

# Tentative: Workshop: Data driven crop design technology

2018/2/20~2/21

## Tuesday 20<sup>th</sup> February

- 13:00 ~ 13:20    Opening Address  
**Professor Yasuhide Fukumoto**, Director of Institute of Mathematics for Industry (IMI)  
**Professor Petros Sofronis**, Director of the International Institute on Carbon-Neutral Energy Research (I2CNER)    (Video Letter)
- 13:20 ~ 14:00    Statistical gene data analysis and applications to plant growth.  
**Satoru Koda** (Graduate School of Mathematics, Kyushu University) Yoshihiko Onda (RIKEN Center for Sustainable Resource Science) Hidetoshi Matsui (Faculty of Data Science, Shiga University,) Ryuei Nishii (Institute of Math for Industry, Kyushu University) Keiichi Mochida (RIKEN Center for Sustainable Resource Science/ Institute of Plant Science and Resources, Okayama University)
- 14:00 ~ 14:40    Estimation of gene expression from shallow RNA-Seq by topic model.  
**Koji Iwayama** (The Center for Data Science Education and Research, Shiga University), Makoto Kashima and Atsushi J. Nagano
- 14:40 ~ 15:00    **Coffee break**
- 15:00 ~ 15:50    Quantification of the Genomic Contribution towards Food and Energy-related Crop Traits.  
**Alexander E. Lipka** (Department of Crop Sciences, University of Illinois)
- 15:50 ~ 16:10    **Coffee break**
- 16:10 ~ 17:00    The Plant-Microbe nexus: emerging frontiers in engineering sustainable crop production systems.  
**Kaustubh Bhalerao** (Department of Agricultural and Biological Engineering, University of Illinois, Urbana-Champaign)
- 17:30 ~ 19:30    **Banquet** at Itori-ito

### **Wednesday 21<sup>st</sup> February**

- 10:00 ~ 10:40 A life course approach aiming to design climate-resilient crops.  
**Keiichi Mochida** (RIKEN Center for Sustainable Resource Science/ Institute of Plant Science and Resources, Okayama University)
- 10:40 ~ 11:20 Field-omics approach to explore physiological variations decisive for agricultural traits  
**Takashi Hirayama** (Institute of Plant Science and Resources, University of Okayama)
- 11:20 ~ 11:40 **Coffee break**
- 11:40 ~ 12:30 TERRA REF: Open Software, Data, and Computing to Advance High Throughput Phenomics  
**David Shaner LeBauer** (Carl R. Woese Institute for Genomic Biology, National Center for Supercomputing Applications, University of Illinois, Urbana-Champaign)
- 12:30 ~ 13:30 **Lunch Break**
- 13:30 ~ 14:10 Miniaturized Chemical Analyzers for Water Quality Monitoring  
**Ryo Miyake**, (Institute Graduate school of Engineering, The University. of Tokyo)
- 14:10 ~ 15:00 Understanding mushroom fruiting: a data-driven approach  
**Nicola La Porta** (Environmental Biotechnology Platform at the Research and Innovation Centre of Fondazione Edmund Mach)
- 15:00 ~ **Closing Address**