



# The Final SUPER-IRNET Workshop

## ~ Beyond the SUPER, Toward the Future ~

Date: March 16 - 19, 2026 (in Japan time)

Venue: University of Osaka, Nakanoshima-Center, Osaka, Japan

### Workshop Program (ver. March 16, 2026)



#### March 16 (Day1):

[Chair: Ken Osato]

**13:00-13:15** “*SUPER-IRNET Full 5-Years Report, Toward the Future*”  
Yusei Koyama (NAOJ)

**13:15-13:30** “*SWIMS for TAO: Current Status and Project Update*”  
Masahiro Konishi (Univ. of Tokyo)

**13:30-13:45** “*ULTIMATE-Subaru: Current Status and GLAO Final Design*”  
Yosuke Minowa (NAOJ)

**13:45-14:00** “*Wide Field Imager (WFI) for ULTIMATE-Subaru*”  
Kosuke Kushibiki (NAOJ)

**14:00-14:15** “*The ULTIMATE development activities in ASIAA*”  
Shiang-Yu Wang (ASIAA)

**14:15-14:30** “*NINJA: Near-Infrared and optical Joint spectrograph with Adaptive optics*”  
Michitoshi Yoshida (NAOJ)

**14:30-14:45** “*Current Status and Future Prospects of ULTIMATE-START : A Laser Tomography Adaptive Optics System for the Subaru Telescope*”  
Aino Narayama (Tohoku University)



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**14:45-15:00** “Development of Image Signal Processor for Adaptive Optics using FPGA”  
Mitsuaki Takahashi (Tohoku University)

15:00-15:30 Coffee Break

**[Chair: Masayuki Akiyama]**

**15:30-15:45** “PRIME Microlensing Exoplanet Survey: 2025 Season”  
Takahiro Sumi (Osaka University)

**15:45-16:00** “PRIME All-Sky Grid Analysis Progress and Update on Image Analysis”  
Ryusei Hamada (Osaka University)

**16:00-16:20** “France - Japan Potential Collaborations”  
Denis Burgarella (Laboratoire d'Astrophysique de Marseille) [I]

**16:20-16:35** “Transformation of Quiescent Galaxies in the Cluster Core at  $z=1.52$  from the Euclid First Quick Release”  
Ko Ishida (Tohoku Univ)

**16:35-16:55** “UNIONS/Euclid AGN science”  
Kohei Ichikawa (Tohoku Univ) [I]

**16:55-17:10** “ULTIMATE-Subaru: Probing Cosmic Reionization with Wide-Field Near-Infrared Narrowband Imaging”  
Daichi Kashino (NAOJ)



## March 17 (Day2)

[Chair: Kentaro Motohara]

**09:30-09:45** “Panoramic views of galaxy and AGN formation in the early Universe explored by narrow/medium-band imaging with ULTIMATE and SWIMS”

Tadayuki Kodama (Tohoku University)

**09:45-10:00** “Ruby-Rush: Exploring massive quiescent galaxies with SWIMS and ULTIMATE”

Kosuke Takahashi (Tohoku University)

**10:00-10:15** “Physical mechanisms driving both enhanced and suppressed star formation at cosmic noon”

Hayate Hagiwara (Tohoku University)

**10:15-10:30** “Co-evolution of massive black holes and their host galaxies with wide-field surveys”

John Silverman (Kavli IPMU)

**10:30-10:50** “Future Aspects for SWIMS/ULTIMATE-Subaru Medium-Band filters: Quantifying Expected Improvements with 10,000+ Mock Galaxies”

Nuo Chen (Tohoku University) [!]

**10:50-11:20** Coffee Break

[Chair: Sakurako Okamoto]

**11:20-11:35** “Cartography at the Cosmic Extremes: Mapping the 100 cMpc-scale “Cosmic Himalayas” at  $z=2.2$ ”

Yongming Liang (ICRR, University of Tokyo)

**11:35-11:50** “Environmental dependence of chemical enrichment across cosmic noon probed by NIR spectroscopy of high- $z$  overdensities”

Kota Adachi (Tohoku University)

**11:50-12:05** “Statistical properties of quiescent galaxies at high redshift revealed by JWST”

Kei Ito (Cosmic Dawn Center, Technical University of Denmark)



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**12:05-12:25** *“Probing the Most Pristine Sources in the Era of JWST, Roman, and ULTIMATE”*  
Takahiro Morishita (Caltech/Tohoku University) [I]

12:25-14:00 Lunch Break

**[Chair: Ryou Ohsawa]**

**14:00-14:15** *“Near-Field Cosmology with ULTIMATE, Euclid, and Roman”*  
Sakurako Okamoto (Subaru, NAOJ)

**14:15-14:30** *“Revealing the 3D Dynamics of Milky Way Dwarf Galaxies with Next-Generation Surveys”*  
Kohei Hayashi (NIT, Sendai College)

**14:30-14:45** *“Wide-field Photometric Studies of Stellar Halos in Nearby Galaxies with HSC and Near-Infrared Imaging”*  
Itsuki Ogami (NAOJ)

**14:45-15:00** *“Synergistic Surveys toward the Galactic Center in the SUPER IRNET 2.0 Era”*  
Daisuke Suzuki (Osaka University)

**15:00-15:15** *“Search for pulsating stars in the Galactic bulge with PRIME”*  
Noriyuki Matsunaga (University of Tokyo)

15:15-15:45 Coffee Break

**[Chair: Takahiro Sumi]**

**15:45-16:00** *“High-redshift transient surveys”*  
Takashi Moriya (NAOJ)

**16:00-16:20** *“ULTIMATE-Subaru Galactic Plane Survey and its Synergy with the Roman Space Telescope”*  
Kumiko Morihana (Subaru, NAOJ) [I]

**16:20-16:35** *“JASMINE: Japan Astrometry/photometry Satellite Mission for INfrared Exploration”*  
Ryouhei Kano (NAOJ)



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**16:35-16:50** “*The JASMINE astrometric solvers: 2 ways to achieve sub-miliarcsecond precision*”  
Pau Ramos (NAOJ)

**16:50-17:05** “*GREX-PLUS*”  
Yuichi Harikane (University of Tokyo)

**17:05-17:20** “*Enhancing SUPER-IRNET Science with PRIMA: Synergies Between Near- and Far-Infrared Wide-Field Surveys*”  
Hanae Inami (Hiroshima University)

**17:20-17:30** “*Star formation sciences with ULTIMATE-Subaru II*”  
Yuhei Takagi (Subaru, NAOJ)

**17:30-17:35** “*NIR survey for brown dwarfs and planetary-mass objects in the star-forming regions*”  
Yumiko Oasa (Saitama University)

**18:15-** Banquet



## March 18 (Day3)

[Chair: Tadayuki Kodama]

**09:30-09:45** “*Morphology is All You Need: The Transformative Power of Galaxy Morphology in Predicting Galaxy Properties*”

Juan Pablo Alfonzo (Tohoku University)

**09:45-10:00** “*Disk formation and evolution by the SUPER instruments*”

Takafumi Tsukui (Kavli IPMU)

**10:00-10:15** “*Uncovering the Multi-Zone ISM in a Spatially Resolved Star-Forming Galaxy at  $z = 8.3$  with JWST and ALMA*”

Kana Takechi (University of Tokyo)

**10:15-10:30** “*PEGASUS: Pfs Emission-line GALaxy SURvey with Subaru*”

Mariko Kubo (Kwansei Gakuin University)

10:30-11:00 Coffee Break

[Chair: Hanae Inami]

**11:00-11:15** “*Statistical Analysis of ISM Electron Density at  $z \sim 0-11$  for Galaxy Evolution*”

Akimi Matsuura (University of Tokyo)

**11:15-11:30** “*BEACON: JWST NIRCам Pure-parallel Imaging Survey. IV. A Systematic Search for Galaxy Overdensities and Evidence for Transition of Gas Accretion Phase*”

Ryo Albert Sutanto (Tohoku University)

**11:30-11:45** “*Probing New Physics at Cosmic Dawn: Constraints on the Fine-Structure Constant up to  $z \sim 10$  with JWST/NIRSpec [OIII] Emission Lines*”

Chishin Kamijo (University of Tokyo)

**11:45-12:00** “*Spider-Webb: Spatially-Resolved Evidence of Inside-Out Quenching in the Spiderweb Protocluster at  $z \sim 2$* ”

Ronaldo Laishram (NAOJ)



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**12:00-12:15** “*Quenching and transformation of galaxies in the Spiderweb protocluster: Insights from HST grism and JWST observations*”

Abdurrahman Naufal (ASIAA)

12:15-14:00 Lunch Break

**[Chair: Mariko Kubo]**

**14:00-14:20** “*Simulation-Based Inference for Cluster Weak Lensing and Cosmology*”

Sut-leng Tam (National Yang Ming Chiao Tung University) [I]

**14:20-14:35** “*HSC Niji - MB filter production and the first light -*”

Atsushi Nishizawa (Gifu Shotoku)

**14:35-14:50** “*Cosmology with HSC medium-bands filters*”

Hironao Miyatake (Nagoya University)

**14:50-15:05** “*The Mysterious Case of Iron in XMPs: Tracing Chemical Enrichment in the Local Analogues of the Early Universe*”

Aaron Myszka (Swinburne University of Technology)

**15:05-15:20** “*Low-mass with high-sSFR H $\alpha$  emitters at  $z \sim 2$  in ZFOURGE-COSMOS field*”

Jeung Yun (University of Tokyo)

**15:20-15:35** “*Non-LRD Broad Line AGN Confirmed at  $z \sim 9$* ”

Yui Takeda (SOKENDAI/NAOJ)

**15:35-15:50** “*Age gradients of Post-starburst galaxies at  $1 < z < 1.5$  revealed by JWST*”

Rajashree Bhuyan (National Taiwan University)

15:50-16:20 Coffee Break

**16:20-17:20** Special Session on Leadership & Career Path [Moderated by Hironao Miyatake]



## **March 19 (Day4)**

**[Chair: Daisuke Suzuki]**

**09:30-09:50** “*A spatially resolved view of the baryon cycle in galaxies at cosmic noon*”  
Rodrigo Herrera-Camus (Universidad de Concepción) [I]

**09:50-10:05** “*LyA galaxies at  $z\sim 7$* ” [remote]  
Felipe Barrientos (Pontificia Universidad Católica de Chile)

**10:05-10:25** “*Fire and Ice: Protoclusters and the Formation of the Most Massive Galaxies at Cosmic Dawn*”  
Lucas Kimmig (University Observatory Munich, LMU) [I]

**10:25-10:40** “*Planning study for Korean New Optical Telescope*”  
Se-jin Oh (KASI)

**10:40-10:55** “*High-Resolution Spectroscopic Studies of YSO Outbursts Selected from Large-Area Surveys*”  
Ho-Gyu Lee (KASI)

10:55-11:25 Coffee Break

**11:25-11:45** “*NASA Plans for the Golden Age of Astronomy Surveys*” [remote]  
Jason Rhodes (NASA JPL) [I] (\*remote\*)

**11:45-12:05** “*Hunting for kilonovae with PRIME and Roman*”  
Eleonora Troja (University of Rome Tor Vergata) [I]

**12:05-12:20** “*South African Transient Science and Possible Synergies with new Infrared Facilities and Surveys*”  
David Buckley (SAAO)

**12:20-12:45** Discussion toward SUPER-IRNET-2.0

**12:45-12:50** Concluding Remarks