation, computer design and organization, LSI systems for embedded applications, digital signal processing, image processing, computer vision, biometric authentication, forensic human identification, and security issues in computer systems.   He received more than 20 academic awards, including the IEE Ambrose Fleming Premium Award (1994), the IEE Mountbatten Premium Award (1999), the IEICE Outstanding Transaction Paper Awards (1989 and 1997), the IEICE Inose Award (1997), the Ichimura Award (2008), as well as many outstanding paper awards from international conferences and symposiums such as ISMVL, ISPACS, SASIMI and COOL Chips.

Speech Title: What is the role of university in disaster response, recovery and rehabilitation? --- Focusing on our disaster victim identification project

Abstract:
The Great East Japan Earthquake on March 11, 2011 caused high-intensity ground shaking, a massive tsunami and a serious nuclear power plant accident, resulting in a disaster of a scale unprecedented in the history in Japan. Tohoku University, as a core university located in the disaster-affected area, has played a critical role in post-disaster response, relief, recovery, and rehabilitation process. Tohoku University is now conducting various research and development projects for supporting regional reconstruction and economic revitalization.

As a typical example of contribution to early-stage disaster response, this keynote speech first provides a brief overview of our Disaster Victim Identification (DVI) project in Miyagi prefecture, where 9,537 bodies have been retrieved and 1,308 people are still missing as of June 10, 2013. In this Tsunami disaster, dental identification is much effective compared with other biometric human identification methods such as fingerprint/palmprint identification and DNA-based identification. We designed and implemented an overall workflow (with necessary IT support tools) for effective human identification using dental recodes, in close cooperation with Miyagi Prefectural Police and Miyagi Dental Association. The keynote speech also summarizes recent progress of research and development projects conducted by Tohoku University for restoring disaster-affected area and revitalizing regional economies.