



Day 1 — TUESDAY 21

12:00 – 13:50

 **Welcome lunch**

13:50 – 14:00

Welcome & introduction

Session 1: “Simulations and neural networks in adaptive optics”

14:00 – 14:30

Fabio Rossi “SPECULA: the Italian effort to advance end-to-end simulations in Adaptive Optics”

14:30 – 15:00

Pietro Ferraiuolo “OPTICALIB: A Python Framework for Adaptive Optics Experimentation”

15:00 – 15:30

Ivan Agostinelli “AI Optimization for Sensorless Adaptive Optics”

15:30 – 16:00

 **Coffee Break**

16:00 – 16:30

Elena Masciadri “Optical Turbulence Forecast: challenges for the next-generation ground-based astronomy and for the free-space optical communication (FSOC)”

16:30 – 17:00

Camilo German Weinberger Cerro “Neural networks applied to forecasting the astroclimatic parameters in an operational context”

17:00 – 18:00

Panel discussion 1: Adaptive Optics @ INAF

Day 2 — WEDNESDAY 22

09:00 – 09:30  **Breakfast**

Session 2: “Techniques for PSF reconstruction”

09:30 – 10:00 **Andrea Grazian** “Towards First Light for MICADO: the PSF Reconstruction Software”

10:00 – 10:30 **Gianluca Li Causi** “The SHARK-VIS experience in post-AO high-resolution and high-contrast imaging in visible band as a sandbox for playing with WFS telemetry and deconvolution”

10:30 – 11:00 **Simone Sacquegna** “Convolutional neural network for the PSF subtraction in high contrast imaging”

11:00 – 11:30  **Coffee Break**

Session 3: “Development of new technologies for AO”

11:30 – 12:00 **Armando Riccardi** “Ideas for transmissive wavefront corrector developments for enhancing wide field adaptive optics”

12:00 – 12:30 **Massimo Brescia** “AIO: Adaptive Intelligent Optics”

12:30 – 13:00 **Stefano Bonora** “Stack of deformable lenses for multi-conjugate adaptive optics”

13:00 – 14:30  **Lunch Break**

14:30 – 15:00 **Gianluca Di Rico** “ORCAS a new space orbiting guide star”

15:00 – 16:00 **Panel discussion 2: Adaptive Optics @ LBT**

16:00 – 16:30 **Bus to Monte Mario**

17:00 – 21:00  **Social aperitif and dinner**

XX:XX **Bus back to Rome**

Day 3 — THURSDAY 23

09:00 – 09:30

 **Breakfast**

Session 4: “Future instrumentation for ground-based AO observations”

09:30 – 10:00

Davide Greggio “EKARUS: A new Adaptive Optics R&D Platform at the Asiago Observatory”

10:00 – 10:30

Elia Costa “EKARUS at Asiago Observatory: Design and Implementation of the Instrument Control Software”

10:30 – 11:00

Tania Sofia Gomes Machado “The New Ingot WFS Optical Test Bench”

11:00 – 11:30

 **Coffee Break**

Session 5: “Future instrumentation for ground-based AO observations”

11:30 – 12:00

Remon Sjoerd Van Gaalen “NirvanaVIS: AO-Assisted Wide Field Speckle Imaging at LBT”

12:00 – 12:30

Carmelo Arcidiacono “Speckle Reconstruction Techniques for High-Resolution Visible Imaging”

12:30 – 13:00

Oleksandra Rebrysh “Final optical design of the adaptive optics module of MAVIS”

13:00 – 14:30

 **Lunch Break**

Session 6: “Science with AO: What Is Needed for the Future”

14:30 – 15:00

Chiara Di Prospero “Prototyping activities of the MORFEO Soft Real-Time Computer”

15:00 – 15:30

Luciano Antonio Corubolo “Static adaptive correction to compensate for non-axisymmetric wavefront distortions in next-generation gravitational wave detectors”

15:30 – 16:00

Matteo Menessini “Integrated modeling and analysis of high order active segmented mirrors for space telescopes”

16:00 – 16:30

Armin Schimpf “ALPAO technology”

16:30 – 17:00 ☕ **Coffee Break**

17:00 – 18:00 **Panel discussion 3: Habitable Worlds Observatory**

Day 4 — FRIDAY 24

09:00 – 09:30 🥐 **Breakfast**

Session 7: “Science with AO: What Is Needed for the Future”

09:30 – 10:00 **Paolo Saracco** “SHARP: a next-generation near-IR spectrograph conceived for the ESO-ELT”

10:00 – 10:30 **Alessandro Ballone** “Design and early implementation of the MCAO MATTO bench”

10:30 – 11:00 **Simone Lombardi** “The ADONI-ET Optical Test Bench experiment. Part of a feasibility study for closed-loop adaptive thermal compensation in gravitational wave detectors”

11:00 – 11:30 ☕ **Coffee Break**

11:30 – 12:00 **Cédric Antoine Adrien Gabriel Plantet** “Petaling on the ELT: mitigation strategy for MORFEO”

12:00 – 12:30 **Talk by Roberto Ragazzoni, INAF President**

12:30 – 13:00 **Wrap up**

Useful informations

📍 **Venue:**

Centro Congressi Frentani,
Via dei Frentani, 4, 00185 Roma RM

✉ **Contacts LOC:**

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