

# Workshop on Plant biology

using remote sensing, modelling, genetics and genomics  
to apply our knowledge for the better future.

Wed. 18th October, 09:00-15:00 (CEST)  
UZH Irchel Campus, Y10-G-03/04 or online\*

\*Registration is required to obtain the Zoom link for online participation

<https://forms.gle/x2FQ7Mrms9rYs1wJA>



Funding support



Co-funded by the  
UZH Global Strategy and  
Partnerships Funding Scheme

Organizing committee  
Reiko Akiyama  
Chengchoon Ang  
Kazuki Fukushima  
Masaomi Hatakeyama  
Lukas Rohr  
Aki Morishima  
Yasuhiro Sato  
Taro Takahashi  
Kenji Yip Tong  
Misako Yamazaki

Prof. Kentaro Shimizu

Morning Session I  
Chair person: PD Andreas Hund

| JST   | CEST  | Speaker               | Affiliation | Title of the talk   |
|-------|-------|-----------------------|-------------|---|
| 16:00 | 09:00 | Prof. Kentaro Shimizu | UZH         | Opening remarks   |
| 16:05 | 09:05 | Prof. Hiroyoshi Iwata | U o Tokyo   | Modeling genome-phenome relationships to accelerate plant breeding  |
| 16:45 | 09:45 | Yasuhiro Sato         | UZH         | Genome-wide neighbor effects predict genotype pairs that reduce herbivory in mixed planting   |
| 17:00 | 10:00 | Afef Marzougui        | ETH         | Genotype-by-environment interaction studies using multi-scale phenotyping   |
| 17:20 | 10:20 | Shunsuke Yoshioka     | KU          | A high-throughput phenotyping by UAVs of a wheat NAM population and exploration of effective traits for predicting yield components |

Morning Session II  
Chair person: Prof. Hiroyoshi Iwata

| JST   | CEST  | Speaker             | Affiliation | Title of the talk  |
|-------|-------|---------------------|-------------|--|
| 18:00 | 11:00 | Prof. Merry Schuman | UZH         | Leveraging remote sensing to assess plant genetic variation  |
| 18:25 | 11:25 | Haruka Sano         | UoT         | UAV measurements of growth and phenology in larch and their genetic dissection                                   |
| 18:40 | 11:40 | Haozhou Wang        | UoT         | Virtual Broccoli Farmland Implementation by Drone-based Phenotyping and Cross-scale Data Fusion                  |
| 18:55 | 11:55 | Reiko Akiyama       | UZH         | Tool for monitoring plants in natura   |
| 19:10 | 12:10 | Katharina Jung      | UZH         | Exploring an Asian NAM population for rust resistance and drought tolerance                                      |
| 19:25 | 12:25 | Kengo Sakurai       | UoT         | Random regression for modeling soybean plant response to irrigation changes using time-series multispectral data |

Afternoon Session  
Chair person: Prof. Kentaro Shimizu

| JST   | CEST  | Speaker               | Affiliation | Title of the talk  |
|-------|-------|-----------------------|-------------|--|
| 20:45 | 13:45 | Dr. Andreas Hund      | ETH         | Development of a global wheat full semantic segmentation dataset                                 |
| 21:05 | 14:05 | Matthias Heuberger    | UZH         | How retrotransposons shape the evolution of wheat centromeres                                    |
| 21:20 | 14:20 | Naoto Benjamin Hamaya | UZH         | Unravelling the genetic architecture of male reproductive traits in Asian bread wheat            |
| 21:35 | 14:35 | Aline Galatea Herger  | UZH         | molecular characterization of a non-conventional powdery mildew resistance protein in wheat: Pm4 |
| 21:50 | 14:50 | Prof. Kentaro Shimizu | UZH         | Closing remarks  |

UZH: University of Zurich  
UoT: University of Tokyo  
ETH: ETH Zürich