



The Finnish Astronomical Society  
Suomen  
tähtitieteilijäseura

Tähtitieteilijäpäivät

# ASTRONOMERS' DAYS

20-22 May 2024, Vaasa

[ttseura.fi/ad2024](http://ttseura.fi/ad2024)

## Invited speakers

Prof. Colin Snodgrass (University of Edinburgh)  
Dr. Foteini Oikonomou (NTNU, Trondheim)  
Dr. John Antoniadis (FORTH IA, Crete)

## Scientific Organising Committee

Mélina Poulain (Oulu), chair  
Mikael Granvik (Helsinki/Luleå)  
Tuomas Savolainen (Aalto/Metsähovi)  
Elina Lindfors (Turku)  
Panagiotis Charalampopoulos (Turku)

## Local Organising Committee

Riku Rautio (Oulu), chair  
Karri Koljonen (NTNU, Trondheim)  
Emma Mannfors (Helsinki)  
Anne Virkki (Helsinki)  
Pouya M. Kouch (Turku/Metsähovi)  
Quentin Salomé (Aalto/FINCA)



**VAISALA**



Tieteellisten seurain  
valtuuskunta



Magnus Ehrnroothin säätiö

Sponsors

## Astronomers' Days 2024 Recap

Astronomers' Days 2024, held from May 20-22 in Vaasa, Finland, stood as the nation's foremost conference on astronomy, bringing together senior and junior Finnish astronomers, along with enthusiasts, to share and discuss cutting-edge research in astronomy and space physics.



### **Organizing Committees**

The event was planned by the Scientific Organizing Committee, chaired by Dr. Méline Poulain, and included esteemed members Dr. Mikael Granvik, Dr. Tuomas Savolainen, Dr. Elina Lindfors, and Dr. Panagiotis Charalampopoulos. The Local Organizing Committee, consisting of Riku Rautio, Dr. Karri Koljonen, Emma Mannfors, Dr. Anne Virkki, Pouya M. Kouch, and Dr. Quentin Salomé, ensured smooth logistical execution.

### **Invited Speakers and Their Contributions**

The conference featured three prominent keynote speakers:

- **Dr. Foteini Oikonomou** (Norwegian University of Science and Technology) delivered an insightful 45-minute talk on multi-messenger astronomy, covering recent developments regarding high-energy neutrinos, ultra-high-energy cosmic rays, and the significant roles AGNs, GRBs, and TDEs play in high-energy astronomy.
- **Dr. John Antoniadis** (FORTH Institute of Astrophysics, Greece) presented the ARGOS project, focusing on continuous wide-field sky monitoring in the radio band, real-time data alerts, and contributions to understanding dark matter, dark energy, and fast radio bursts.
- **Prof. Colin Snodgrass** (University of Edinburgh) discussed recent advancements in comet research, emphasizing the JWST observations and the upcoming ESA Comet Interceptor mission.



## Special Sessions

The conference included several special sessions:

- **Metsähovi Radio Observatory 50-Year Anniversary:** Dr. Joni Tammi provided an overview, Dr. Tuomas Savolainen introduced a cutting-edge triple-band receiver, and Dr. Derek McKay discussed the observatory's interferometry capabilities.
- **FINCA Session:** Dr. Petri Väisänen highlighted FINCA's role in Finnish astronomy and future plans.
- **Nordic Optical Telescope (NOT) Session:** Prof. Seppo Mattila reviewed the telescope's scientific contributions and future developments.
- **Astronomy Outreach Activities:** Dr. Pasi Nurmi discussed public engagement and strategies to inspire future astronomers.
- **Annual Meeting of the Finnish Astronomical Society:** Members discussed society activities and the goal of organizing a large-scale Nordic astronomy conference.
- **Väisälä Prize for the Best PhD Thesis:** Prof. Hannu Koskinen awarded Dr. Armin Nabizadeh, who presented his work on observational studies of accreting X-ray pulsars.





## Scientific Talks

A total of 43 science talks, each 15 minutes long, covered a broad spectrum of topics including high-energy astrophysics, transients, galaxies, the Sun and Solar System, stars and the interstellar medium, and gravitational waves.

The detailed program of the conference as well as the titles of the talks are listed at the end of this recap. The abstracts are also listed on our [webpage](#). The slides of AD24 are found [here](#).

## Social Programs

The conference also featured enriching social programs:

- **Monday Evening:** A visit to Meteoria Söderfjärden, an impressive museum at a meteor impact crater site.





- **Tuesday Evening:** A cruise through the Vaasa archipelago, culminating in the seafood-themed social dinner on one of the thousands of islands of the Vaasa archipelago.





- **Wednesday Evening:** An outreach talk by Dr. Elina Lindfors at the University of Vaasa, organized with the help of the Kvarken Space Center.



## Conclusion

Astronomers' Days 2024 was a resounding success, fostering collaboration and knowledge exchange among Finnish astronomers and enthusiasts. The conference underscored the dynamic and evolving nature of astronomical research, highlighted significant scientific advancements, and reinforced the importance of continuous engagement and outreach to inspire future generations. With over 60 participants and a wide array of scientific discussions and social activities, the event exemplified the vibrant and collaborative spirit of the Finnish astronomical community.



Pouya Kouch,  
President of the Finnish Astronomical Society

The detailed program of AD24 along with the talk titles are given below. The slides of the AD24 talks are found [here](#).

<b>Monday - May 20</b>	
<b>8:15 Registration</b>	
8:45	Welcome
<b>High-energy astrophysics</b>	
9:00	9:00 F. Oikonomou (Invited talk)
Chair: Savolainen	<i>"Multimessenger astronomy with ultra-high-energy cosmic rays and high-energy neutrinos"</i>
	9:45 P.M. Kouch — <i>"Are blazars high energy neutrino factories?"</i>
	10:00 E. Lindfors — <i>"20 years of MAGIC Telescopes"</i>
	10:15 K. Nilsson — <i>"Precession of the jet of PG 1553+113?"</i>
10:30	<b>Coffee break</b>
<b>High-energy astrophysics</b>	
11:00	11:00 T. Hovatta — <i>"Resolving supermassive black hole jets in near-infrared wavelengths"</i>
	11:15 J. Jormanainen — <i>"The long 2016 polarisation angle rotation of OJ 287"</i>
Chair: Lindfors	11:30 A. Bobrikova — <i>"Polarimetric properties of the weakly magnetized neutron stars"</i>
	11:45 V. Ahlberg — <i>"Polarized X-ray reflection from a star"</i>
	12:00 A. Nitindala — <i>"Polarization from Accretion Disk Winds in X-ray Binaries"</i>
12:15	<b>Lunch break</b>
<b>High-energy astrophysics &amp; special sessions</b>	
13:30	13:30 V. Loktev — <i>"Polarimetric Analysis of Accretion Disks around Kerr Black Holes"</i>
	13:45 V. Kravtsov — <i>"Probing the geometry of X-ray binaries with high-precision polarimetry"</i>
Chair: Hovatta	<i>Metsähovi 50 years Special Session</i>
	14:00 J. Tammi — <i>"Metsähovi Radio Observatory, State of the art observations and hands on training in Finland"</i>
	14:30 T. Savolainen — <i>"New 3-band mm-wavelength receiver for Metsähovi Radio Observatory"</i>
	14:45 D. McKay — <i>"Metsähovi Compact Array, Commissioning a new radio interferometer"</i>
15:00	<b>Coffee break</b>
<b>Special sessions &amp; the FAS General meeting</b>	
15:30	<i>NOT Special Session</i>
Chair: Väisänen	15:30 S. Mattila — <i>"Nordic Optical Telescope"</i>
16:00	<i>FAS meeting (general assembly)</i>
<b>Ends at 17:00</b>	
17:45	<b>Social event:</b> Söderfjärden impact crater

**Tuesday - May 21**

Transients	
9:00	9:00 J. Antoniadis (Invited talk)
Chair: Charalampopoulos	<i>"The Array for Gigahertz Observations (ARGOS)"</i>
	9:45 T. Killestein — <i>"Driving infant transient discovery with GOTO"</i>
	10:00 K. Koljonen — <i>"The extreme coronal line emitter AT 2022fpx"</i>
	10:15 J. Näätälä — <i>"X-ray precursors from neutron-star mergers"</i>
10:30	<b>Coffee break</b>
Transients, galaxies & galaxy clusters	
11:00	11:00 S. Rosu —
Chair: Mattila	11:15 C. Humina — <i>"Late-time evolution of the interacting supernova 2017dio"</i>
	11:30 N. Pyykkinen — <i>"Constrain for the helium layer stripping mechanism from the stripped envelope supernova 2021efd"</i>
	11:45 T. Sawala — <i>"Measuring the Galactic potential with expanding star clusters"</i>
	12:00 J. Delhomelle — <i>"The Uncertain Merger of our Milky Way and Andromeda"</i>
	12:15 Venhola — <i>"Distribution and properties of dwarfs in nearby galaxy groups and clusters"</i>
12:30	<b>Lunch break</b>
Special sessions & the Väisälä Prize	
13:30	<i>FINCA Special Session</i>
Chair: Johansson	13:30 P. Väisänen — <i>"Finnish Centre for Astronomy with ESO"</i>
	<i>EPO special session</i>
	14:00 P. Nurmi — <i>"Astronomy public outreach and promoting astronomy teaching"</i>
	<i>Väisälä prize</i>
	14:30 Prize Winner: A. Nabizadeh — <i>"Observational Studies of Accreting X-Ray Pulsars"</i>
15:00	<b>Coffee break</b>
Galaxies & galaxy clusters	
15:30	15:30 R. Rautio — <i>"Modeling the extraplanar diffuse ionized gas in eight galaxies with Cloudy photoionization code"</i>
Chair: Poulain	15:45 J. Hartke — <i>"Catching the formation of the ultradiffuse galaxy Hydra-UDG32 in the act"</i>
	16:00 Q. Salomé — <i>"Inefficient jet-induced star formation in Centaurus A: Are shocks regulating star formation in the northern filaments?"</i>
	16:15 M.B. Stone — <i>"Low-redshift AGN Environments: an observational study"</i>
	16:30 V. Fallah Ramazani — <i>"Distance estimation of BL Lac objects"</i>
	16:45 P. Heinämäki — <i>"Supercluster mass function"</i>
<b>Ends at 17:00</b>	
17:45	<b>Social dinner:</b> Archipelago cruise



**Wednesday - May 22**

Solar System & Sun	
9:00	9:00 C. Snodgrass (Invited talk)
Chair: Virkki	<i>"Recent Results and Future Prospects in Comet Science"</i>
	9:45 M. Granvik — <i>"Tidal disruption of asteroids increases the rate of impacts with the Earth"</i>
	10:00 G. Fedorets — <i>"Characterising very small asteroids as building blocks of the Solar System"</i>
	10:15 A. Penttilä — <i>"Modeling the polarization of the Didymos asteroid system before and after the DART impact"</i>
	10:30 K. Muinonen — <i>"Scattering of light in planetary regoliths using Mueller matrix decomposition"</i>
10:45	<b>Coffee break</b>
Solar System & Sun	
11:10	11:10 A. Virkki — <i>"Planetary Surface Characterization Using Radar Observations"</i>
Chair: Granvik	11:25 A. Leppälä — <i>"Radiative-Transfer Coherent-Backscattering Modelling for Polarimetric Phase Curves of Galilean Satellites"</i>
	11:40 V. Björn — <i>"Mercury Regolith Modelling Using Messenger Spectrophotometry"</i>
	11:55 M. Vuori — <i>"Deriving the complex refractive index of an acoustically levitated Mercury analogue particle using laboratory measurements"</i>
	12:10 D. Weigt — <i>"A novel technique to predict magnetic flux emergence on the Sun"</i>
	12:25 S. Kivistö — <i>"Almost 50 years of Metsähovi Solar Observations on 37 GHz with recovered digitised historical maps"</i>
12:40	<b>Lunch break</b>
Gravitational waves & supermassive binary BHs	
13:35	13:35 P. Johansson — <i>"Resolving the complex dynamical evolution of SMBH in cosmological simulations using the KETJU code"</i>
Chair: Tammi	13:50 A. Keitaanranta — <i>"Supermassive black hole dynamics with KETJU and a dynamical friction subgrid model"</i>
	14:05 A. Rawlings — <i>"The Stochastic Nature of SMBH Binary Eccentricity"</i>
	14:20 T. Minkinen — <i>"Detecting a gravitational wave background from early universe phase transitions with LISA"</i>
14:35	<b>Coffee break</b>
Stars & interstellar medium	
15:00	15:00 A. Haris — <i>"Spot Transits in Kepler and TESS Photometry of Late Main-Sequence Stars"</i>
Chair: Sawala	15:15 E. Mannfors — <i>"Cloud evolution in the high-energy molecular ring <math>\lambda</math> Orionis"</i>
	15:30 J. Vorster — <i>"VLBI Observations of Water Masers During the Accretion Burst in a High-Mass Protostellar Cluster"</i>
<b>Ends at 15:45</b>	
Outreach event at University of Vaasa:	
18:00	E. Lindfors — <i>"Jännittävät mustat aukot"</i>