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*October 9-10 at Miyagino Ward Cultural Center, Sendai*

## PLENARY TALK

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### **Quantum annealing and its application - new generation of natural computing**

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#### **<Abstract>**

Quantum annealing is a generic solver for optimization problems, which uses fictitious quantum fluctuation. The most groundbreaking progress in the research field of quantum annealing is its hardware implementation, that is, the so-called quantum annealer, by using artificial spins. In this presentation, we demonstrate several application of quantum annealing in real industry after a short introduction.

#### **<CV>**

Masayuki Ohzeki graduated with a Ph.D. in physics from Tokyo Institute of Technology in 2008, and subsequently spent one and a half years as a postdoctoral fellow. He worked as an assistant professor in the Kyoto University. Since 2016, he has been an associate professor at the Graduate School of Information Sciences at Tohoku University. His research interests are broad, including machine learning and its potential from a perspective of theoretical physics and itself. He was awarded the 6th Young Scientists' Award of the Physical Society of Japan, and the Young Scientists' Prize by The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology in 2016.