



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

PALACONGRESSI, RIMINI
1-5 SEPTEMBER 2025

IAG Scientific Assembly 2025

Geodesy for a changing environment



Conference Handbook

Index

Dear Colleagues, p. 3

Committees, p. 3

Sponsors, p. 4

General information, p. 5

Program at a glance, p. 6

Social program, p. 7

Monday September 1, 2025, p. 9

Tuesday September 2, 2025, p. 19

Wednesday September 3, 2025, p. 29

Thursday September 4, 2025, p. 38

Friday September 5, 2025, p. 48



**A MORE SUSTAINABLE FUTURE?
IT'S NOT ENOUGH FOR US TO IMAGINE IT.**

We believe in innovation as a factor of sustainable development. To create shared value, to always be one step ahead.

Being the leading insurance group in Italy in the motor sector, taking care of the protection of millions of people every day makes us proud but also gives us a strong sense of responsibility. This is why we have been working for years to achieve social innovation, more sustainable finance, and to offer products with environmental and social value. Concrete and measurable actions which can make the difference and bring about correct and sustainable growth for the entire community.

Unipol, always one step ahead.



Dear Colleagues,

On behalf of the Department of Physics and Astronomy (DIFA) and the Department of Civil, Chemical, Environmental, and Materials Engineering (DICAM) of the Alma Mater Studiorum - Università di Bologna we would like to invite you to attend the IAG 2025 Scientific Assembly, to be held from 1 to 5 September, 2025, in Rimini, Italy.

The theme of the Assembly is **“Geodesy for a changing environment”** to be developed within the domains of interest of the four IAG Commissions, namely: Reference Frames, Gravity Field, Rotation and Geodynamics, and Positioning and Applications.

The scientific assembly provides a unique opportunity for the international community to meet, propose and discuss topics where geodetic science plays a considerable role. The theme of the assembly draws geodesists' attention to impacts of environmental variations/changes, increasingly severe extreme events of different nature and to developing strategies apt to capture the onset of abrupt changes in the Earth system.

We are looking forward to welcoming you in Rimini for the IAG 2025 Scientific Assembly.

Prof. Stefano Gandolfi, DICAM Prof. Susanna Zerbini, DIFA

Chairs of the Local Organizing Committee of IAG 2025 Scientific Assembly

Committees

SCIENTIFIC ORGANIZING COMMITTEE

Chair

Daniela Thaller, BKG – German Federal Agency for Cartography and Geodesy (Germany)

Members

- Annette Eicker, HafenCity University Hamburg (Germany)
- Jürgen Müller, Institute of Geodesy (IfE), Leibniz University Hannover, Hannover, (Germany)
- Laura Sanchez, Technical University of Munich School of Engineering and Design (Germany)
- Mattia Crespi, Università la Sapienza (Italy)
- Pawel Wielgosz, University of Warmia and Mazury in Olsztyn (Poland)
- Rebekka Steffen, Lantmäteriet (The Swedish Mapping, Cadastral and Land Registration Authority) (Sweden)
- Srinivas Bettadpur, The University of Texas at Austin (USA)
- Stefano Gandolfi, University of Bologna (Italy)
- Susanna Zerbini, University of Bologna (Italy)
- Szabolcs Rózsa, Budapest University of Technology and Economics, Budapest
- Urs Hugentobler, Technical University of Munich School of Engineering and Design (Germany)
- Valérie Ballu, French National Centre for Scientific Research (France)

LOCAL ORGANIZING COMMITTEE

Chairs

- Stefano Gandolfi, DICAM - Department of Civil, Chemical, Environmental, and Materials Engineering, Alma Mater Studiorum - Università di Bologna
- Susanna Zerbini, DIFA - Department of Physics and Astronomy “Augusto Righi”, Alma Mater Studiorum - Università di Bologna

Members

- Daniela Thaller, BKG – German Federal Agency for Cartography and Geodesy (Germany)
- Silvia Castellaro, DIFA (University of Bologna)
- Enrico Paolucci, DIFA (University of Bologna)
- Luca Tavasci, DICAM (University of Bologna)
- Luca Vittuari, DICAM (University of Bologna)
- Antonio Zanutta, DICAM (University of Bologna)
- Enrica Vecchi, DICAAR (University of Cagliari)

Sponsors

PLATINUM SPONSORS



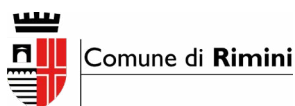
SILVER SPONSOR



EXHIBITORS AND SPONSORS



WITH THE PATRONAGE OF



ORGANIZING SECRETARIAT



General information

Registration

All delegates of the conference have registered online but **check in with the registration desk is required** for all upon arrival of the onsite participants. Conference materials can also be collected here.

The registration desk will be open at the following times:

- August 31: 16:30 – 20:00
- September 1: 08:15 – 19:00
- September 2: 08:15 – 19:00
- September 3: 08:15 – 17:30
- September 4: 08:15 – 19:00
- September 5: 08:15 – 17:00



The official IAG25 app is now available!

To obtain it, please download on your device the **"Cvent Events" app** and look for the event "IAG Scientific Assembly 2025 - Geodesy for a changing environment".

Free Wi-Fi

To access the free Wi-Fi at Palacongressi di Rimini, follow these steps:

1. Connect to the network: PALAS

2. Log in using one of the following options:

- If you are already registered, enter your credentials.
- Use your **social media account**.
- Request access **by email**: you will receive an email with your login credentials and a link to the sign-in page.

Useful Links

en.riminipalacongressi.it | www.visitrimini.com/en

Contact

For more information, please visit our website eventi.unibo.it/iag2025 or contact us at fam.eventi@unibo.it.

Thanks to UNIPOL and Eni for their support in producing the Abstract Book.



Eni FOR

2024

A Just Transition

Ogni giorno ci impegniamo per **una transizione energetica giusta**, che contribuisca a **preservare l'ambiente** e promuova l'accesso alle risorse in maniera efficiente e socialmente equa, **generando valore condiviso**. Un impegno che raccontiamo nel nostro report volontario di sostenibilità.



SCOPRI DI PIÙ SULL'IMPEGNO DI ENI
PER UN FUTURO PIÙ SOSTENIBILE

Program at a glance

Date	from	to	Activity	Rooms					Ground Floor (poster and exhibition area)
				Anfiteatro	Marina	Parco	Borgo	Lavatoio	
Sunday 31/08/2025	17:30	20:00	Icebreaker						Icebreaker
Monday 01/09/2025	09:00	10:30	Opening Session	Opening Part 1					
	10:30	11:00							Coffe break
	11:00	12:30		Opening Part 2					
	12:30	14:00	Lunch time						
	14:00	15:30	Highlight session	H02 - Northeast Italy					
	15:30	17:00	parallel sessions		H-02-2	G04-2	G08	G07-1/-2	
	17:00	17:30	Coffe break						Coffe break
	17:30	19:00	Poster Session						Poster session
Tuesday 02/09/2025	09:00	10:30	parallel sessions		G01-1/-4	G04-1	G08	G10	
	10:30	11:00	Coffe break						Coffe break
	11:00	12:30	parallel sessions		G01-3	G03-1	G08	G07-4	
	12:30	14:00	Lunch time						
	14:00	15:30	Highlight session	H04 - Climate					
	15:30	17:00	parallel sessions		G05-4	G03-4	G01-2	G09	
	17:00	17:30	Coffe break						Coffe break
	17:30	19:00	Poster Session						Poster session
Wednesday 03/09/2025	09:00	10:30	parallel sessions		G05-1	G03-2	G01-2	J01	
	10:30	11:00	Coffe break						Coffe break
	11:00	12:30	parallel sessions		G05-1	G03-2	G01-2	J01	
	12:30	14:00	Lunch time						
	14:00	15:30	parallel sessions		G05-2	G03-3	G06-3	G04-3	
	15:30	16:00	Coffe break						Coffe break
	16:00	17:30	Poster Session						Poster session
	20:00	23:30	Social Event	Gala Dinner (co Grand Hotel Rimini)					
Thursday 04/09/2025	09:00	10:30	parallel sessions		G02-2	G05-2	G06-2	J03	
	10:30	11:00	Coffe break						Coffe break
	11:00	12:30	parallel sessions		G02-2/-3	G05-3	G06-2/-4	J02-3/-2	
	12:30	14:00	Lunch time						
	14:00	15:30	Highlight session	H01 - Future Missions					
	15:30	17:00	4 parallel sessions		G02-2/-3	G05-3	G06-1	G07-5	
	17:00	17:30	Coffe break						Coffe break
	17:30	19:00	Poster Session						Poster session
Friday 05/09/2025	09:00	10:30	parallel sessions		G02-1	J03	G11-1	J02-2	
	10:30	11:00	Coffe break						Coffe break
	11:00	12:30	parallel sessions		G02-1	J03	G11-3	J02-1	
	12:30	14:00	Lunch time						
	14:00	15:00	Highlight session	H03 - Geohazard					
	15:00	15:30	Coffe break						Coffe break
	15:30	17:00	Closing Session	Closing					

Social program

**Sunday
August 31, 2025**

**17:30
ICEBREAKER PARTY / EVENING
▼ PALACONGRESSI
Via della Fiera 23, Rimini**

**Wednesday
September 3, 2025**

**20:00
GALA DINNER
▼ GRAND HOTEL DI RIMINI
Parco Federico Fellini 1, Rimini**





**ONE STEP AHEAD TOGETHER,
BECAUSE LIFE IS A JOURNEY.**

Unipol by your side, to accompany and protect you every day.

If we are leaders in Italy, it is because every day we stand by over ten million customers to take care of their present and future. We constantly create solutions to meet the needs of people and businesses with innovative ideas and highly technological services. And if we have the most widespread and extensive sales network in Italy, with 2000 agencies, it is to always be there when you need us.

Unipol, always one step ahead.



unipol.com



Monday
September 1, 2025

08:15	OPENING OF THE REGISTRATION DESK	12:30	LUNCH BREAK
	ANFITEATRO ROOM		ANFITEATRO ROOM - H02
	Opening Session – Part 1		Highlight Session – H02-1: Northeast Italy with focus on the Po Plain – Impacts of changing climate on the region Chairmans: <i>Susanna Zerbinì, Stefano Gandolfi</i>
09:00	Opening of the IAG Scientific Assembly 2025 <i>Richard Gross (IAG President)</i>		
09:15	Welcome Addresses IUGG perspective on IAG <i>Chris Rizos (IUGG President)</i> <i>Anna Montini (Councilor, City of Rimini – Delegate for Ecological Transition, Blue Economy and Statistics of the Municipality of Rimini)</i> <i>Andrea Cimatti (Head of Physics and Astronomy Department, University of Bologna)</i> <i>Susanna Zerbinì (Co-chair of LOC – Alma Mater Professor, Physics and Astronomy Department, University of Bologna)</i>	14:00	Astronomical tuning of plate tectonics: a key to understand the northern Adriatic area <i>Carlo Doglioni</i>
09:40	Introduction to IAG Symposia organization <i>Daniela Thaller (IAG Secretary General, Chair of SOC)</i>	14:20	Radar interferometry from space for surface displacements investigation: three decades of developments and observations <i>Riccardo Lanari</i>
09:55	Awards presented by Richard Gross and Daniela Thaller JoG Young Author Award 2023: Safoora Zaminpardaz JoG Young Author Award 2024: Justyna Śliwińska <i>Presentation by Justyna Śliwińska</i> Best reviewer Award 2023: Bailing Li Best reviewer Award 2024: Judit Benedek	14:40	Long-term variations of mean sea level and extreme events in the northern Adriatic <i>Fabio Raicich</i>
10:30	COFFEE BREAK	15:00	Monitoring and modelling marshland elevation changes along the Po Plain coast. Projecting their fate under climate change and anthropogenic pressure <i>Pietro Teatini, Marta Cosma, Cristina Da Lio, Anna Maria Mazzia, Urooj Qayyum, Luigi Tosi, Claudia Zoccarato</i>
	Opening Session – Part 2		MARINA ROOM - H02 H02-2 Northeast Italy with focus on the Po Plain – Impacts of changing climate on the region Chairmans: <i>Susanna Zerbinì, Stefano Gandolfi</i>
11:00	Introduction to the Sponsors presentations <i>Richard Gross</i>	15:30	Geodynamical monitoring in Italian CCS projects <i>M. C. Dacome, G. Dell'elce, F. Pedrazzi, A. Pozzoli, M. Vettorel</i>
11:05	ESA's geodetic missions: past, present and future <i>Ilias Daras (ESA)</i>	15:45	Drought-induced vertical displacements and water loss in the Po river basin (Northern Italy) from GNSS measurements <i>Francesco Pintori, Enrico Serpelloni</i>
11:25	Geodesy and Eni: an untarnished common evolution pathway <i>Davide Calcagni (ENI – Senior Advisor to Exploration Director Technology and Industrial Scouting)</i>	16:00	Four Decades of shoreline evolution in the Emilia-Romagna region under anthropogenic influence <i>Enrica Vecchi, Matteo Meli, Claudia Romagnoli</i>
11:45	Connecting geodesy and insurance for safer communities <i>Renzo Giovanni Avesani (Chairman at Leithà, Unipol Group)</i>	16:15	LiDAR-driven topographic surveys for floodplain management in Northern Marche <i>Eva Savina Malinverni, Francesco Di Stefano, Marsia Sanità, Stefano Chiappini, Alberto Tazioli</i>
12:05	What does a robust global geodesy supply chain look like? <i>Liubov Poshyvailo-Strube (on behalf of Nick Brown, Head of the UN-GGCE)</i>	16:30	DInSAR displacements calibration with GNSS measurements in subsiding areas: the Emilia-Romagna (Italy) case study <i>Eugenia Giorgini, Manuela Bonano, Claudio De Luca, Giovanni Onorato, Riccardo Lanari, Stefano Gandolfi</i>
12:25	Closing and start scientific program <i>Daniela Thaller</i>	16:45	GIN Project, a Geodetic Integrated Network for monitoring and topographical survey on the Emilia-Romagna Region suitable both for classical and space geodetic techniques <i>Nunzio De Nigris, Michele Di Lorenzo, Stefano Gandolfi, Marco Marcaccio, Stefano Olivucci, Alberto Pellegrinelli, Luca Tavasci, Andrea Valentini, Enrica Vecchi</i>

PARCO ROOM - G04

G04-2: Tidal and non-tidal mass signatures in space and surface geodetic observations

Chairmans: *Carla Braitenberg, Henryk Dobslaw, Severine Rosat, Xiaoming Cui*

- 15:30 Tides of the Moon
Xiaodong Chen, Binbin Liao, Heping Sun, Mingqiang Hou
- 15:45 The excitation of atmospheric tide on the Celestial Pole Offsets
Xiaoming Cui, Weiwei Yang, Heping Sun
- 16:00 Accurate tidal and non-tidal reductions of gravity records for volcano monitoring: the Campi Flegrei Superconducting gravity station
Raffaella Casolaro, Umberto Riccardi, Tommaso Pivetta, Stefano Carlino, Jacques Hinderer, Federic Littel
- 16:15 Comparative analysis of geocenter motion estimation using GNSS data: Network Shift vs. Surface Load Displacement approaches
Adrian Nowak, Radosław Zajdel, Krzysztof Sośnica
- 16:30 Mitigating Non-Tidal Loading Effects in Raw Observation-Level GNSS Time Series: Case Studies from Antarctic and Beyond
Yohannes Getachew Ejigu, Hannu Koivula, Jyri Näränen, Arttu Raja-Halli, Fatemeh Khorrami, Maaria Nordman
- 16:45 Double-difference and precise point positioning processing strategies to determine OTL effect in GNSS time series
Anna Fantoni, Carla Braitenberg, Roberto Devoti, Grazia Pietrantonio

BORG ROOM - G08

G08-1: Geodesy for Climate Research

Chairmans: *Annette Eicker, Balaji Devaraju, Carmen Blackwood, Frank Ghoms, Maria Fernanda Camisay*

- 15:30 New ZTD SIRGAS products, from homogenization on IGS14, adjustments to the combination strategy, and north American stations inclusion
Maria Virginia Mackern Oberti, Patricia Alejandra Rosell, Maria Laura Mateo, Maria Fernanda Camisay
- 15:45 Consistency and Homogeneity of ZTD Estimates from IGS Repro3
Hugo Breton, Bock Olivier, Samuel Nahmani, Pierre Bosser
- 16:00 Advancing Climate Research through GNSS Reflectometry: A Novel Geodetic Approach to Monitoring Earth System Processes
Milad Asgarimehr, Tianqi Xiao, Daixin Zhao, Hamed Izadgoshasb, Jens Wickert
- 16:15 First quasi-global soil moisture retrieval using Fengyun-3 GNSS-R constellation observations
Wentao Yang, Fei Guo, Xiaohong Zhang
- 16:30 Intense Mesoscale Convective Systems in Central Africa and associated large scale environments
Vanessa S. Ngono Ashu

- 16:45 Geodesy for Climate Actions
C K Shum, Yu Zhang, Shengdao Wang, Patrick Smith, Yixin Xiao, Yang Tang, Metehan Uz, Kazim Atman, Orhan Akyilmaz, Ehsan Forootan, Jean-Philippe Montillet, Jérôme Benveniste, Erick Lansard

LAVATOIO ROOM - G07

G07-1: Gravitational field modelling and analysis for the Earth and for oblate and prolate planetary bodies and irregularly shaped celestial bodies

Chairmans: *Dimitrios Tsoulis, Michal Šprlák, Zhi Yin, Ropesh Goyal, Sten Claessens*

- 15:30 Far-Zone Effects for Spherical Integral Transformations
Michal Šprlák, Martin Pitoňák, Jiří Belinger, Petr Trnka, Pavel Novák
- 15:45 Gravity degree-depth relations for high-order disturbing potential gradients
Xiao-Le Deng, Nico Sneeuw, Dimitrios Tsoulis
- 16:00 When in doubt smooth! Returning to the convergence problem in collocation theory
Fernando Sansò, Giovanna Venuti

G07-2: Geoid/quasigeoid modelling approaches in view of cm-precision/cm-accuracy

Chairmans: *Dimitrios Tsoulis, Michal Šprlák, Zhi Yin, Ropesh Goyal, Sten Claessens*

- 16:15 Integration Studies of webGIS and VR Technologies in Modeling the Gravity Fields of Solar-System Bodies
Zhi Yin, Kefei Zhang, Junsheng Liu, Qinglu Mu, Yabo Duan, Jingsheng Zhang
- 16:30 Consistent determination of the gravimetric geoid and orthometric height
Pavel Novák, Robert Tenzer
- 16:45 A conceptualisation of a consistently precise and accurate centimetre geoid
Ropesh Goyal, Sten Claessens

COFFEE BREAK

GROUND FLOOR - POSTER SESSION

G01-1: Space Techniques: Prerequisites for current and future terrestrial and lunar missions

- P. 1 Impact of relative weighting on a common parameter estimation from colocated geodetic space techniques.
Peter Vollmair, Anja Schlicht, Urs Hugentobler
- P. 2 What novel observation types could next-generation GNSS feature?
Patrick Schreiner, Susanne Glaser, Shrishail Raut, K. H. Neumayer, Harald Schuh
- P. 3 Exploring new prospects by incorporating satellite observations into VLBI
Shrishail Raut, Susanne Glaser, Patrick Schreiner, Robert Heinkelmann, Karl Hans Neumayer, Harald Schuh

- P. 4 Modeling of SRP and ERP induced accelerations on LEO satellites for POD purposes
Vassiliki Krey, Xanthos Papanikolaou, Dimitrios Anastasiou, Georgios Serelis, Vangelis Zacharis, Maria Tsakiri
- G01-3: Regional Reference Frames: Status, Challenges and Applications**
- P. 5 A concept for Kinematic Geodetic Reference System for the Kingdom of Saudi Arabia
Sultan Alshahrani, Rossen Grebenitcharsky, Iurii Golubinka, Oleksandr Lompas, Abdulwasiiu Salawu, Uthman Alrubaia, Alqahtani Abdullah
- P. 6 A concept for transitioning from static to Time-varying Vertical Reference System and from a static to Dynamic Geoid for the Kingdom of Saudi Arabia
Rossen Grebenitcharsky, Elena Rangelova, Sultan Alshahrani, Uthman Alrubaia, Tatyana Lambeva, Abdullah Alqahtani
- P. 7 ADELA Project: Recent Advances in Nonlinear Deformation Models Applied to Regional Reference Frames in Seismic Zones (SIRGAS-CON and REDGEOMIN)
José Antonio Tarrio Mosquera, Miguel Marten Allendes, Catalina Cáceres Venegas, Valeria Vásquez Tejo, Juan Giglio, Marcelo Caverlotti
- P. 8 The Impact of Thermal Expansion on Nonlinear Vertical Variations of GNSS Reference Stations in Mainland China
Junli Wu, Xiaoqing Wang, Zhicai Li, Fengyan Zhang
- P. 9 EPN-Repro3: Improved Maintenance of Regional Reference Frames Through Standardized and Complete Reprocessing of all Available GNSS Data (1996-Present)
Christof Völkse, Tomasz Liwosz, Juliette Legrand, Martin Lidberg, Andrzej Araszkiewicz, Carine Bruyninx, Miguel Gonzales Hidalgo, Martin Imrišek, Lila Jean-Louis, Tina Kempe, Benjamin Männel, Johan Leclercq, Rosa Pacione, Juraj Papco, Sándor Tóth, Márta Varga, Lin Wang, Junchen Xue, Joaquin Zurutuza
- P. 10 Research on the Method for Realizing Datum Uniformity of Cross-region Reference Stations
Xiaoqing Wang, Junli Wu, Peng Zhang, Zhanyi Sun
- P. 11 NATRF2022 based on Repro3 re-processing - a modern terrestrial reference system for Canada
Mieczysław Piraszewski, Jason Bond, Michael Craymer, Babak Amjadiparvar, Michael Bremner, Mohammad Ali Goudarzi, Earl Lapelle, Karen Simon, Yanlai Zhao
- P. 12 PNG2020, a new geodetic reference frame for Papua New Guinea
Richard Stanaway, Edwin Nidkombu, Lui Gawi
- P. 13 Vertical Displacement at SLR and GNSS Stations in the Pacific Region (withdrawn)
Peter Dunn, Van Husson, Christopher Szwec
- P. 14 Long-term Variation in the Vertical Reference Frame
Graham Appleby, Andreja Susnik, Victoria Smith, Jose Rodriguez, Peter Dunn
- P. 15 Status of the modernisation of the Swiss Vertical Reference System
Elisa Borlat, Jérôme Carrel, Sebastian Condamin, Sébastien Guillaume, Urs Marti, Andreas Schlatter, Daniel Willi
- P. 16 Efforts for regional IHRF calculation and local gravity reference
Denizar Blitzkow, Valéria Cristina Silva, Gabriel N. Guimarães, Ana Cristina O. C. Matos, Edvaldo S. Fonseca Junior, Flavio G. V. Almeida Filho
- P. 17 Nonlinear Motion Analysis of GNSS Continuously Operating Reference Stations Based on Multi-channel Singular Spectrum Analysis (withdrawn)
Yantian Xu, Yingyan Cheng
- P. 18 RGM04 to RGM23 : a coordinate transformation for Mayotte based on a geophysical model of the volcano-tectonic crisis
Xavier Collilieux, Raphaël Grandin, Thierry Gattacceca, Brice Virly, Olivier Jamet, Paul Rebischung
- P. 19 Geospatial Reference System: Nigeria Perspective
Ogochukwu Uju Izuegbu
- G01-4: The International Celestial Reference Frame for Geodetic Applications: Requirements, Challenges, and Future Prospects**
- P. 20 The Fundamental Reference Image Data Archive (FRIDA)
Christopher DiLullo, Remington Sexton, Phil Cigan, Seth Bruzewski, David Gordon
- P. 21 A VGOS CRF fully consistent with the S/X frames
Sujata Dhar, Robert Heinkelmann, Minghui Xu, Georg Beyerle, Harald Schuh
- P. 22 Progress and limitations in quantifying present-day GIA in Antarctica by combining geodetic satellite data
Matthias Willen, Jacob Klug, Taco Broerse, Martin Horwath, Bert Wouters, Eric Buchta, Mirko Scheinert, Veit Helm
- P. 23 Advancing geodynamic research in Antarctica: Reprocessing GNSS data to infer consistent coordinate time series(GIANT-REGAIN)
Eric Buchta, Mirko Scheinert, Matt King, Terry Wilson, Achraf Koulali, Peter Clarke, Demián Gómez, Eric Kendrick, Kora Heidrich-Meisner
- P. 24 A hybrid crustal deformation model for Canada combining GNSS data and GIA predictions
K. Simon, J. Bond, M. Craymer
- P. 25 Vertical Land Movement Budget and Its Impact on Coastal Sea-Level around the World
Carsten Ludwigsen, Ole Baltazar Andersen, Per Knudsen

G04-2: Tidal and non-tidal mass signatures in space and surface geodetic observations

- P. 26 Combining geodetic observations to study temporal gravity variations
Laura Pénzešová, Barbora Korekáčová, Juraj Janák
- P. 27 Analysis of Non-Tidal Atmospheric Loading Effect on GNSS Time Series at Observation Level in High latitude Region
Fatemeh Khorrami, Halfdan Pascal Kierulf, Yohannes Getachew Ejigu, Maaria Nordman
- P. 28 Exploring network effects in GNSS-based low-degree gravity field coefficients
Radosław Zajdel, Kyriakos Balidakis, Adrian Nowak, Filip Galdyn, Krzysztof Sośnica, Henryk Dobslaw
- P. 29 Using absolute gravimeters to assess ocean tide models at Aboa, Antarctica
Arttu Raja-Halli, Jaakko Mäkinen, Maaria Nordman, Jyri Näränen, Ulla Kallio
- P. 30 A new service for calculating atmospheric loading effects
Ilmur Nevretdinov, Ivan Sukharev-Krylov, Irina Mezhenova

G04-3: Monitoring and Modelling of Earth Orientation Parameters Across Temporal Scales

- P. 31 Projections of ENSO in sea surface temperature and atmospheric angular momentum/length of day from CMIP6
Sigrid Böhm, Martin Nußdorfer, David Salstein
- P. 32 Activities within the post-operational phase of the Second Earth Orientation Parameters Prediction Comparison Campaign and IERS Working Group on the Prediction of Earth Orientation Parameters
Justyna Śliwińska-Bronowicz, Robert Dill, Henryk Dobslaw, Maciej Michalczyk, Jolanta Nastula, Aleksander Partyka, Małgorzata Wińska
- P. 33 Operational and Research Developments in EOP Prediction at BKG
Sadegh Modiri, Daniela Thaller, Santiago Belda, Sonia Guessoum, Lisa Klemm, Alexander Kehm, Daniel König, Claudia Flohrer
- P. 34 Earth Orientation Parameter Products at BKG: From Different Single-Technique Solutions to a Unified Multi-Technique Approach
Lisa Klemm, Daniela Thaller, Claudia Flohrer, Alexander Kehm, Sabine Bachmann, Sadegh Modiri, Gerald Engelhard, Markus Goltz, Christian Schade, Daniel König, Rolf Dach

G04-4: Open Session on Earth Rotation and Geodynamics

- P. 35 Estimating the oceanic contribution to the recent Chandler wobble anomaly by another OAM based on OFES2 data
Ryuji Yamaguchi, Masato Furuya

- P. 36 A Modified Radiation Pressure Model for Precise Orbit Determination of LEO Satellites
Hengyi Wang, Xingyu Zhou, Hua Chen, Weiping Jiang
- P. 37 A study of dynamic atomic interferometric rotation measurements
Yanru Miao, Xiaochun Duan, Zhongkun Hu
- P. 38 Recent disappearing and re-excited Earth's Chandler wobble driven by surficial geophysical fluids
Yonghong Zhou, Qiqi Shi, Jianli Chen, Xueqing Xu
- P. 39 Assessment of the network operation of high resolution Lippmann tiltmeters installed for the monitoring of the Mur-Mürz fault line (Austria)
Enikő Barbély, Judit Benedek, Gábor Papp, Nikolaus Horn, Roman Leonhardt, Bruno Meurers
- P. 40 Cross-Validation of European GNSS Time Series with GRACE and GRACE-FO Deformation Data
Alessandra Borghi, Francesco Pintori

G05-4: Engineering Geodesy

- P. 41 Land subsidence monitoring using GNSS precise point positioning and InSAR data fusion
Ta-Kang Yeh, Tsu-Yu Lee, I-Hsien Lee
- P. 42 Possibilities for automating photogrammetric evaluations for engineering surveying
Zoltán Tóth, Gábor Molnár
- P. 43 Assessing the Accuracy of GNSS Velocities: A Multi-Software Comparison of Differential and PPP-AR Solutions
Antonio Zanutta, Monia Negusini, Matteo Cappuccio, Domitilla Forina, Shahriar Mokhtari, Giorgio Del Ciondolo, Luca Vittuari, Alessandro Capra
- P. 44 UAV system: dealing with direct georeferencing of coastal digital twins
Carmen Maria Giordano, Antonio Zanutta, Valentina Alena Girelli, Maria Alessandra Tini, Alessandro Lambertini, Emanuele Mandanici, Renata Archetti, Massimo Ponti
- P. 45 Displacements detection with low cost GNSS instruments
Matteo Cappuccio, Luca Tavasci, Giorgio Del Ciondolo, Stefano Gandolfi, Paolo Macini
- P. 46 Real – time sensors integration for mobile navigation
Adrian Kaczmarek
- P. 47 Spatio-temporal modeling of highway deformations from Sentinel-1 SAR images
Roberto Monti, Mirko Reguzzoni, Osmari Aponte, Ahmet Kaan Birinci
- P. 48 Instantaneous Parameter Estimation for Near Real-time Monitoring of Infrastructure using Dynamic InSAR
Yuqing Wang, Freek van Leijen, Ramon Hanssen

G07-1: Gravitational field modelling and analysis for the Earth and for oblate and prolate planetary bodies and irregularly shaped celestial bodies

- P. 49 Gravity-forward modelling of topography on the surface of the Moon by a combination of spatial- and spectral-domain techniques using 3D variable density
Blazej Bucha
- P. 50 The gravitational potential of a celestial body in terms of generalized ellipsoidal harmonics
Georgios Panou
- P. 51 Computation of generalized ellipsoidal harmonics of high degree and order
Jason Koci, Georgios Panou
- P. 52 A numerical comparison between stochastic and deterministic methods for modelling gravity signal variations
Georgia Gavrilidou, Dimitrios Tsoulis
- P. 53 Global gravitational field modelling of irregular planetary bodies using spheroidal approximation
Jiří Belinger, Veronika Dohnalová, Martin Pitoňák, Pavel Novák, Michal Šprlák
- P. 54 Comparison of spectral combination of vertical and horizontal spheroidal and spectral boundary-value problems: A theoretical study
Martin Pitoňák, Jiří Belinger, Pavel Novák, Michal Šprlák
- P. 55 Calculation of Complete Bouguer and Isostatic Gravity Anomalies from Global Models and Potential Application Areas (withdrawn)
Metehan Uz, E. Sinem Ince

G07-2: Geoid/quasigeoid modelling approaches in view of cm-precision/cm-accuracy

- P. 56 Global gravity field modelling by solving the infinite nonlinear fixed geodetic boundary value problem
Zuzana Minarechová, Marek Macák, Róbert Čunderlík, Karol Mikula
- P. 57 Data preparation for assessing geoid modelling methods in the Gangetic plains of India under project GARUDA
Hemanth Yarlagadda, Mohammed Iqlash, Aniket Mishra, Ropesh Goyal, Indu J, Neeraj Gurjar
- P. 58 Regional Geoid Modelling Using GRAV-D Airborne Gravity Data: Implementation of the Classical Remove-Compute-Restore Method
Shreekanth K. S., Somalin Nath, Sushant Shekhar, B. Nagarajan, Onkar Dikshit
- P. 59 Evaluation of Geoid Models for High-Resolution Gravimetric Geoid Development in India: A Comparative Study of KTH and UNB Approaches
Alok Kumar, Vipin Kumar Maurya, Ramji Dwivedi
- P. 60 Understanding the Impact of Topographical Density on the Geoid-Orthometric Height Relationship

Dechen Wangmo, Robert Kingdon, Petr Vanicek, Marcelo Santos

G07-4: High-precision GNSS theory and algorithms

- P. 61 Development of Regional Ionospheric Model Over the United Arab Emirates
Abdulla Al Naqbi, Mohamed Elsobeiey, Mohamed Yagoub
- P. 62 A Robust Framework for GNSS Real-Time Deformation Monitoring in Complex Environments via Multipath Mitigation and Adaptive Masking
Han Junqiang, Wang Peiyuan, Zhang Rui, Fan Lihong, Wang Siyao, Shen Pengli
- P. 63 Efficient Algorithm of improved singular spectrum analysis for processing incomplete geodetic time series
Kunpu Ji, Yunzhong Shen
- P. 64 Extending higher-order model for non-conservative perturbing forces acting on Galileo satellites during eclipse periods
Xinghan Chen, Maorong Ge, Benjamin Männel, Urs Hugentobler, Harald Schuh

G07-5: Geodetic quality/integrity modelling, monitoring and design

- P. 65 Detection-compensation-control processing framework for unmodeled errors in geodetic data
Zhetao Zhang, Bofeng Li
- P. 66 DIA-PDF Analyses of Some Robust Estimators Used in Geodesy
Peter Teunissen, Krzysztof Nowel, Artur Fischer
- P. 67 Determining a stable reference datum in displacement measurements by using squared Msplit estimation
Marek Hubert Zienkiewicz, Zbigniew Wiśniewski, Christoforos Kotsakis
- P. 68 Minimal identifiable bias algorithm for DIA-estimation under multiple outliers
Artur Fischer, Krzysztof Nowel, Sebastian Ciuban
- P. 69 Outlier detection and statistical reliability analysis for SLAM
Shuran Zheng, Jinling Wang

G08-1: Geodesy for Climate Research

- P. 70 Sea level trends along the South African coast from 1993 to 2022 using XTRACK altimetry, tide gauges, and GNSS measurements
Franck Ghoms, Muharrem Hilmi Erkoç, Roshin P. Raj, Atinç Pirti, Antonio Bonaduce, Babatunde J. Abiodun, Julianne Stroeve
- P. 71 Assessing the quality of DORIS tropospheric products: Insights from the IDS IGN-IPGP/JPL analysis center for ITRF2020-u2024
Samuel Nahmani, Arnaud Pollet, Willy Bertiger

- P. 72 Studying the effects of leakage error on GRACE-FO TWS signal in the European river basins
Artur Lenczuk, Anna Klos, Janusz Bogusz
- P. 73 Assessing sub-seasonal subsurface water storage dynamics using exponential filtering of ESA CCI soil moisture and daily GRACE TWS data
Daniel Blank, Daniel Rasche, Andreas Güntner, Annette Eicker
- P. 74 Reprocessing and Spatiotemporal Analysis of China's Multi-Source Precipitable Water Vapor under a Changing Climate
Jingna Bai, Roeland Van Malderen, Eric Pottiaux, Weixing Zhang, Yidong Lou, Jingnan Liu
- P. 75 Do hydrological loading models account for cryosphere-induced deformation?
Maylis de La Serve, Jeffrey Freymueller, Julien Barnéoud
- P. 76 Next step in marine reference surfaces – the DTU25 mean sea surface
Bjarke Nilsson, Ole Baltazar Andersen, Per Knudsen
- P. 77 Closed-loop Simulations of Current and Future Satellite Gravity Missions — a Parameter Model Comparison for Retrieving the Long-term Trend
Marius Schlaak, Roland Pail
- P. 78 Regional modelling of water storage variations from combined GRACE/-FO and GNSS data in a Kalman filter framework
Viviana Wöhnke, Annette Eicker, Matthias Weigelt, Torsten Mayer-Gürr
- P. 79 Assessing water storage trends in using GRACE/GRACE-FO and a surface- and groundwater-coupled hydrological model
Stephanie Bringeland, Steven K. Frey, Georgia Fotopoulos, John Crowley, Bruce Xu, Omar Khader, Hyung Eum, Babak Farjad, Andre R. Erler, Anil Gupta
- P. 80 SIRGAS-IWV: 22 years of GNSS data
Patricia A. Rosell, María Virginia Mackern Oberti, María Laura Mateo, María Fernanda Camisay, Juan Antonio Rivera
- P. 81 Potential of current and future satellite gravity missions for the evaluation of extreme events in global coupled climate models
Klara Middendorf, Marius Schlaak, Roland Pail, Laura Jensen, Henryk Dobslaw, Annette Eicker
- P. 82 Evolution of GNSS analysis techniques in glacial monitoring
Matteo Cappuccio, Giorgio Del Ciondolo, Monia Negusini, Luca Vittuari, Antonio Zanutta
- P. 83 Reconciling Global Mean Sea Level Budget in the Satellite Altimetry Era
Yufeng Nie, Jianli Chen, Guodong Xu, Anno Löcher
- P. 84 Dual Forcing Effects on Grounding Line Dynamics: Tidal Modulation and Climate Warming at Greenland 79°N Glacier
Delong Tao, Jürgen Kusche, Bernd Uebbing
- P. 85 Earth Observation data for Advancing Flood Forecasting: EO4FLOOD project
Angelica Tarpanelli, Guy Schumann
- P. 86 Joint Inversion of GNSS and GRACE/GRACE-FO data for terrestrial water storage changes in the Yellow River Basin, China
Tieding Lu, Yulong Chen, Zhiping Chen, Kaiyun Lyu, Xunqiang Gong
- P. 87 Sea Level Budgets using over 20 years of GRACE and and 30 years of Altimetry data
Carsten Ludwigsen, Ole Baltazar Andersen, Per Knudsen
- P. 88 Water storage variations in the La Plata Basin: assessing ENSO effects through GRACE and global models
Ayelen Pereira, Cecilia Cornero, Ana Cristina O. C. Matos Matos, Rafael Seoane, María Cristina Pacino, Denizar Blitzkow, Ailin Pereira
- P. 89 SPAMS10: predictive analytics of peatland surface motion dynamics under different climate scenarios
Y. A. Lumban-Gaol, P. N. Conroy, R. F. Hanssen
- P. 90 Seasonal analysis of precipitation partitioning using a modified Budyko framework and terrestrial water storage change estimates
Karim Douch
- P. 91 A look at ground-GNSS ZTD trends for climate models
Marcelo Santos, Rosa Pacione, Kyriakos Balidakis, Sharyl Byram, Galina Dick, Riley Hughes, Jonathan Jones, Hannes Keernik, Anna Klos, Yidong Lou, Haroldo Marques, Samuel Nahmani, Thalia Nikolaidou, Kalev Rannat, Raul Valenzuela, Zhang Weixing, Yibin Yao, Peng Yuan
- P. 92 Monitoring water storage change in lakes and reservoirs from space
Luciana Fenoglio, Jiaming Chen, Bibi Naz, Frederic Frappart, Jürgen Kusche
- H02 Northeast Italy with focus on the Po Plain – Impacts of changing climate on the region**
- P. 93 Topo-Bathymetric Monitoring of the Emilia-Romagna Coast: Strategies, Surveying Techniques, and Data Processing for Sandy Beach Preservation
Nunzio De Nigris, Stefano Gandolfi, Filippo Elia Pizzera, Flavia Sistilli, Luca Tavasci, Enrica Vecchi
- P. 94 Orthometric heights from spirit levelling and the IHRF/IHRF approach: a comparison along the Italian North Adriatic shoreline
Riccardo Barzaghi, Stefano Gandolfi, Luca Tavasci, Daniela Carrion, Alberto Pellegrinelli
- P. 95 Characterization of climate-related processes in Northwest Italy through InSAR data
Daniele Guidi, Francesca Silverii, Marco Polcari, Eleonora Rivalta
- P. 96 Advancements in Monitoring Subsidence in the Emilia-Romagna Plain: Methods and Findings

Gabriele Bitelli, Eugenia Giorgini, Alessandro Lambertini, Marco Marcaccio, Marianna Mazzei, Luca Vittuari

- P. 97 Evolution of methodologies in monitoring ground movements on large topographic leveling networks
Antonietta Calò, Gabriele Bitelli, Maria Carolina Dacome, Gianluca Dell'Elce, Roberto Miandro, Maria Alessandra Tini, Luca Vittuari
- P. 98 GIN Project, a Geodetic Integrated Network for monitoring and topographical survey on the Emilia-Romagna Region suitable both for classical and space geodetic techniques (Moved to Oral)
Nunzio De Nigris, Michele Di Lorenzo, Stefano Gandolfi, Marco Marcaccio, Stefano Olivucci, Alberto Pellegrinelli, Luca Tavasci, Andrea Valentini, Enrica Vecchi

19:00 **CLOSING OF THE REGISTRATION DESK**



The European Space Agency (ESA) is Europe's gateway to space. Its mission is to shape the development of Europe's space capability and ensure that investment in space continues to deliver benefits to the citizens of Europe and the world. It is an international organisation with 23 Member States. By coordinating the financial and intellectual resources of its members, it can undertake programmes and activities far beyond the scope of any single European country. ESA's job is to draw up the European space programme and carry it through. ESA's programmes are designed to find out more about Earth, its immediate space environment, our Solar System and the Universe, as well as to develop satellite-based technologies and services, and to promote European industries. ESA also works closely with space organisations outside Europe.

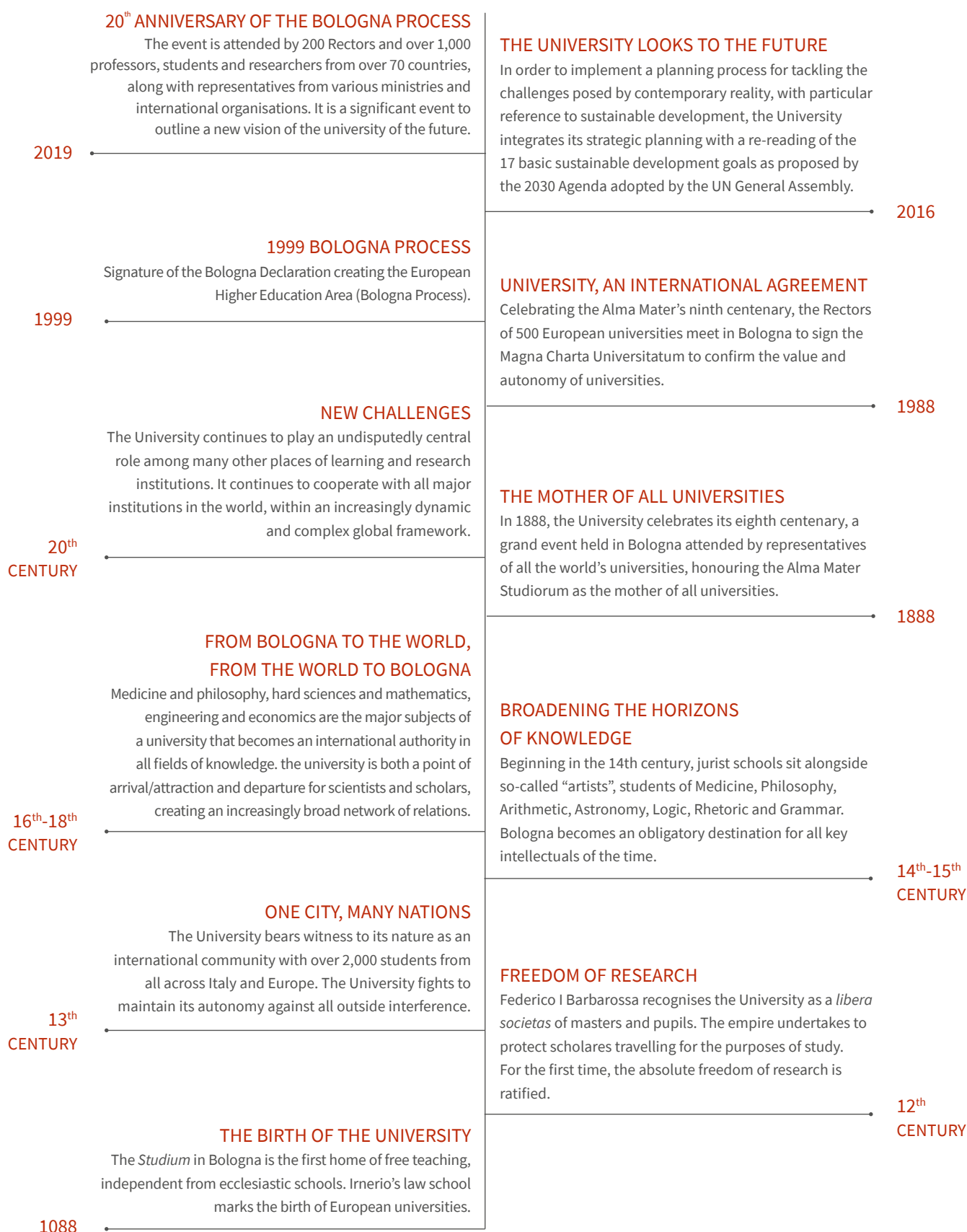


ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

AEDIS ATHENAEQ ADDICTA
ET AD PRISTINUM SPLENDOREM ARTIBUS
DISCIPLINISQUE PROVEHENDIS RESTITUTA
FABIO ROVERSI MONACO RECTORE
A.D. MCMLXXXVIII
ARCHITECTUS ROBERTO SCANNVINI



NINE CENTURIES OF HISTORY



Tuesday
September 2, 2025

8:15 **OPENING OF THE REGISTRATION DESK**

MARINA ROOM - G01

G01-1: Space Techniques: Prerequisites for current and future terrestrial and lunar missions
Chairmans: Krzysztof Sosnica, Maria Karbon

09:00 GENESIS-D: Contribution from German organizations to ESA's GENESIS Mission
Harald Schuh, Robert Heinkelmann, Mathis Bloßfeld, Frank Flechtner, Claudia Flohrer, Susanne Glaser, Benjamin Männel, Patrick Schreiner, Florian Seitz, Manuela Seitz, Daniela Thaller

09:15 SLR-Based Reference Frame Employing LAGEOS and Sentinel-6A
Kyriakos Balidakis, Luca Weinem, Claudia Flohrer, Alexander Kehm, Daniel Koenig, Daniela Thaller, William Desprats, Ulrich Meyer, Mathis Blossfeld, Daniel Arnold, Linda Geisser

09:30 The Surface-Fixed Lunar Reference Frame
Brent Archinal, Al Conrad, Tom Duxbury, Daniel Hestroffer, James Hilton, Laurent Jorda, Randy Kirk, Sergei Klioner, Jean-Luc Margot, David Mayer, Jürgen Oberst, Flora Paganelli, Ryan Park, Jinsong Ping, P. Kenneth Seidelmann, Alex Stark, David Tholen, Iwan Williams

09:45 Report from the IAG JWG 1.1.3 about Lunar reference frames
Agnès Fienga, Krzysztof Sosnica, Kayla J. Brinkley, Pascale Defraigne, Trevor W. Garner, Cheryl Gramling, Robert Heinkelmann, Luciano Iess, Maria Karbon, Sergei Klioner, Erwan Mazarico, Stephen Merkowitz, Masaya Murata, Jürgen Müller, Flora Paganelli, Dmitry Pavlov, Jinsong Ping, Nicolas Rambaux, Susan Stewart, Richard Swiden, Javier Ventura-Traveset

G01-4: The International Celestial Reference Frame for Geodetic Applications: Requirements, Challenges, and Future Prospects
Chairmans: Krzysztof Sosnica, Maria Karbon

10:00 Linking Planetary Ephemeris Reference Frames to ICRF via Millisecond Pulsars
Li Guo, Yueqi Song, Zhen Yan

10:15 Detection of a Systematic Parallax Effect in VLBI Observations
Angelina Osetrova, Oleg Titov

PARCO ROOM - G04

G04-1: Geodetic Constraints and Modeling of Glacial Isostatic Adjustment and Cryospheric Deformation Across Time Scales
Chairmans: Carsten Ludwigsen, Ingo Sasgen, Karen Simon, Lambert Caron, Matthias Willen

09:00 A New Generation of Land Uplift and Glacial Isostatic Adjustment Models for Northern Europe
Holger Steffen, Jonas Ågren, Andrzej Araszkiewicz, Tobias Arnell, Valentina R. Barletta, Michael Dähnn, Pasi Häkli, Pingping Huang, Lotti Jivall, Halfdan P. Kierulf, Tong Ning, Maaria Nordman, Matthew

Simpson, Rebekka Steffen, Lev Tarasov, Olav Vestøl, Vents Zuševic, The Nkg Gnss Analysis Centre

09:15 Strain rate evolution in the European Alps due to Glacial Isostatic Adjustment since the Last Glacial Maximum
Fernando Linsalata, Daniele Melini, Giorgio Spada

09:30 Long-term variations in the Earth's Figure axis and polar motion
Minkang Cheng

G04-4: Open Session on Earth Rotation and Geodynamics

Chairmans: Carsten Ludwigsen, Ingo Sasgen, Karen Simon, Lambert Caron, Matthias Willen

09:45 Real-Time High-Frequency Estimation of Earth Rotation Parameters Using Global Navigation Satellite Systems (GNSS)
Zhiwei Qin, Shuli Song, Jungang Wang, Qinming Chen, Maorong Ge

10:00 Interannual oscillations in length of day changes and relations with ENSO and climate indices
M. Wińska, D. Staniszewska, J. Śliwińska-Bronowicz, J. Nastula

10:15 Opportunities of earth rotation sensing with large area optical time and frequency transfer network
Bin Wang, Yize Zhang, Weijie Tan, Junping Chen, Kexin Xu, Chenglong Zhang, Xing Su

BORG ROOM - G08

G08-1: Geodesy for Climate Research

Chairmans: Annette Eicker, Balaji Devaraju, Carmen Blackwood, Frank Ghomsi, Maria Fernanda Camisay

09:00 European daily GPS-observed displacements for hydrogeodesy
Anna Klos, Anne Springer, Artur Lenczuk, Jan Mikocki, Christian Mielke, Juergen Kusche, Janusz Bogusz

09:15 High-resolution terrestrial water storage estimates derived from integrated GPS and InSAR displacements: the Seine case study
Jan Mikocki, Anna Klos, Susanna Werth, Artur Lenczuk, Janusz Bogusz

09:30 Simultaneous Estimation of Present-Day Surface Mass Trend, Ice History and Earth Rheology from Space Geodetic and Historical Data (withdrawn)
Xiaoping Wu, Giorgio Spada, Daniele Melini, Yan Jiang

09:30 Potential of current and future satellite gravity missions for the evaluation of extreme events in global coupled climate models
Klara Middendorf, Marius Schlaak, Roland Pail, Laura Jensen, Henryk Dobslaw, Annette Eicker

09:45 Transboundary groundwater monitoring based on in-situ observations and downscaled GRACE/GRACE-FO estimates: A case study of the Bug River Basin
Justyna Śliwińska-Bronowicz, Tatiana Solovey, Rafał Janica, Agnieszka Brzezińska, Anna Stradczuk

10:00	AAU's approach for assimilating current and future satellite gravity data into high resolution global hydrological models <i>Ehsan Forootan, Fan Yang, Leire Retegui-Schiettekatte, Marius Schlaak, Roland Pail, Maike Schumacher</i>		<i>Venegas, Alberto da Silva, Laura Sánchez, Sonia Alves Costa, Nilton Ribas Júnior, María Virginia Mackern, Julio Teixeira, Karina Rosero, Micaela Carbonetti, Guido González, Tony Aparco, Oscar Rodríguez, Ángel Zapata, Álvaro Álvarez, Mauricio Varela, Hernan Guerra</i>
10:15	GRACE mass change solutions for sea-level budget assessments: methods, results, and uncertainties <i>Thorben Döhne, Martin Horwath, Marie Bouih</i>	11:45	Comparative Assessment of Epoch-Wise Realization of a Regional Reference Frame With Conventional and Innovative Approaches Using Indian CORS Sub-Network Observations <i>Ratnesh Kushwaha, Mathis Bloßfeld, Alexander Kehm, Nagarajan Balasubramanian, Onkar Dikshit</i>
LAVATOIO ROOM - G10			
G10-1: Modern Concepts and Quantum Technology for Geodesy Chairmans: <i>Jakob Flury, Jürgen Müller, Marcelo Santos, Marvin Reich, Öykü Koç</i>			
09:00	Chronometric levelling with transportable optical clocks <i>Christian Lisdat (solicited)</i>	12:00	The Asia-Pacific Reference Frame (APREF) project - Learnings from operation over 15 years and the recent progress <i>Guorong Hu, Anna Riddell, Ryan Ruddick, Basara Miyahara</i>
09:15	Centimeter-level global height system unification using spatial bi-directional optical frequency links via satellite <i>Ziyu Shen, Pengfei Zhang, An Ning, Wenbin Shen</i>	12:15	Do we need to apply Atmospheric tidal and non-tidal loading in the regional GNSS double differencing networks? : Investigation with consistent reprocessing of 27 years of BKG regional network <i>Lin Wang, Axel Rülke, Tetyana Romanyuk, Ole Roggenbuck</i>
09:30	ELT: An optical time transfer method based on SLR and one-way ranging <i>Anja Schlicht, Stefan Marz, Jan Kodet, Johann Eckl, Ulrich Schreiber, Ivan Prochazka, Josef Blazej, Achim Helm, Shuo Liu, Theo Schwall, Wolfgang Schaefer, Luigi Cacciapuoti, Christoph Salomon</i>	PARCO ROOM - G03 G03-1: Next Generation Technologies Chairmans: <i>David Wiese, Derek van Westrum, Jürgen Müller, Luca Massotti</i>	
09:45	Simulation of Frequency Differences between Earth- and Moon-bound Clocks <i>Mingyue Zhang, Jürgen Müller</i>	11:00	Novel Sensors and Quantum Technology for Geodesy (QuGe) <i>Jürgen Müller</i>
10:00	How accurately can an optical clock network estimate absolute gravity potential? <i>Miltiadis Chatzinikos, Pacome Delva</i>	11:15	Laser Ranging for future Gravity Missions <i>Malte Misfeldt, Vitali Müller, Gerhard Heinzel, Kai Voss, Kolja Nicklaus</i>
10:15	European QUantum Infrastructure Project for Gravimetry <i>Sébastien Merlet, Przemyslaw Dykowski, Daniele Carbone, Lucia Seoane, Marvin Reich</i>	11:30	Exploring the Prospect of a Constellation of Microsatellites enabled by the Development of DORT, a new Miniaturized Ranging System <i>Matthew Darrow, Roland Pail, Thomas Gruber, Elisabeth Paul, Bastian Eder</i>
10:30	COFFEE BREAK	11:45	SENSORIS – a concept for high-temporal gravity field solutions <i>Matthias Weigelt, Johann Max Rohr, Joshua Reeder, Alexander Koch, Benny Rievers, Tim Gust, Antonio Garcia</i>
MARINA ROOM - G01 G01-3: Regional Reference Frames: Status, Challenges and Applications Chairman: <i>Fernand Bale</i>			
11:00	A concept for transition from Static to a Temporal Saudi Arabia Saudi Arabia National Spatial Reference System (TSANSRS) <i>Rossen Grebenitcharsky, Sultan Alshahrani, Iurii Golubinka, Elena Rangelova, Uthman Alrubaia, Abdullah Alqahtani</i>	12:00	Measuring gravity gradients in future missions equipped with quantum sensors <i>João Encarnação, Christian Siemes, Ilias Daras, Olivier Carraz, Aaron Strangfeld, Philipp Zingerle, Roland Pail</i>
11:15	From a global reference frame to regional reference frames, how to handle this for a global GNSS network <i>Francesco Matonti, Joanna Wnuk, Adam Miller</i>	12:15	Implementation of clock measurements in satellite-based gravity field recovery – A closed-loop feasibility study <i>Moritz Huckfeldt, Florian Wöske, Benny Rievers</i>
11:30	WG I-SIRGAS: Current strategies for GNSS processing and analysis in the SIRGAS-CON <i>José Antonio Tarrio Mosquera, Catalina Cáceres</i>	BORGIO ROOM - G08 G08-1: Geodesy for Climate Research Chairmans: <i>Annette Eicker, Balaji Devaraju, Carmen Blackwood, Frank Ghoms, Maria Fernanda Camisay</i>	

11:00 Refining Geodetic Ocean Heat Content Estimates: Improved Leakage Corrections for Gravimetry and associated induced uncertainties in the Ocean Heat Content estimates
Hugo Lecomte, Sebastien Fourest, Benoit Meyssignac, Alejandro Blazquez, Julia Pfeffer, Noémie Lalau, Robin Fraudeau, Michael Ablain, Alexandre Boughanemi

11:15 Antarctic Sea Level and Steric Sea Level Variation from Observations (withdrawn)
Franck Eitel Kemgang Ghomsi, Jennifer V. Lukovich, Julianne Stroeve

11:15 Closed-loop Simulations of Current and Future Satellite Gravity Missions — a Parameter Model Comparison for Retrieving the Long-term Trend
Marius Schlaak, Roland Pail

11:30 Satellite Geodesy for Assessing Future Sea Level Change Impacts
R. Steven Nerem, Ashley Bellas-Manley, Eduard Heijkoop, Martin Kolster, Alexa Putnam
Evaluating Nigerian Transgressive Mud Coast

11:45 Recoverability of AMOC signal in satellite gravimetry: A closed loop simulation study
Linus Shihora, Marius Schlaak, Rory Bingham, Henryk Dobslaw, Roland Pail – presented by Marius Schlaak

12:00 A satellite-driven framework for long-term river discharge assessment
Paolo Filippucci, Angelica Tarpanelli

12:15 Vulnerability to Coastal Flooding Hazards in a Changing Climate
Olusegun Dada

LAVATOIO ROOM - G07

G07-4: High-precision GNSS theory and algorithms
Chairmans: *Dimitrios Psychas*

11:00 Detection and Identification of Integer Ambiguity-Resolved GNSS Model Biases
Peter Teunissen, Chengyu Yin, Christian Tiberius

11:15 Extending Geodetic Estimation Theory by Factor Graph Optimization: A Case Study On GNSS PPP
Axel Koppert, Eva Buchmayer

11:30 Long-term multipath modeling for permanent GNSS stations
Yuanxin Pan, Benedikt Soja

11:45 Dual mixed-integer least-squares estimation for GNSS baseline-length constrained direction finding
Lotfi Massarweh, Peter J.G. Teunissen

12:00 Satellite biases estimable in undifferenced and uncombined PPP-RTK: can they serve as OSB-like corrections?
Pengyu Hou, Dimitrios Psychas, Baocheng Zhang

12:15 Satellite phase bias determination in the presence of ambiguity jumps: theory and PPP-RTK results
Dimitrios Psychas, Amir Khodabandeh, Peter J. G. Teunissen

LUNCH BREAK

ANFITEATRO ROOM - H04-1

Highlight Session – H04-1: Geodesy for Climate and Water

Chairmans: *Annette Eicker, Carmen Blackwood, Jay Famiglietti*

14:00 Present-day sea level changes: the role of observations
Anny Cazenave

14:25 From Geodesy to Forecasting: Employing GNSS Atmospheric Water Vapor Observations for Hurricane Monitoring and Early Warning
Yohannes Getachew Ejigu, Maaria Nordman

14:50 Terrestrial Water Storage and Groundwater as Essential Climate Variables
Andreas Guentner

MARINA ROOM - G05

G05-4: Engineering Geodesy

Chairmans: *Janina Peplinska, Janis Kaminskis*

15:30 The new Italian LiDAR Digital Surface and Terrain Models and Aerogravimetric Database
Silvano Pecora, Maria Paola Bonofiglio, Carlo Doglioni, Giuseppe Poccia, Fernando Sansò, Riccardo Barzaghi, Renè Forsberg, Vittorio Casella, Marco Arciero, Mattia Crespi

15:45 Connecting InSAR EGMS Basic time series to ITRF for seismic hazard monitoring: problems and applications
Laura Giaccio, Alessandra Maria de Pace, Alexandru Lăpădat, Valeria Belloni, Roberta Ravanelli, Freek van Leijen, Ramon Hanssen, Mattia Crespi

16:00 High-Precision Wide-Bandwidth Deformation Monitoring Using Mass-Market GNSS/Accelerometers
Guangcai Li, Jianghui Geng, Yongjie Xu, Jacek Paziewski

16:15 Comparative Analysis of Point Clouds Acquired by iPhone 15 Pro Max equipped with ViDoc RTK Rover and Leica BLK2GO for Structural Condition Assessment
Nicole Pascucci, Laura Marconi, Maria Alicandro, Donatella Dominici, Sara Zollini

16:30 Bridge deformation monitoring using low-cost GNSS sensor array
Bence Turák, Csaba Égető, Szabolcs Rozsa

16:45 A Small Sample Data-Applicable BDS/GNSS Deformation Accurate Prediction Model Considering both Global and Local Features
Cheng Hou, Junbo Shi, Chenhao Ouyang, Jiming Guo, Jingui Zou

PARCO ROOM - G03

G03-4: Analysis, algorithms, and Models

Chairmans: *Athina Peidou, Khosro Ghobadi-Far, Rebecca McGirr, Sinem Ince*

- 15:30 CSR GRACE RL07 Processing: Results from Level-2 and Mascon Solutions
Himanshu Save, Chaoyang Zhang, Byron Tapley, Srinivas Bettadpur, Nicholas Childress, Nadege Pie, Peter Nagel, Zhigui Kang, Benjamin Krichman, Geethu Jacob, Mark Tamisiea, John Ries, Steven Poole
- 15:45 Spatiotemporal Interpolation of Residual KBR1B Data for High-Frequency Mass Change Models
Michal Cuadrat-Grzybowski, Joao Teixeira da Encarnacao
- 16:00 Evaluation and Tuning of Mascon Approach for Temporal Gravity Field Recovery
Simon Schiller, Huiyi Wu, Marius Schlaak, Roland Pail
- 16:15 On the investigation of GRACE-FO LRI post-fit residuals
Mathias Frye, Igor Koch, Jakob Flury
- 16:30 Understanding the spectral analysis of data sampled non-uniformly on a circle: Implications for satellite gravimetry
Digvijay Singh, Balaji Devaraju
- 16:45 Assimilating terrestrial time-lapse gravimetry data into hydrogeological models to resolve water storage change variations
Nazanin Mohammadi, Hamzeh Mohammadigheymasi, Landon Halloran

BORG ROOM - G01

G01-2: International Terrestrial Reference Frame: Challenges, future developments and applications Chairmans: *Mathis Bloßfeld*

- 15:30 ITRF2020 Updates: Motivations, Results and Uncertainty Evaluation
Zuheir Altamimi, Paul Rebischung, Xavier Collilieux, Julien Barnéoud, Kristel Chanard, Maylis de la Serve
- 15:45 A comparison of ITRF2020, DTRF2020 and JTRF2020
Paul Rebischung, Julien Barnéoud, Kevin Gobron, Maylis de La Serve, Xavier Collilieux, Zuheir Altamimi
- 16:00 Evaluation of ITRS 2020 realizations and their extensions for POD of altimetry and geodetic satellites
Sergei Rudenko, Mathis Bloßfeld, Manuela Seitz, Julian Zeithöfler
- 16:15 Intercomparison of ITRF2020 and JTRF2020 solutions at reference frame level
Christopher Kotsakis, Miltiadis Chatzinikos
- 16:30 Advancements in Global Terrestrial Reference Frame: A Comprehensive Analysis of GNSS Velocity Fields, Plate Motion Models, geocentric motion and CTRF2023
Hu Wang, Jing Jiao, Yingying Ren, Xinlin Wang, Wei Wang
- 16:45 ESA's efforts towards a Combination On the Observation Level
Erik Schoenemann, Ivan Sermanoukian Molina, Francesco Gini, Tim Springer, Michiel Otten, Florian Dilssner, Volker Mayer, Birgit Traiser, Sara Bruni, Jean-Christophe Berton, Frank Zimmermann, Werner Enderle, Sara Gidlund

LAVATOIO ROOM - G09

G09-1: Seafloor Geodesy, Marine Positioning and Undersea Navigation

Chairmans: *Heidrun Kopp, Valérie Ballu*

- 15:30 New technologies and operations to resolve the problem of sea surface platforms for GNSS-A
Yusuke Yokota
- 15:45 Understanding biases due to the instrumental errors in GNSS-A seafloor positioning
Shun-Ichi Watanabe, Tadashi Ishikawa, Yusuke Yokota, Yuto Nakamura, Koya Nagae
- 16:00 Acoustic Array Design and Solutions for Resisting the Sound Speed Variation Effect on the Seafloor Geodesy
Shuqiang Xue, Shuang Zhao, Zhen Xiao (树强 薛, 爽 赵, 圳 肖)
- 16:15 A novel reconstruction method of ocean sound speed field based on U-Net network with application in underwater acoustic positioning
Kaifei He, Song Wang
- 16:30 Integrating and testing pressure, inertial and photogrammetry data for seafloor mapping and marine habitat monitoring
Fabio Menna, Erica Nocerino, Alessio Calantropio, Alessandro Lambertini, Shahriar Mokhtari, Luca Vittuari, Maria Gabriella Gaeta, Cristiana Bragalli, Silvio Del Pizzo, Salvatore Troisi
- 16:45 Post-seismic viscoelastic deformation of seafloor reference points for nearly 10 years following the 2011 Tohoku-Oki earthquake Mw 9.0
Jie Dong, Shuqiang Xue

COFFEE BREAK

GROUND FLOOR - POSTER SESSION

G01-2: International Terrestrial Reference Frame: Challenges, future developments and applications

- P. 1 A Multipath Hemispherical Map with Strict Quality Control for Multipath Mitigation
Houxiang Zhou, Xiaoya Wang, Shengjian Zhong
- P. 2 Enhancing DORIS Orbit Determination: A Special Strategy for Geomagnetic Storm Days
Vikash Kumar, Petr Stepanek, Vratislav Filler, Nagarajan Balasubramanian, Onkar Dikshit
- P. 3 Multichannel singular spectrum analysis of DORIS station position time series
Sofiane Khelifa, Hicham Dekkiche
- P. 4 Modeling SLR range biases to Low Earth Orbiters - insights from a study based on 12 satellites and 20 years of data
Dariusz Strugarek, Krzysztof Sośnica
- P. 5 Impact of alignment strategy to the reference frame on the 3D annual station motions from different GNSS solutions
Janusz Bogusz, Paul Rebischung, Anna Klos
- P. 6 GRACE Data as Non-Tidal Deformation: Effect on Position Timeseries Forecast

- T. Mike Chin, Claudio Abbondanza, Richard S. Gross, Michael B. Heflin*
- P. 7 Effects of SLR orbit eccentricity on the geodetic parameter determination via simulation study
Joanna Najder, Krzysztof Sośnica, Radosław Zajdel, Tomasz Kur
- P. 8 Collaborative Efforts in GNSS Antenna Calibration: Evaluating Latitude-Dependent Position Deviations Using IGS Ring Calibration Data
Johannes Kröger, Tobias Kersten, Andria Bilich, Igor Sutyagin, Steffen Schön
- P. 9 The impact of different reference frame realizations strategies on GNSS coordinate time series in Antarctica
Kora Heidrich-Meisner, Eric Buchta, Mirko Scheinert, Martin Horwath
- P. 10 On simulation studies of space geodetic techniques for innovative combination strategies
Susanne Glaser, Anton Reinhold, Manuela Seitz
- P. 11 On the propagation of orbit errors into large-scale spurious variations in daily GNSS station position time series
Kevin Gobron, Paul Rebischung, Hanane Ait-Lakbir, Sylvain Loyer, Alvaro Santamaría-Gómez
- P. 12 Spatio-temporal GNSS time series analysis using Monte-Carlo singular spectrum analysis
Hamed Karimi, Urs Hugentobler, Mahsa Heydari
- P. 13 Analysis on BDS Satellite Antenna Phase Center Corrections and Its Contribution to the Terrestrial Reference Frame Scale
Hongzhan Zhao, Shuli Song, Xiangxiang He, Weili Zhou, Chao Huang, Maorong Ge
- P. 14 DSO DORIS Processing Toolkit: Status and Preliminary Results
Xanthos Papanikolaou, Dimitrios Anastasiou, Vangelis Zacharis, Maria Tsakiri, Vasiliki Krey, George Serelis
- P. 15 An Open-Source Python Package for Satellite Laser Ranging Data Analysis and Precise Orbit Determination (Preliminary results)
Vangelis Zacharis, Dimitrios Anastasiou, Xanthos Papanikolaou, Vasiliki Krey, George Serelis, Maria Tsakiri
- P. 16 A Proposal to Introduce a Systematic Evaluation and Release Procedure for Future ITRFs
Maria Davis, Sharyl Byram, Nick Stamatakis
- P. 17 Current developments of the BKG/DGFI-TUM IVS Combination Centre
Alexander Kehm, Sabine Bachmann, Manuela Seitz, Mathis Bloßfeld, Sandra Schneider-Leck, Daniela Thaller
- P. 18 Investigations of non-tidal loading corrections on GNSS station positions and their statistical significance
Lukas Jendges, Susanne Glaser, Lara Oppitz, Jan Martin Brockmann
- P. 19 Strategies for Combining Mono-Satellite DORIS Solutions
Karine Le Bail, Frank Lemoine, Guilhem Moreaux, Doug Chinn
- G03-1: Next Generation Technologies**
- P. 20 Error analysis and test verification of height measurement based on APM optical clock
Changliang Xiong, Lifeng Bao, Daoxin Liu, Lin Wu, Yong Wang
- P. 21 Evaluating the Geodetic Contributions of NGGM and MAGIC Missions within the SING Project
Elisavet-Maria Mamagiannou, Thomas Loudis Papanikolaou, Dimitrios Natsopoulos, Georgia Gavrilidou, George S. Vergos, Dimitrios Tsoulis
- P. 22 Overview of CARIOQA-PMP Post-Pathfinder Mission Scenarios in Context with Earth Observation User Needs
Katharina Lechner, Thomas Gruber, Roland Pail
- P. 23 Advances of Optical Interferometry in the Context of Future Satellite Gravimetry Missions
Alexey Kupriyanov, Annike Knabe, Nina Fletting, Manuel Schilling, Vitali Müller, Jürgen Müller
- P. 24 Earth's static gravity field determination based on the combination of cold atom interferometry gradiometer and optical clocks
Wenming Chen, Hao Zhou, Shuyun Zheng, Zebing Zhou, Zhicai Luo
- P. 25 An regional enhanced gravity satellite constellation in the middle and low latitudes (withdrawn)
Guangyu Jian, Min Zhong
- P. 26 Novel frequency stabilization and determination concepts for future gravity missions
Timm Wegehaupt, Sariga Sachit, Vitali Müller, Malte Misfeldt, Gerhard Heinzel, Claus Braxmaier, Jens Grosse
- P. 27 Accelerometer Data Transplant for Next-Generation Satellite Gravimetry
Mohsen Romeshkani, Jürgen Müller, Sahar Ebadi, Annike Knabe, Manuel Schilling
- P. 28 Invention of Computerized Accelerometers to Manufacture First Truly Physical Instruments for Precise Measurement of Acceleration
Peiliang Xu
- P. 29 Error analysis of the satellite gradiometry based on the new generation accelerometers
Qinglu Mu, Jürgen Müller, Changqing Wang, Wei Feng, Min Zhong, Zhi Yin
- P. 30 A Simulator for Level 1A Laser Interferometry Data (withdrawn)
Laura Müller, Vitali Müller, Malte Misfeldt and Gerhard Heinzel

- P. 31 Advancements in Laser Link Acquisition strategies for Future Gravimetry Missions
Reshma Krishnan Sudha, Vitali Müller, Malte Misfeldt, Gerhard Heinzel
- G03-2: Terrestrial Gravimetry**
- P. 32 Atmacs 2.0: reanalysis of the Atmospheric attraction computation service
Ezequiel D. Antokoletz, Hartmut Wziontek and Thomas Klügel
- P. 33 Hellenic National Gravimetric Network: Update and Data Processing
Melissinos Paraskevas, Nestoras Papadopoulos, Ioannis Katsafados, Maria Tsakiri
- P. 34 The Italian absolute gravity network G0
Riccardo Barzaghi, Daniela Carrion, Lorenzo Rossi, Barbara Betti, Federica Migliaccio, Alfonso Vitti, Federica Riguzzi, Luca Frasca, Filippo Greco, Giovanna Berrino, Alessandra Borghi, Daniele Carbone, Francesco Vespe, Alessandro Germak, Alessio Facello, Andrea Prato, Augusto Mazzoni, Federica Fuso
- P. 35 Observing and adjusting a large-scale surface gravity network in Colombia using a highly redundant measurement approach
Franco S. Sobrero, Michael Bevis, Demián D. Gómez, Arturo Echalar, Paola Montenegro, Eric Kendrick, Arielle Batistti, Lizeth Contreras Choque, Juan Carlos Catari, Carlos A. Franco Prieto
- P. 36 Three decades of absolute gravity measurements at the Finnish Antarctic research station Aboa
Jyri Näränen, Jaakko Mäkinen, Arttu Raja-Halli, Hannu Koivula
- P. 37 Refining Gravity Observations with Tidal Corrections: Case Study of the gPhone X Gravimeter at IIT Kanpur
Somalin Nath, Sushant Shekhar, B. Nagarajan, Onkar Dikshit
- P. 38 Advancements in Quantum Gravity Sensing for Geophysical Applications: Insights from the FIQUgS Project
Martina Capponi, Daniele Sampietro, Camille Janvier
- P. 39 Vertical gravity gradients above piers: is a second-degree polynomial still enough?
Anastasia Efimenko, Ilya Oshchepkov
- P. 40 Long-term absolute gravity measurements at TsNIIGAIK station
Ilya Oshchepkov, Vladislav Bashkatov, Igor Ryaskov, Irina Mezhenova, Ilmur Nevretdinov, Gennady Melnik
- P. 41 Thirty years of superconducting gravity observations at Metsähovi Geodetic Research Station, Finland
Arttu Raja-Halli, Jaakko Mäkinen, Heikki Virtanen, Jyri Näränen, Maaria Nordman, Mirjam Bilker-Koivula
- P. 42 AGrav – the International Absolute Gravity Database of IAG revisited
Sylvain Bonvalot, Hartmut Wziontek, François André
- P. 43 Participative gravity-modelling of the Balmuccia peridotite body: progress report and preliminary model constraints
Matteo Scarponi, Ludovic Baron, Denis Anikiev, Enikő Barbély, Judit Benedek, Hans-Jurgen Götze, Mohammad Ismaiel, Gábor Papp, Sabine Schmidt, Rosaria Tondi, György Hetényi
- P. 44 Execution of Mixed Gravimetric Measurements for Innovative Data Usage
Janis Kaminskis, Lubova Sulakova, Ieva Demjanenko, Leila Neimane, Dāvis Sīka
- G03-3: Spaceborne Gravimetry**
- P. 45 The NGGM/MAGIC mission performance evaluation framework (MPEF)
Roland Pail, Thomas Gruber, The Mpef Team, Ilias Daras
- P. 46 Orbit parameterization for SLR-based time-variable gravity field recovery focusing on LARES and LARES-2 satellites
Filip Galdyn, Krzysztof Sośnica
- P. 47 Precise orbit and clock determination for the Chinese gravity satellite in low-low satellite-to-satellite tracking mode
Yidu Lian, Xiang Guo, Jiale Liu
- P. 48 Combination of Swarm monthly gravity field solutions derived from different approaches
Charlotte Gschwind, Thomas Grombein, Kurt Seitz, Hansjörg Kutterer
- P. 49 COST-G: recent developments and future perspectives
Ulrich Meyer, Martin Lasser, Linda Geisser, Thorben Döhne, Christoph Dahle, Eva Boergens, Ingo Sasgen, Mathis Blossfeld, Wei Feng, Adrian Jäggi
- P. 50 Towards a new ESA Earth System Model for Future Gravity Mission Simulation Studies
Henryk Dobslaw, Linus Shihora, Volker Klemann, Laura Jensen, Robert Dill, Lone Stumpe, Yoshiyuki Tanaka, Ingo Sasgen, Bert Wouters, Moritz Langer, Jeanne Sauber, Shin-Chan Han, Ilias Daras
- P. 51 GRACE Follow-On orbit and gravity field determination using GPS carrier phase and SLR observations
Martin Lasser, Linda Geisser, Ulrich Meyer, Daniel Arnold, Adrian Jäggi
- G03-4: Analysis, algorithms, and Models**
- P. 52 Comparison and evaluation of different techniques for Downward Continuation in Airborne Gravimetry
Rafailia-Maria Mavromatidou, George Vergos
- P. 53 A GRACE-FO LRI-based static Earth gravity field recovery: Evaluation of LRI's impact on the high-frequency domain
Grigorios Kalimeris, Roland Pail, Thomas Gruber

- P. 54 The analysis of superconductive gravimeter measurements and comparisons with time series of CORS station and wells
Hanjiang Wen, Huanling Liu, Wei Wang, Tao Jiang
- P. 55 TUM GRACE Mascon Solution: Processing Chain and Preliminary Results
Huiyi Wu, Simon Schiller, Marius Schlaak, Roland Pail
- P. 56 A New Regularization Approach for GRACE Monthly Spherical Harmonic Solutions
Mingyang Xia, Hao Zhou, Zebing Zhou, Zhicai Luo
- P. 57 Detecting mass changes using along-orbit range-accelerations of GRACE-FO ranging systems
Changqing Wang, Zitong Zhu, Peng Peng, Haoming Yan, Haibo Tu
- P. 58 Detecting Momentum Transfer Events using Laser Ranging Interferometer
Pallavi Bekal, Vitali Müller, Malte Misfeldt, Laura Müller, Gerhard Heinzel
- P. 59 Gravity Field Solution by Exploiting the Full Potential of GRACE Follow-On
Sahar Ebadi, Matthias Weigelt
- P. 60 Impact of Tone Errors in GRACE-FO Inter-Satellite Ranging on Time-Variable Gravity Field Recovery
Zitong Zhu, Changqing Wang, Malte Misfeldt, Laura Müller, Yihao Yan, Vitali Müller
- P. 61 Improved regional mass change estimation using Slepian functions in a Kalman filter framework
Rebekka Steffen, Viviana Wöhnke, Annette Eicker, Matthias Weigelt
- P. 62 High-Resolution Global and Regional Reanalyses for Atmospheric De-aliasing of Satellite Gravimetry
Ziyu Liu, Petra Friederichs, Jürgen Kusche, Christian Mielke, Anne Springer
- P. 63 xGGM23 an updated geoid model for Mexico
David Avalos, Marcelo Santos, Petr Vanicek, Robert Kingdon
- P. 64 GRACE-FO Line-of-Sight Gravity Differences for Earth System Mass Variation
Shirui Yan, Greg Kalimeris, Thomas Gruber
- G05-1: Emerging Positioning Technologies and GNSS Augmentations**
- P. 65 The role of Gyro-observations and Laplace equation vs propagation of lateral refraction errors in long tunnels
Luciano Surace
- P. 66 Detection of GNSS NLOS signals in urban environments via stacking ensemble learning and signal features
Li Liu, Zhao Li, Weiping Jiang
- P. 67 ViDoc RTK Device for Ancient Walls Surveying: Accuracy Assessment and Validation with Geomatic Techniques
Raffaella Brigante, Laura Marconi, Sara Zollini, Maria Alicandro, Nicole Pascucci
- P. 68 Stochastic analysis of high-rate GNSS observations from low-cost receivers and antennas
Ibaad Anwar, Balaji Devaraju
- P. 69 Development, applications and performance of a low-cost GNSS station
Tomasz Hadaś, Grzegorz Marut, Adrian Kaczmarek, Maciej Lackowski, Kamil Kaźmierski
- P. 70 Research on Credibility Assessment Algorithms for Multi-System PPP-AR Positioning
Jinzhong Mi, Shouzhou Gu, Yuqi Pang
- P. 71 A Rigorous Semi-Tightly Coupled Model for the Integration between GNSS and INS
Mowen Li, Tianhe Xu
- P. 72 Galileo High Accuracy Service (HAS) positioning performance
Kamil Kazmierski, Tomasz Hadas, Grzegorz Marut
- P. 73 Combination of PPP-B2b, HAS and MADOCA-PPP corrections: with emphasis on the improvement of real time precise point positioning
Guo Chen, Haoyu Kan
- P. 74 An SBAS Client Positioning Algorithm Combined with Improved IGGI11 Tolerance Estimation
L. Wang, J.B. She, G.W. Huang
- P. 75 A New Stochastic Model for Precise Positioning with Low-Cost Instruments
Liwenle Liu, Xiaopeng Gong, Jun Huang
- P. 76 A GNSS Fault Detection and Exclusion Algorithm Considering Off-Diagonal Elements of the Variance-Covariance Matrix under Integrity Risk Constraints
Guanwen Huang, Jian Wang, Le Wang, Ziwei Wang
- P. 77 Collaborative Positioning with UWB and Wi-Fi RTT for Enhanced Pedestrian Localization
Harris Perakis, Guenther Retscher, Vassilis Gikas
- G09-1: Seafloor Geodesy, Marine Positioning and Undersea Navigation**
- P. 78 Ocean Sound Channel Depth Estimation Based on Machine Learning
Haopeng Fan, Kai Xiao, Yinhu Zhan
- P. 79 Resilient Integration of INS/GNSS/LBL/CTD for Enhanced Marine Navigation and Positioning
Tianhe Xu, Mowen Li
- P. 80 Spatial-Frequency Multidimensional Feature Fusion Matching Algorithm for Gravity-Aided Navigation System
Shi Liu, Lin Wu, Lifeng Bao
- P. 81 Utilization of Unmanned surface vehicles for GNSS-Acoustic measurement
Takeshi Iinuma, Motoyuki Kido, Yusaku Ohta, Tatsuya Fukuda, Fumiaki Tomita, Yusuke Yokota, Mikiko Fujita
- P. 82 Preparation for Potential Application of Seafloor Integrated Geodetic Infrastructure: Precision

Positioning Strategies for Hybrid Seafloor Beacon Constellations
Shuang Zhao, Shuqiang Xue, Zhenjie Wang, Baojin Li

P. 83 Real-time GNSS-Acoustic Precise Positioning via Sound Speed from Global Ocean Analysis and Prediction
Yang Liu, Yanxiong Liu, Guanxu Chen, Menghao Li, Qihua Tang, Yikai Feng

P. 84 Vertical deformation at the seafloor using pressure gauges: impact and mitigation of instrumental drifts and jumps
Angele Laurent, Yann-Treden Tranchant, Alexandre Duvernay, Laurent Testut, Olivier de Viron, Denis Dausse, Jean-Michel Leconte, Hanuyan Liu, Valérie Ballu

G10-1: Modern Concepts and Quantum Technology for Geodesy

P. 85 Impact of the relativistic oblateness orbit correction on GRACE-FO results and future LEO missions
Krzysztof Sośnica, Filip Gałdyn

P. 86 Impact of the Earth Tide Models on Reducing Uncertainties of the Optical Atomic Clocks in Continuous Clock Operation
Ryuichi Ichikawa, Yoshiyuki Tanaka, Ryo Honda

P. 87 CARIOQA-PMP: Simulating Quantum Space Gravimetry Missions
Nina Fletling, Annike Knabe, Jürgen Müller, Manuel Schilling, Matthias Weigelt

P. 88 Development of a High-Accuracy Transportable Yb Optical Lattice Clock
Matteo Barbiero, Irene Goti, Marco Pizzocaro, Filippo Levi, Federico Lavorenti, Alessandra Tortora, Carmelo Grova, Olmo Artesani, Giada Meogrossi, Adalberto Sapia, Mario Siciliani de Cummis, Danilo Vicari, Giancarlo Natale Varacalli, Davide Calonico, Tommaso Petrucciani

P. 89 Determination of Physical Heights via Time Transfer
Klarissa Emma Lachmann, Jürgen Müller

P. 90 Clock-based Height System Unification of Europe and Brazil – A Simulation Study
Asha Vincent, Juergen Mueller

P. 91 First analysis of ELT measurements as part of the ACES mission
Stefan Marz, Anja Schlicht, Johann Eckl, Jan Kodet, Ulrich Schreiber, Ivan Prochazka, Josef Blazej, Achim Helm, Shuo Liu, Theo Schwall, Wolfgang Schäfer, Luigi Cacciapuoti, Christophe Salomon

P. 92 Determination of temporal variations in the Earth's gravity field using novel optical clocks on-board of Low Earth Orbiters
Akbar Shabanloui, Jürgen Müller

P. 93 Development of a High-Bandwidth Quantum Gravimeter and its Applications in Geophysics
Maria Mendes, Vineetha Naniyil, Monika Pietrzyk, Sachin Kinge, Paul Wilkinson, Michael Holynski, Victoria Smith, Yu-Hung Lien

H01: Future Geodetic Satellite Missions and new Technologies

P. 94 Hydrology as seen from a network of Superconducting Gravimeters in Europe: a possible ground-truth for future satellite gravity missions
Umberto Riccardi, Tommaso Pivetta, Susanna Zerbini

P. 95 Toolbox for NGGM-MAGIC
Per Knudsen, Americo Ambrozio, Marco Restano, Ilias Daras

P. 96 Demonstration of frequency transfer over a free-space optical communication for future QZSS
Hiroshi Takiguchi, Aru Suemasa, Miho Fujieda, Toshimichi Otsubo, Yoshihisa Takayama

P. 97 Implementing near-field delay modelling into PORT for the upcoming ESA Genesis satellite mission
Akhil A. Gunessee, Özgür Karatekin, Birgit Ritter, Véronique Dehant, Georg Beyerle, Robert Heinkelmann

P. 98 METRIC: an integrated mission concept aimed at upper atmosphere mapping, fundamental physics and geodesy
Roberto Peron, Enrico Lorenzini, Simone Dell'Agnello, Alessandro Di Marco, David Lucchesi, Monia Negusini, Francesco Santoli, Vincenza Tornatore, Andrea Valmorbida, Alberto Vecchiato

P. 99 The GENESIS VLBI Transmitter: Lessons from Wettzell and Next Steps in Development
Graciela López Rosson, Akhil Gunessee, Özgür Karatekin, Željko Jelić, Véronique Dehant, Birgit Ritter, Thibaut Deleu, Urs Hugentobler, Jan Kodet, Gerhard Kronschnabl

19:00 **CLOSING OF THE REGISTRATION DESK**



Eni 2024 FOR

A Just Transition

Ogni giorno ci impegniamo per **una transizione energetica giusta**, che contribuisca a **preservare l'ambiente** e promuova l'accesso alle risorse in maniera efficiente e socialmente equa, **generando valore condiviso**. Un impegno che raccontiamo nel nostro report volontario di sostenibilità.



SCOPRI DI PIÙ SULL'IMPEGNO DI ENI
PER UN FUTURO PIÙ SOSTENIBILE



Wednesday
September 3, 2025

8:15 **OPENING OF THE REGISTRATION DESK**

MARINA ROOM - G05

G05-1: Emerging Positioning Technologies and GNSS Augmentations

Chairmans: *Dinesh Manandhar, Fabricio S. Prol, Heidi Kuusniemi, Mahmoud Elsanhoury*

- 09:00 LEO-PNT Receiver Positioning Performance for Dynamic Users: A Hardware-in-the-Loop Evaluation
Francesco Menzione, Andrea Piccolo, Domenico Di Grazia, Fabio Pisoni
- 09:15 Optimization of LEO Doppler-smoothed code positioning and velocity estimation
Yan Yang, Fei Guo, Xiaohong Zhang
- 09:30 Real-Time LEO Satellite Clock Determination — Progress and Challenges
Meifang Wu, Kan Wang, Jinqian Wang, Wei Xie, Jiawei Liu
- 09:45 Advancements in PPP with LEO-PNT Integration: A Study on Convergence Time
Marianna Alghisi, Nikolina Zalleme, Ludovico Biagi
- 10:00 A RANSAC-Based GNSS/Inertial/Visual Graph Optimization Algorithm for Complex Urban Environments
Runhua Chen, Hua Chen, Weiping Jiang
- 10:15 Collaborative Urban Navigation: Real-World Validation of Multi-Agent Multi-Sensor Systems
Anat Schaper, Fabian Ruwisch, Dennis Kulemann, Steffen Schön

PARCO ROOM - G03

G03-2: Terrestrial Gravimetry

Chairmans: *Derek van Westrum, Ezequiel Antokoletz, Neda Darbeheshti, Przemyslaw Dykowski, Sylvain Bonvalot, Wojtech Palinkas*

- 09:00 Nordic Comparison of Absolute Gravimeters – NKG CAG 2022
Mirjam Bilker-Koivula, Hartmut Wziontek, Andreas Engfeldt, Maxime Mouyen, Wojtech Palinkáš, Jyri Näränen, Stefaan Castelein, Hergeir Teitsson, Jean-Daniel Bernard, Ludger Timmen, Reinhard Falk, Vegard Ophaug, Przemyslaw Dykowski, Tomasz Olszak, Hans-Georg Scherneck
- 09:15 Realization of a traceable gravity reference at the Pecny station
Vojtech Palinkáš, Miloš Val'ko, Jakub Kostecký, Petr Křen
- 09:30 Assessing the Impact of the South-to-North Water Diversion Project: Insights from the Superconducting and Absolute Gravimeter Dataset
Peng Peng, Xing Leling, Yan Haoming, Wang Changqing
- 09:45 Absolute Quantum Gravimeters for field measurements
Romain Gautier, Vincent Ménéret, Jérémie Richard, Laura Antoni-Micollier, Pierre Vermeulen, Camille Janvier, Cédric Majek, Bruno Desruelle, Paul Bertier

- 10:00 Testing of the AQG-B07 absolute quantum gravimeter within the QuGrav Project – first results
Przemyslaw Dykowski, Adam Ciesielski, Marcin Sekowski, Vincent Ménéret, Romain Gautier

- 10:15 Regularization Approach in Tidal Analysis for Absolute Gravimetry
Adam Ciesielski, Przemyslaw Dykowski

BORGIO ROOM - G01

G01-2: International Terrestrial Reference Frame: Challenges, future developments and applications

Chairmans: *Mathis Bloßfeld*

- 09:00 Glacial induced variations in the uplift – a challenge for the reference frame
Halfdan Pascal Kierulf, Ann-Silje Kirkvik
- 09:15 Assessing and Improving Geophysical Models for Improved Future Reference Frames
Jeffrey Freymueller, Claudio Abbondanza, Jean-Paul Boy, Kristel Chanard, Sophie Coulson, Laura Jensen, Halfdan Kierulf, Anna Klos, Anthony Mémin, Laurent Métivier, Manuela Seitz, Maylis de la Serve
- 09:30 Long-term surface temperature impacts on global GNSS reference stations from 2000 to 2023
Ran Lu, Zhao Li, Danan Dong, Yanming Feng, Weiping Jiang
- 09:45 IGS BeiDou-3 satellite antenna calibration campaign
Peter Steigenberger, Paul Rebischung, Kyohei Akiyama, Elmar Brockmann, Zhiguo Deng, Florian Dilssner, Bingbing Duan, Jianghui Geng, Jing Guo, Eléonore Saquet, Arturo Villiger, Oliver Montenbruck
- 10:00 Advancing from an Individual to a Combined ANTEX product: Final Results of the IGS Ring Calibration Campaign
Tobias Kersten, Igor Sutyagin, Andria Bilich, Johannes Kröger, Steffen Schön
- 10:15 Topocentric to geocentric transformation of local tie vectors: a critical step in tie vector production?
Pierguido Sarti, Luca Vittuari, Alessandra Borghi, Maria Alessandra Tini, Monia Negusini

LAVATOIO ROOM - J01

J01-1: Geodetic Space Weather Research

Chairmans: *Andrés Calabia Aibar, Ehsan Forootan, Fabricio Dos Santos Prol, Michael Schmidt, Ningbo Wang*

- 09:00 Simultaneous multiplicative column-normalized method with time propagation (4DSMART+) for 4-D tomography of topside ionosphere and plasmasphere (Changed to Poster)
Tatjana Gerzen, Michael Schmidt, David Minkwitz
- 09:00 Spatio-temporal analysis of Global Ionospheric Maps using multi-channel singular spectrum analysis
Mahsa Heydari, Hamed Karimi, Siavash Iran-Pour, Urs Hugentobler
- 09:15 A Novel Method for Enhancing Thermospheric Mass Density Empirical Model
Yu Guo, Fei Guo, Xiaohong Zhang

09:30	Developing Earth Upper Atmosphere Forecast Tools <i>Ehsan Forootan, Saeed Farzaneh, Michael Schmidt</i>	11:00	Gravity surveys in the vertical as a tool for monitoring long-term water storage changes in the unsaturated zone <i>Marvin Reich, Daniel Rasche, Stephan Schröder, Markus Morgner, Knut Günther, Heiko Thoss, Andreas Güntner</i>
09:45	Impact of the Geomagnetic Storm in May 2024 on ALOS-2/PALSAR-2 Imageries and GNSS TEC in Japan <i>Masato Furuya, Ihsan Muafiry</i>		
10:00	Thermospheric Responses following the May 2024 Geomagnetic Storm from CASSIOPE GNSS-Based Non-Gravitational Accelerations <i>Andres Calabia, Myrto Tzamali, Shuanggen Jin, María Dolores Rodríguez, Luis del Peral</i>	11:15	Modeling Vertical Gravity Gradients Using Geodetic and Geological Data <i>Klemen Medved, Bozo Koler, Oleg Odalovic</i>
10:15	Improved GRACE-FO orbit determination during intense geomagnetic storms using onboard accelerometer measurement <i>Haonan She, Guanwen Huang, Manuel Hernández-Pajares, German Olivares-Pulido, Le Wang, Zitong Zhu</i>	11:30	Calibration of relative gravity meters and the effect on the accuracy of the results of gravimetry campaigns in the Bavarian Alps as part of the EAlpG project <i>Tobias Bauer, Jan Müller, Joachim Schwabe</i>
10:30	COFFEE BREAK	11:45	Airborne gravimetry based on strapdown technology – recent results with a new instrument <i>Vadim Vyazmin, Andrey Golovan, Oleg Kontarovich</i>
	MARINA ROOM - G05	12:00	Results of drone-based strapdown gravimetry with correction of IMU sensor misalignments <i>Bjørnar Dale, David Becker, Rene Forsberg, Tim Jensen</i>
	G05-1: Emerging Positioning Technologies and GNSS Augmentations Chairmans: <i>Dinesh Manandhar, Fabricio S. Prol, Heidi Kuusniemi, Mahmoud Elsanhoury</i>	12:15	General discussion about session <i>Przemyslaw Dykowski et al.</i>
11:00	A general atmospheric processing method for unbiased PPP-RTK reliable positioning <i>Bobin Cui, Shi Du, Guanwen Huang, Longjiang Tang, Le Wang, Schuh Harald</i>		BORG ROOM - G01
11:15	An optimized Precise Point Positioning method based on GNSS broadcast ephemeris <i>Xiaopeng Gong, Xinrui Zhang</i>		G01-2: International Terrestrial Reference Frame: Challenges, future developments and applications Chairmans: <i>Mathis Bloßfeld</i>
11:30	An extended broadcast clock and ephemeris prediction model for autonomous navigation <i>Ioulia Peppas, Urs Hugentobler, Stefan Marz, Anja Schlicht, Rafael Felix Soriano, Franziska Goettl, Francesco Formaggio, Willem Van Der Weg, Javier Miguez, Vicente Lucas Sabola, Jose Antonio Garcia Molina, Stefan Wallner, Jean-Jacques Floch</i>	11:00	IVS Contribution to the Second ITRF2020 Update <i>Benedikt Soja, Alexander Kehm, Dirk Behrend, Rüdiger Haas</i>
11:45	Leveraging Vibration Effects on Clock Performance for GNSS Receiver Fingerprinting in Dynamic Environments <i>Qianwen Lin, Steffen Schön</i>	11:15	The potential of current K-band VLBI geodesy in 2025 <i>Hana Krasna, David Gordon, Christopher S Jacobs, Aletha de Witt, Jung Taehyun, Patrick Charlot</i>
12:00	Tests on LiDAR/UWB collaborative positioning for ground vehicles <i>Andrea Masiero, Paolo Dabove, Vincenzo Di Pietra, Charles Toth, Antonio Vettore, Alberto Guarnieri, Wioleta Blaszczyk-Bak, Jelena Gabela, Czesław Suchocki, Harris Perakis, Vassilis Gikas, Valerio Baiocchi, Kai-Wei Chiang, Salil Goel</i>	11:30	Deriving a TRF from VLBI observations to Genesis - what is the impact of the inclination? <i>Helene Wolf, Lisa Kern, Sofie Steinmetz, Johannes Böhm</i>
12:15	Influence of Gravity Field on Inertial Navigation <i>Tim Jensen, René Forsberg – presented by René Forsberg</i>	11:45	Impact assessment about the inclusion of LARES-2 in the ILRS official products <i>Antonio Basoni, Vincenza Luceri, David Sarrocco</i>
	PARCO ROOM - G03	12:00	SLR Range Bias Determination Using Multi-LEO Microwave-Based Orbits <i>Linda Geisser, William Desprats, Daniel Arnold, Adrian Jäggi</i>
	G03-2: Terrestrial Gravimetry Chairmans: <i>Dinesh Manandhar, Fabricio S. Prol, Heidi Kuusniemi, Mahmoud Elsanhoury</i>	12:15	Geocenter coordinates: comprehensive analysis of determination methods and outcomes <i>Tomasz Kur, Krzysztof Sośnica, Adrian Nowak, Filip Galdyn, Radosław Zajdel</i>
			LAVATOIO ROOM - J01
			J01-1: Geodetic Space Weather Research Chairmans: <i>Andrés Calabia Aibar, Ehsan Forootan, Fabricio Dos Santos Prol, Michael Schmidt, Ningbo Wang</i>
		11:00	Retrieval and Validation of Ionospheric Indices for Ship-based Monitoring over the Arctic

15:15 Enhancing GNSS Resilience: Insights from Jammertest 2024
Youssef Tawk, Francesco Matonti

- PARCO ROOM - G03**
- G03-3: Spaceborne Gravimetry**
Chairmans: *Adrian Jäggi, Aleš Bezdek, João Encarnação, Nadège Pie*
- 14:00 Evaluating the tradespace of processing techniques for the reduction of temporal aliasing in future gravity missions
Petro Abrykosov, Roland Pail
- 14:15 Future satellite gravimetry: The quantum leap?
Philipp Zingerle, Roland Pail, Thomas Gruber
- 14:30 Simulations of gravity field recovery by the space-wise approach for the CARIOQA pathfinder and future missions
Lorenzo Rossi, Mirko Reguzzoni, Khulan Batsukh, Amir Mohammad Eslami, Federica Migliaccio – (presented by Mirko Reguzzoni)
- 14:45 Assessing the potential of MAGIC and future quantum mission constellations for hydrology and climate applications
Annette Eicker, Klara Middendorf, Philipp Zingerle, Marius Schlaak, Roland Pail, Laura Jensen
- 15:00 Joint orbit and gravity field determination from GPS carrier phase observations of Spire CubeSats
Thomas Grombein, Martin Lasser, Alexandra Miller, Daniel Arnold, Adrian Jäggi

G05-2: Multi-frequency, Multi-constellation GNSS
Chairmans: *Jianghui Geng, Pawel Wielgosz*

- 15:15 Leveraging Spire CubeSats and hSST + SLR Models for Improved Gravity Field Solutions
Parisa Shafiei, Matthias Weigelt, Adrian Jäggi, Sajad Tabibi
- BORG ROOM - G06**
- G06-3: Standardization, integration and optimization of geodetic products**
Chairmans: *Detlef Angermann, George Vergos, Nicholas Stamatakos, Robert Heinkelmann*
- 14:00 The ESA Genesis mission: tasks and challenges for the scientific community (solicited)
Johannes Böhm, Urs Hugentobler
- 14:15 Consistent, constrained or AI supported – application of system modelling approaches for improved geodetic data processing, signal separation, and prediction (solicited)
Maik Thomas, Robert Dill, Henryk Dobsław, Jan Saynisch-Wagner, Roman Sulzbach
- 14:30 Recent activities of the ICGEM Service and its contribution to the gravity field related products and their use (solicited)
E. Sinem Ince, Sven Reissland, Kirsten Elger, Christoph Foerste, Thomas Gruber, Josef Niedermaier, Alex Torkhov, Metehan Uz
- 14:45 A new ISO standard on the unique numbering of ground geodetic stations (solicited)
Thierry Gattacceca, Brice Viriv

- 15:00 Towards a consistent set of parameters for the definition of a new GRS
Urs Marti
- 15:15 Status and prospects for improvement of IAU and IERS standards related to geodesy with emphasis on Earth rotation
José M. Ferrándiz, Cheng-Li Huang, Alberto Escapa, Maria Karbon

LAVATOIO ROOM - G04

G04-3: Monitoring and Modelling of Earth Orientation Parameters Across Temporal Scales

Chairmans: *Chengli Huang, Henryk Dobslaw, Jolanta Nastula, Sadegh Modiri, Sigrid Böhm*

- 14:00 The role of theoretical corrections for planetary nutations in improving the modelling of celestial pole offsets
Jose M. Ferrandiz, Maria Karbon, Alberto Escapa, Juan F. Navarro
- 14:15 Analysis of Polar Motion Excitation Using C21 and S21 Coefficients from New Hybrid SLR+DORIS Solutions and Hydrological models
Jolanta Nastula, Justyna Śliwińska-Bronowicz, Małgorzata Wińska, Anno Löcher, Jürgen Kusche, Helena Gerdener
- 14:30 Complete resolution of the polar motion equation for the Earth's rotation
Xueqing Xu, Yonghong Zhou, Chengli Huang
- 14:45 A novel approach for direct estimation of the instantaneous Earth rotation velocity
Oleg Titov
- 15:00 UT1 measurements using Shanghai and Urumqi VGOS antennas
Jiangying Gan, Fengchun Shu, Xuan He, Yidan Huang, Li Guo, Zhong Chen, Cong Liu
- 15:15 High-precision Earth Rotation Parameters Prediction based on the combined solution with Deep Learning Method
Chenxiang Wang

COFFEE BREAK

GROUND FLOOR – POSTER SESSION

G05-2: Multi-frequency, Multi-constellation GNSS

- P. 1 Displacement monitoring and multimodal frequency identification of long-span bridges utilizing PPP-RTK
Linyu He, Hua Chen, Weiping Jiang
- P. 2 Multi-GNSS real-time satellite clocks estimation integrating regional stations and LEO observations
Wei Xie, Kan Wang, Wenju Fu, Wen Lai, Mengyuan Li, Xuhai Yang
- P. 3 Optimizing Rapid and Precise Positioning with QZSS MADOCA Ionospheric Corrections: A Comprehensive Evaluation of PPP and Long Baseline RTK Performance
Xiaolong Mi, Xingyu Chen, Yuanfan Deng, Wu Chen, Yang Yang, Yunbin Yuan

- P. 4 A machine learning-based cascade assessment method for GNSS observation data quality
Hanke Gao, Xinzhe Wang, Yibin Yao
- P. 5 Validity analysis of GNSS ephemeris through Multiple Bands
Lihong Fan, Zhaoyan Li, Rui Zhang, Junqiang Han, Siyao Wang
- P. 6 Improving Urban Geo-Monitoring with PPP Using Low-Cost GNSS Equipment Installed on lamp Posts
Zahra Bani Mostafavi, Johannes Kröger, Steffen Schön
- P. 7 Real-Time GNSS PPP Solutions accuracy assessment: insights from the INGV RING network and recent advancements
Pietro Miele, Antonio Avallone, Ciriaco D'Ambrosio, Luigi Falco, Shi Du, Maorong Ge, Roberto Devoti, Nicola Angelo Famiglietti, Carmine Grasso, Grazia Pietrantonio, Raffaele Moschillo, Annamaria Vicari
- P. 8 Modeling of highly stable GNSS ground and space clocks using piece-wise linear representations
Jari Simon Widczisk, Benjamin Männel, Jens Wickert
- P. 9 Remote time transfer calibrated GNSS receiver clock offset and its impact on positioning
Tzu-Yi Lien, Ta-Kang Yeh, Shinn-Yan Lin
- P. 10 Clustering the GNSS landscape: satellite-specific insights from geodetic time series
Radoslaw Zajdel, Kamil Smolak, Jan Douša, Peter Steigenberger, Erik Schönmann, Francesco Gini
- P. 11 Performance evaluation of multi-frequency BDS-3/INS tightly-coupled integration in urban environment
Runyi Shi, Yue Wang, Han Gao, Yinhu Zhan, Peng Xiao, Kai Xiao
- P. 12 Multi GNSS real-time precise clock estimation at GFZ: Introduction and evaluation of new data product
Andreas Brack, Shengping He, Jens Wickert
- P. 13 Enhancing real-time PPP solutions through receiver clock parameter modeling
Marcin Mikoś, Krzysztof Sośnica, Kamil Kazmierski, Steffen Schön
- P. 14 The HUST Multi-GNSS Experiment products: strategy, generation, and evaluation
Xiang Guo, Yidu Lian, Jiale Liu, Xin Yang, Tianhua Jiang, Jie Ran, Zhaoyi Zhang
- P. 15 ROTI-based GNSS Velocity Estimation Method under magnetic storm conditions
Kaifei He, Yu Fu
- P. 16 Enhancing PPP-RTK Using Ionosphere-Weighted Models with Unified Receiver DCB
Junjie Han, Xin Li, Xingxing Li, Guillermo González-Casado, Ángela Aragón Ángel, Jiande Huang
- P. 17 The new PPP-RTK service in Germany: structure, performance and challenges
Franziska Riedel, Martin Freitag, Franziska Hartmann, Christoph Knöfel, Mathias Meißies, Christian Rost, Dirk Rubart, Axel Rülke

- P. 18 Integrated precise orbit determination of GPS and LEO with LEO inter-satellite link and ground/onboard GPS observations
Wen Lai, Guanwen Huang, Le Wang, Zhiwei Qin, Shichao Xie, J. M. Ferrándiz
- P. 19 Determining satellite antenna phase centers on the third-frequency GNSS signals and its impact on the terrestrial reference frame scale
Bingchen Fu, Jianghui Geng, Qiyuan Zhang
- P. 20 Data Quality Evaluation of the Onboard Observation from Sentinel Satellites
Mengyuan Li, Haiyan Yang, Wei Xie, Xuhai Yang
- P. 21 Evaluation of Ionospheric Multi-layered Mapping Functions in GNSS Observation and Positioning Domains
Jacek Paziewski, Rafał Sieradzki, Mainul Hoque, Olaf Frauenberger, Grzegorz Nykiel, Pawel Wielgosz, Beata Milanowska, Narayan Dhita, Raul Orus Perez
- P. 22 Reference time and clock biases of multi-GNSS precise clock products and their effects on PPP timing and time transfer
Fu Zheng, Dong Zhang, Chuang Shi
- P. 23 The satellite orbit/clock/bias combination project at IGS Wuhan combination Center (withdrawn)
Qiang Wen, Jianghui Geng, Guo Chen, Yahao Zhang
- P. 24 Deep learning-augmented PPP-RTK positioning for smartphones in urban environments
Qi Xu, Xin Li, Xingxing Li, Zhiheng Shen
- P. 25 Near real-time Multi-GNSS orbits, clock and observable-specific biases at Wuhan University
Xiaolong Xu
- P. 26 Evaluating the Altimetric Performance of Low-Cost GNSS Receivers Augmented by PPP-RTK
Matteo Cutugno, Laura Marconi, Giovanni Pugliano, Fabio Radicioni, Raffaella Brigante, Umberto Robustelli, Aurelio Stoppini
- P. 27 A Comparative Analysis of Galileo HAS and SP3 Precise Orbits for GNSS Positioning
Umberto Robustelli, Matteo Cutugno, Giovanni Pugliano
- P. 28 Exploring synthetic carrier-phase measurements in ultra low-cost smartphone GNSS receivers for low-cost GNSS networks
Neil Gogoi, Paolo Dabove
- P. 29 Exploring the tolerance of AI-based Techniques for GNSS Reliable Ambiguity Resolution (Moved to Oral)
Amarildo Haxhi, Vassilis Gikas
- G05-3: GNSS for Troposphere**
- P. 30 Higher accuracy estimation of the weighted mean temperature (Tm) with the aid of machine learning and NWP model
Junyu Li, Mingyun Hu, Chaolong Yao, Feijuan Li, Lilong Liu, Liangke Huang, Yuxin Wang
- P. 31 Impact of GNSS Radio Occultation Data on High-Impact Weather Forecasts in the North Pacific
Hsu-Feng Teng
- P. 32 Assessment of Global PWV Inversion with Galileo HAS Service
Min Wang, Hanpeng Fan, Kai Xiao
- P. 33 Use of GNSS data to analysis the spatial characterization of PWV: study case in the South of Spain
Elena Giménez de Ory, Leire Retegui, María Selmira Garrido, María del Carmen García, María Clara de Lacy
- P. 34 Real-Time ZTD correction grid based on augmented GNSS network for navigation services
Antonio Basoni, Rosa Pacione, Leonardo Bagaglini, Roberto Lanotte
- P. 35 Enhancing Real-Time Tropospheric Delay Estimation: A Two-Step Model Using Global Forecast System
Zhilu Wu, Bofeng Li, Yang Yu, Qingyuan Liu
- P. 36 Enhancing CMIP6 Water Vapor Simulations with GNSS and Machine Learning: A Breakthrough in Climate Modeling
Ao Guo, Yan Xu, Nan Jiang, Luísa Bastos
- P. 37 GNSS PPP Augmentation with Remote Sensing PWV under Different Surface Types
Nan Jiang, Ranran Jia, Yan Xu, Zeqi Li, Tianhe Xu
- P. 38 GNSS Data Assimilation of Tropospheric Gradients and Zenith Total Delays for improving Severe Weather Forecasting
Rohith Thundathil, Florian Zus, Galina Dick, Jens Wickert
- P. 39 Forecasting GNSS Tropospheric Delays for Positioning and Meteorology
Piroska Laky, Béla Paláncz, Lajos Völgyesi, Szabolcs Rózsa
- P. 40 Evaluation of precipitable water vapor estimates from three reanalysis datasets with ground-based GNSS and GNSS radio occultation under typhoon conditions
Jiaqi Shi, Min Li, Andrea Steiner, Minghao Zhang, Kefei Zhang
- P. 41 Real-time tropospheric delay mapping using a geographic similarity-based neural network (Moved to Oral)
Chengbo Liu, Cuixian Lu, Yuxin Zheng, Xuanzhen Zhang
- P. 42 An improved GNSS tropospheric tomographic method by adding virtual signals
Minghao Zhang, Kefei Zhang, Pedro Mateus, Pedro M. A. Miranda, Longjiang Li, Suqin Wu, Jiaqi Shi
- P. 43 Impact of individual GNSS antenna calibration models on tropospheric estimates
Katarzyna Stepniak, Pawel Wielgosz, Jacek Paziewski
- P. 44 Real time model construction of zenith tropospheric delay in Sichuan-Yunnan region and its application in PPP with the Radiosonde and

- CORS datasets
Zhiping Chen, Xingan Luo, Tieding Lu
- P. 45 Tropospheric Delay Augmentation for PPP-AR through Integration of GFS model
Bobin Cui, Shi Du, Guanwen Huang, Le Wang, Qin Zhang
- G06-1: Contribution of geodesy to Earth observations**
- P. 46 GGOS: The Global Geodetic Observing System of the International Association of Geodesy
Laura Sanchez, Anna Riddell, José C. Rodríguez, Detlef Angermann, Martin Sehnal, Martin Lidberg, Thomas Gruber, Benedikt Soja, Michael Schmidt, Timothy Melbourne, Richard S. Gross, Jose M. Ferrandiz, Allison Craddock, Basara Miyahara, Georgios Vergos, Claudia Tocho
- P. 47 GGOS Focus Area on Geodetic Space Weather Research – Current Status
Michael Schmidt, Ehsan Forootan
- P. 48 Status and plans of the International DORIS Service
Laurent Soudarin, Guilhem Moreaux, Frank Lemoine, Cécile Manfredi, Jérôme Saunier, Mathis Bloßfeld, Hugues Capdeville, Anna Kelley, Laura Sánchez, Ernst Schrama, Patrick Schreiner, Petr Štěpánek, Maria Tsakiri, Ningbo Wang, Karine Le Bail
- P. 49 Repro3 - Preliminary results of reprocessing available GNSS stations in Greece
Dimitrios Anastasiou, Xanthos Papanikolaou, Kostas Raptakis, Maria Tsakiri
- P. 50 The Role of AI in Modern Geodesy: Insights from GGOS Focus Area AI4G
Benedikt Soja, Maria Kaselimi, Milad Asgarimehr, Sadegh Modiri, Mohammad Ali Sharifi, Santiago Belda, Lei Liu, Mohammad Omidalizari, Justyna Śliwińska-Bronowicz
- G06-2: Global geodetic infrastructure for Earth System Monitoring**
- P. 51 FocusPOD: A POD and Geodesy SW Package
Heike Peter, Carlos Fernandez Martin, Jaime Fernandez Sanchez, Javier Berzosa Molina, Luning Bao Cheng, Miguel Angel Muñoz de la Torre
- P. 52 The Hartebeesthoek Terrestrial Laser Scanning Project – Towards a VLBI delay calibration model
Axel Nothnagel, Theresa Pfaffinger
- P. 53 Strengthening Africa's Geodetic Infrastructure: Progress, Challenges, and Strategic Planning
Aletha de Witt
- P. 54 Detection, Mitigation and Recovery of Barometric Errors in Legacy SLR Data (withdrawn)
Van Husson, Christopher Szewc, Austin Gerrety
- P. 55 New 1 kHz SLR System of Zimmerwald - Transmit and Receive in the Telescope Coudé
Pierre Lauber, Adrian Jäggi
- P. 56 First assessment of SWOT DORIS data by the IDS IGN-IPGP/JPL Analysis Center
Arnaud Pollet, Samuel Nahmani, Willy Bertiger
- P. 57 Status update of the GGOS Core Site Metsähovi, Finland
Jyri Näränen, Mirjam Bilker-Koivula, Joona Eskelinen, Hannu Koivula, Ulla Kallio, Antti Laaksonen, Jouni Peltoniemi, Markku Poutanen, Arttu Raja-Halli, Nataliya Zubko
- P. 58 Progress in the geodetic infrastructure of the IHRF and ITRF implementation in SIRGAS region: Latin America
Gabriel N. Guimarães, Ezequiel Antokoletz, Ana Cristina O. C. Matos, Ayelen Pereira, José L. C. Sánchez, Walter H. S. Pina, Agustín R. Gómez, Claudia Tocho, Denizar Blizkow
- P. 59 IGS ACC Transition from Geoscience Australia to NASA
Taylor Yates, Salim Masoumi, Tom Herring, Anna Riddell, Rivers Lamb
- P. 60 GNSS Station Calibration: Experience from the SWEPOS Network
Tobias Nilsson, Martin Lidberg, Tong Ning, Lotti Jivall, Christina Lilje, Jan Johansson
- P. 61 Ongoing activities at the GGOS Bureau of Networks and Observations
José Rodríguez, Martin Lidberg, Alexander Kehm, Benjamin Männel, Roland Pail, C.K. Shum, Roger Fraser, Taylor Yates, Ryan Hippenstiel, Cornelia Eschelbach, Johannes Böhm, Riccardo Barzaghi, Georgios Vergos, Hayo Hase, Dick Behrend, Clément Courde, Toshimichi Otsubo, Allison Craddock, Markus Bradke, Jérôme Saunier, Guilhem Moreaux, Elizabeth Bradshaw, Lesley Rickards, Richard Gross
- P. 62 International VLBI Service for Geodesy and Astrometry (IVS) – status 2025
Lucia McCallum, Benedikt Soja
- P. 63 Studies of asymmetric thermal deformation of VLBI telescope
Ulla Kallio, Joona Eskelinen, Nataliya Zubko
- P. 64 Validation of DSO DORIS processing software using the JASON satellite series
Georgios Serelis, Dimitrios Anastasiou, Xanthos Papanikolaou, Vangelis Zacharis, Vassiliki Krey, Maria Tsakiri
- P. 65 Recent Geodetic Infrastructure Improvements in the Satellite Laser Station Riga
Kalvis Salmins, Janis Kaulins, Stanislav Melkov
- P. 66 What does a robust global geodesy supply chain look like? (Moved to Oral)
Liubov Poshyvailo Strube, Samuel Nahmani, José Carlos Rodríguez Pérez, Nicholas James Brown
- P. 67 The InSAR Designated Target Database; conceptual design and implementation
Ramon Hanssen, Hans van der Marel, Lennard Huisman, Freek van Leijen
- G06-3: Standardization, integration and optimization of geodetic products**

- P. 68 Role and activities of the GGOS Bureau of Products and Standards
Detlef Angermann, Thomas Gruber, Michael Gerstl, Robert Heinkelmann, Urs Hugentobler, Laura Sanchez, Peter Steigenberger
- P. 69 VLBI processing with the Bernese GNSS Software for multi-technique analysis at BKG
Claudia Flohrer, Facundo Barrera, Rolf Dach, Bingbing Duan, Urs Hugentobler, Daniela Thaller
- P. 70 Developments in the IHRF CC to generate consistent potential values for the IHRF/IHRF
George Vergos, Laura Sánchez, Riccardo Barzaghi
- P. 71 An visual exploration of consistency: case study geodetic VLBI
Maria Karbon, Santiago Belda, Alberto Escapa, Jose M. Ferrandiz
- P. 72 Metadata Recommendations for GNSS Data – Key Features and Potential for Broader Applications
Kirsten Elger
- P. 73 geodezyx: a versatile python toolbox for geodetic data manipulation with GNSS processing pedagogical features
Pierre Sakic, Samuel Nahmani, Gustavo B. Mansur
- P. 74 The ISO Geodetic Register
Michael Craymer, Larry Hothem
- P. 75 The IAS2024 coastal sea level dataset and first evaluations
Fukai Peng, Xiaoli Deng, Yunzhong Shen, Xiao Cheng
- P. 76 Future development of ICGEM within the SAMDAT Project
Aleksandr Torkhov, Kirsten Elger, E. Sinem Ince, Thomas Gruber, Christoph Förste, Josef Niedermaier, Sven Reißland, Metehan Uz
- P. 77 Status of the IERS Conventions Updates
Sharyl Byram, Nicholas Stamatakos, Maria Davis, Christian Bizouard
- G06-4: Enhancement of GGOS collaboration at regional level**
- P. 78 Geodesy in India: Current activities and plans
Ropesh Goyal, Onkar Dikshit, Nagarajan B., Shubha Pandey, Manoranjan Mohanty
- P. 79 Overview of geodetic infrastructure in South Africa - now and future options
Roelf Botha, Marisa Nickola, Aletha de Witt
- J01: Geodetic Space Weather Research**
- P. 80 Under the Storm: How the G5 Event Shaped Ionospheric Behavior and GNSS Accuracy in May 2024
Ahmed Abdelaziz, Zhang Xiaohong, Ren Xiaodong
- P. 81 Evolution of post-sunset equatorial plasma bubbles: relationships to the equatorial ionospheric anomaly induced by pre-reversal enhancement electric fields
Lung-Chih Tsai, Shin-Yi Su, Jun-Xian Lv, Harald Schuh, Mohamad Mahdi Alizadeh, Jens Wickert
- P. 82 Two Types of Plasma Flow Oscillations Observed at Midlatitude Topside Ionosphere
Shin-Yi Su, Chi-Kwan Chao, Lung-Chih Tsai, Chao Han Liu
- P. 83 Aiming the mm-level for the ionospheric error on radio signals
Gilles Wautelet, Benoît Hubert
- P. 84 Extracting GNSS ionospheric scintillation factor from multi-sampling interval geodetic receiver data
Dongsheng Zhao, Longjiang Li, Kefei Zhang
- P. 85 Negative VTEC with spherical harmonic expansion model under different solar activity conditions
Qiang Zhang, Qile Zhao
- P. 86 CARIOQA Quantum Pathfinder Mission for space weather research
Manuel Schilling, Liliane Biskupek, Stefanie Bremer, Matthias Weigelt
- P. 87 Advances on the Topside Ionosphere and Plasmasphere Modelling
Fabricio Prol
- P. 88 Research on the combination of real-time global ionospheric maps and its verification in positioning
Guangxing Wang, Juzheng Fu, Guo Chen, Xing Su
- P. 89 Crowdsourced Ionospheric delay correction Map-PLUS (CIM-PLUS): Extending Crowdsourcing RTK from precise positioning to ionospheric monitoring
Hongjin Xu, Ting Zhang, Yunbin Yuan, Xingliang Huo
- P. 90 Spatio-temporal analysis of Global Ionospheric Maps using multi-channel singular spectrum analysis (Moved to Oral)
Mahsa Heydari, Hamed Karimi, Siavash Iran-Pour, Urs Hugentobler
- P. 90 Simultaneous multiplicative column-normalized method with time propagation (4DSMART+) for 4-D tomography of topside ionosphere and plasmasphere (Moved from Oral to Poster)
Tatjana Gerzen, Michael Schmidt, David Minkwitz
- P. 91 Assimilation of GNSS Data into Deep Learning-Based Forecasting of B-Spline Representation of the Global Ionospheric State
Murat Durmaz, Engin Tunalı, Michael Schmidt
- P. 92 Ionospheric irregularities detected from GNSS measurements collected from COSMIC-2 Precise Orbit Determination antennas
Ayomide Olabode, Lucas Schreiter, Mahdi Alizadeh, Lung-Chih Tsai, Harald Schuh
- P. 93 Analysis of GPS positioning disturbing periodic radiation bursts in 24th solar cycle
Janis Balodis, Madara Normand, Ingus Mitrofanovs
- P. 94 Detecting Traveling Ionospheric Disturbances originated from seismic and non-seismic events using space geodetic techniques
M. Mahdi Alizadeh, Daniel Abdollahi, Harald Schuh, Lung Chih Tsai

17:30

CLOSING OF THE REGISTRATION DESK

A man and a woman are looking at a wireframe sphere. The man, on the right, is wearing headphones and has a beard. The woman, on the left, has short dark hair. They are both looking intently at the sphere, which is made of thin metal wires. The background is blurred, showing what appears to be an office or modern interior.

**ONE STEP AHEAD
TO BUILD THE FUTURE TOGETHER.
EVERY DAY.**

A true leader always knows how to offer solutions and innovative services.
To build the future today. To always be one step ahead.

If we are the leading insurance group in Italy in the motor sector and among the top 10 in Europe, if we are also active in the real estate and hotel sectors, if every day we accompany millions of customers with innovative solutions in their choices of protection, savings, welfare and mobility, it is because anticipating needs that evolve over time is part of our way of doing business.

Unipol, always one step ahead.



unipol.com



Thursday
September 4, 2025

8:15 **OPENING OF THE REGISTRATION DESK**

MARINA ROOM - G02

G02-2: Hydrological and Cryospheric Applications from Gravity and Satellite Altimetry

Chairmans: Eva Boergens, Shin-Chan Han, Tyler Sutterley, Wie Feng

- 09:00 Gravitational inversion for mass changes on the actual Earth surface from GRACE
B. F. Chao, Jing Li, Jin Li
- 09:15 Mass change of Antarctica from satellite gravity, altimetry and airborne campaigns
Rene Forsberg, Sebastian Simonsen, Andreas Stokholm, Tim Jensen, Carl Leuschen
- 09:30 High-resolution Greenland ice sheet mass anomalies by fusing satellite observations and model simulations using deep learning
Junyang Gou, Matthias O. Willen, Martin Horwath, Benedikt Soja
- 09:45 A new ice-mass change time series of the Patagonian Ice Fields derived from GRACE and GRACE-FO Data
Abelardo Romero, Thorben Döhne, Andreas Richter, Martin Horwath
- 10:00 Assessing the Contribution of GRACE Data to Snow Water Equivalent Estimation in Comparison with Conventional Snow Measurement Techniques
Hussein Mohasseb, Shuang Yi, Hussein Abd-Elmotaal

G02-2: Hydrological and Cryospheric Applications from Gravity and Satellite Altimetry

Chairmans: Eva Boergens, Shin-Chan Han, Tyler Sutterley, Wie Feng

- 10:15 Revolutionizing Seafloor Mapping Using SWOT-Derived Gravity and AI-Based Inversion
Biao Lu, Bjarke Nilsson, Andreas Rønne Stokholm, Bjørnar Dale, Tim Enzlberger Jensen, Gabriel Strykowski, Jonathan Frank Kirby, Rene Forsberg, Ole Baltazar Andersen, Walter H. F. Smith, David Sandwell

PARCO ROOM - G05

G05-2: Multi-frequency, Multi-constellation GNSS

Chairmans: Jianghui Geng, Pawel Wielgosz

- 09:00 How best combining GNSS to a multi-GNSS solution?
Rolf Dach, Elmar Brockmann, Daniel Arnold, Maciej Kalarus, Martin Lasser, Stefan Schaer, Pascal Stebler, Adrian Jäggi
- 09:15 CAS New Product Streams Supporting Real-Time PPP-AR of GPS, Galileo and BDS-3
Yang Li, Ningbo Wang, Zishen Li
- 09:30 Multi-GNSS clock combination for Precise Point Positioning with a focus on datum alignment
Jakub Białas, Radosław Zajdel, Marcin Mikoś, Andreas Brack, Gustavo Mansur, Pierre Sakic, Krzysztof Sośnica
- 09:45 Robust Smartphone Positioning in Urban Environments through a Factor Graph Optimization

Based PPP-RTK Framework

Feiyang Wu, Xingxing Li, Xin Li, Zhiheng Shen, Qi Xu

- 10:00 An advanced fault detection and exclusion method considering correlation coefficients to GNSS-RTK positioning integrity for landslide monitoring
Ziwei Wang, Guanwen Huang, Adrià Rovira García, Le Wang, Jian Wang, Wei Xie
- 10:15 Assessing Thermal Noise in GNSS Frequency Transfer: Insights from a Temperature Chamber Experiment
Ahmed Elmaghraby, Thomas Krawinkel, Tobias Kersten, Steffen Schön

BORG ROOM - G06

G06-2: Global geodetic infrastructure for Earth System Monitoring

Chairmans: Cornelia Eschelbach, José Rodriguez, Lucia McCallum, Martin Lidberg

- 09:00 Integration of Local-Ties to the Global Reference Frame
Cornelia Eschelbach, Michael Lösler, Rüdiger Haas, Ryan A. Hardy, Ittai Baum
- 09:15 Producing Local Tie Vectors via GNSS-VLBI Co-Observation of GNSS Satellites
Joe Skeens, Johnathan York, Leonid Petrov, Kyle Herry, Richard Ji-Cathrin, Srinivas Bettadpur
- 09:30 Omni-SLR: a compact, low-cost, multi-purpose SLR system for the future expansion of global geodetic network
Toshimichi Otsubo, Hiroshi Araki, Yusuke Yokota, Kenji Kouno, Mihoko Kobayashi, Takehiro Matsumoto, Yusuke Nakamura, Junichi Nakajima, Haruna Furui, Masaki Honda, Shinobu Kurihara, Yuichi Aoyama
- 09:45 DORIS Network status and outlook
Jérôme Saunier
- 10:00 Monitoring VLBI Instrumentation for Accurate Terrestrial Reference Frames
Karine Le Bail, Masafumi Ishigaki, Tobias Nilsson, Rüdiger Haas
- 10:15 Deformation analysis of the 26m HartRAO radio telescope for improved VLBI signal modeling
Theresa Pfaffinger, Axel Nothnagel, Roelf Botha, Philip Mey, Pieter Stronkhorst, Jonathan Quick, Marisa Nickola, Christoph Holst

LAVATOIO ROOM - J03

J03-1: Geohazards Monitoring through Geodesy

Chairmans: Jean-Mathieu Nocquet, Masayuki Kano, Michela Ravanelli, Susanna Ebmeier, Tim Melbourne

- 09:00 Linking microplate motion changes to the seismic cycle
Giampiero Iaffaldano
- 09:15 Geodetic Strain Rates and Seismicity Rates along the Apennines (Italy)
Riccardo Nucci, Enrico Serpelloni, Licia Faenza, Alexander Garcia, Maria Elina Belardinelli
- 09:30 Influence of the 2011 Tohoku-oki earthquake on the strain-rate field around the Noto Peninsula
Yohei Nozue, Yukitoshi Fukahata

09:45	Geodetic Contributions to Seismic Hazard Assessment and Insights from the 2022 Düzce Earthquake <i>Ilay Farimaz, Seda Ozarpaci, Alpay Ozdemir, Efe Turan Ayruk, Figen Eskikoy, Havva Neslihan Kiray, Cengiz Zabci</i>	11:00	GNSS tropospheric sounding - the decade past and the decade ahead <i>Kefei Zhang, Suqin Wu, Longjiang Li, Dongsheng Zhao, Peng Sun</i>
10:00	Quantitative assessment of geological hazard susceptibility zones using integrated multi-parameter ground observations <i>Wei Wang, Li Luo, Chanyin Zhang, Hanjiang Wen, Tao Jiang</i>	11:15	Integrating geodetic remote sensing with multi-satellite observations from polar-orbiting and geostationary sensors for monitoring convective and volcanic clouds <i>Hugues Brenot, Riccardo Biondi, Samuel Nahmani, Flavio Cannavò, Eric Pottiaux, Mohammed Hammouti, Alessandra Maria De Pace, Mattia Crespi, Augusto Mazzoni, Estera Trzcina, Witold Rohm</i>
10:15	Geodetic Analysis of Afterslip Following the 6 February 2023 Kahramanmaraş Earthquake Sequence <i>Efe Turan Ayruk, Seda Ozarpaci, Muhammed Turgut, Ilay Farimaz, Mehmet Kokum, Roger Bilham, Ugur Dogan</i>	11:30	Research on Vertical Tropospheric Modeling Methods for Grid-Based RTK Using ERA5 Products <i>Shouzhou Gu, Jinzhong Mi, Yuqi Pang</i>
10:30	COFFEE BREAK	11:45	An Anisotropy-Aware Lightweight Model for High-Resolution Tropospheric Delay Retrieving <i>Xuanzhen Zhang, Cuixian Lu, Yuxin Zheng, Chenbo Liu, Zhuo Wang</i>
MARINA ROOM - G02		12:00	Enhancing Rainfall Forecasting with a GRU-Based Model Using GNSS-Derived PWV and Meteorological Data <i>Longjiang Li, Kefei Zhang, Dongsheng Zhao, Minghao Zhang</i>
G02-2: Hydrological and Cryospheric Applications from Gravity and Satellite Altimetry Chairmans: <i>Eva Boergens, Shin-Chan Han, Tyler Sutterley, Wie Feng, Cheinway Hwang, Daocheng Yu, Lan Zhang, Mirko Reguzzoni, Robert Tenzer</i>		12:15	WHG: the hourly site-wise Wuhan University Horizontal Gradient product <i>Yaozong Zhou, Yidong Lou, Weixing Zhang</i>
11:00	Non-Seasonal Terrestrial Water Storage Variation and Its Response to Extreme Droughts and Floods in Southeastern China <i>Lin Zhang, Yunzhong Shen, Nico Sneeuw, Kunpu Ji, Qiujie Chen</i>	BORGO ROOM - G06	
11:15	Integrating downscaled GRACE data with SWAT+ to enhance regional terrestrial water storage monitoring in the Naryn River Basin <i>Shuxian Liu, Timo Schaffhauser, Roland Pail</i>	G06-2: Global geodetic infrastructure for Earth System Monitoring Chairmans: <i>Cornelia Eschelbach, José Rodriguez, Lucia McCallum, Aletha de Witt, Claudia Tocho, Esther Azcue</i>	
11:30	Regional gravity field solutions by applying the space-wise approach to NGGM/MAGIC simulated data <i>Mirko Reguzzoni, Lorenzo Rossi, Öykü Koç, Federica Migliaccio</i>	11:00	New VLBI sites in China and cross-border VGOS deployment (solicited) <i>Fengchun Shu</i>
G02-3: Oceanography and Solid Earth Science from Gravity and Satellite Altimetry Chairmans: <i>Eva Boergens, Shin-Chan Han, Tyler Sutterley, Wie Feng, Cheinway Hwang, Daocheng Yu, Lan Zhang, Mirko Reguzzoni, Robert Tenzer</i>		11:15	The Geodetic Reference System for the Americas (SIRGAS): efforts to maintain and enhance Geodetic Infrastructure (solicited) <i>María Virginia Mackern, Ezequiel Antokoletz, Gustavo Caubarrere, Sandra Bolanos, José Antonio Tarrío, Mauricio Varela, Gabriel Guimaraes, Hermann Drewes, Laura Sánchez, Demian Gómez</i>
11:45	A Generalizable Framework for Shallow Water Bathymetry Using Machine Learning <i>Hsiao Jou Hsu, Joachim Moortgat</i>	G06-4: Enhancement of GGOS collaboration at regional level Chairmans: <i>Cornelia Eschelbach, José Rodriguez, Lucia McCallum, Aletha de Witt, Claudia Tocho, Esther Azcue</i>	
12:00	Determination of gravity field inside oceans based on shallow layer method: a case study <i>Youchao Xie, Wen-Bin Shen</i>	11:30	GGOS Africa: Advancing Regional Geodetic Collaboration and Capacity (solicited) <i>Aletha de Witt</i>
12:15	Can SAR altimetry improve the pulse-limited altimetry waveforms? <i>Abhilasha Garkoti, Balaji Devaraju</i>	11:45	GGOS IberAtlantic: Strengthening geodetic cooperation across the Iberian-Atlantic region <i>Esther Azcue, José Manuel Ferrandiz, Javier González García, Clara Lázaro, Luisa Magalhães, Mariana Moreira, Paulo Patrício, Antonio Pazos,</i>
PARCO ROOM - G05			
G05-3: GNSS for Troposphere Chairmans: <i>Cuixian Lu, Galina Dick, Jonathan Jones, Ningbo Wang</i>			

Helena Ribeiro, Manuel Sánchez Piedra, Isabel Vigo

- 12:00 GGOS D-A-CH – A regional framework for research on the integration of geodetic observing systems
Hansjoerg Kutterer
- 12:15 GGOS Japan -Platform for enhancing country-level geodetic collaboration-
Basara Miyahara, Yusuke Yokota, Shinobu Kurihara, Shun-Ichi Watanabe, Masafumi Ishigaki, Takehiro Matsumoto, Naofumi Takamatsu, Yuichi Aoyama, Koji Matsuo, Toshimichi Otsubo

LAVATOIO ROOM - J02

J02-3: Decoding Earth's Dynamics: Machine Learning Frontiers in EOP and Gravity Field Assessment

Chairmans: *Fupeng Li, Justyna Śliwińska-Bronowicz, Sadegh Modiri, Santiago Belda, Zhangli Sun, Ashutosh Tiwari, Milad Asgarimehr, Monique Kuglitsch*

- 11:00 Ultra short-term predictions of UT1-UTC using Intensive sessions in a machine-learning framework
Arnab Laha, Matthias Schartner, Benedikt Soja, Sigrid Böhm, Johannes Böhm, Nagarajan Balasubramanian, Onkar Dikshit
- 11:15 Artificial Intelligence-Based Downscaling of Terrestrial Water Storage Grids from Simulated NGGM and MAGIC Data
Gilberto Goracci, Ilias Daras, Nicolas Longepe
- 11:30 Investigation of Machine Learning Techniques for Obtaining Line-of-Sight Gravity Difference from GRACE-FO Intersatellite Ranging Data
Daisy Bergin, Marvin Bredlau, Matthias Weigelt

J02-2: AI for Deformation Analysis and GNSS Remote Sensing: Earth, Atmosphere and Natural Hazards

Chairmans: *Fupeng Li, Justyna Śliwińska-Bronowicz, Sadegh Modiri, Santiago Belda, Zhangli Sun, Ashutosh Tiwari, Milad Asgarimehr, Monique Kuglitsch*

- 11:45 AI-Enhanced IoT System for Monitoring and Analyzing Land Subsidence in Central Taiwan
Wei-Chia Hung, Yi-An Chen, Shao-Hung Lin, Guan-Zhong Lin
- 12:00 Investigating deep learning models to predict short-term future landslide behavior using multi-temporal InSAR
Sumit Pandey, Vipin Kumar Maurya, Shivika Saxena, Ashutosh Tiwari, Shivam Chawla, Chandrakant Ojha, Ramji Dwivedi
- 12:15 AIDA++: An AI-Driven Platform for Integrated Geodetic and Earth Observation Data Analysis in Hydrology and Land Deformation
Mehdi Joud

LUNCH BREAK

ANFITEATRO ROOM - H01

Highlight Session – H01-1: Future Geodetic Satellite Missions and new Technologies

Chairmans: *Carmen Blackwood, Johannes Böhm, Susanne Glaser*

- 14:00 NGGM/MAGIC: the next step towards sustained monitoring of mass change in the Earth system
Roland Pail, Ilias Daras
- 14:30 System evaluation for new applications of a compact multi-purpose SLR system "Omni-SLR"
Yusuke Yokota, Toshimichi Otsubo, Hiroshi Araki, Kenji Kouno, Mihoko Kobayashi, Takehiro Matsumoto, Yusuke Nakamura, Junichi Nakajima, Haruna Furui, Masaki Honda, Shinobu Kurihara, Yuichi Aoyama
- 14:45 Genesis: a Future Geodetic Satellite Mission at the Foundation of Navigation
Gaia Fusco, Sara Gidlund, Pierre Waller, Evelyn Honore-Livermore, Evelina Sakalauskaite, Werner Enderle, Erik Schoenemann, Jean-Christophe Berton, Francesco Gini
- 15:15 Simulation of GENESIS' contribution to the determination of terrestrial reference frame parameters
Hanane Ait-Lakbir, Miltiadis Chatzinikos, Pacome Delva, Jean-Charles Marty, Arnaud Pollet

MARINA ROOM - G02

G02-3: Oceanography and Solid Earth Science from Gravity and Satellite Altimetry

Chairmans: *Eva Boergens, Shin-Chan Han, Tyler Sutterley, Wie Feng, Cheinway Hwang, Daocheng Yu, Lan Zhang, Mirko Reguzzoni, Robert Tenzer*

- 15:30 Vertical reference surfaces for height and depth modernization using gravimetry and satellite altimetry data around Taiwan
Cheinway Hwang
- 15:45 A new method for determining geoid gradients using SWOT wide-swath data
Xiaoli Deng, Daocheng Yu, Ole Baltazar Andersen, Mark Stewart, Huizhong Zhu,, Jia Luo
- 16:00 Optimized processing of SWOT fast-sampling data for marine gravity recovery: lessons for the 21-day science phase
Daocheng Yu, Cheinway Hwang
- 16:15 On the definition of the radial integral of the geopotential
R. Tenzer, P. Novák, M. Eshagh
- 16:30 Rifting in the Gulf of Aden: gravity rate modelling and detectability by the MAGIC mission
R. Sabadini, A. Regorda, L. Rossi, M. Reguzzoni, C.I. De Gaetani, R. Barzaghi, A.M. Marotta
- 16:45 Evaluating Ocean Eddy Dynamics in the Western Pacific Using Automated Detection and conventional altimeter/SWOT Data
Lan Zhang, Cheinway Hwang, Han-Yang Liu, Emmy T.Y. Chang,, Daocheng Yu

PARCO ROOM - G05

G05-3: GNSS for Troposphere

Chairmans: *Cuixian Lu, Galina Dick, Jonathan Jones, Ningbo Wang*

15:30 Near Real-Time Tropospheric Delay Assessment Through the Variometric Approach: A Comparative Study of Functional Models for ZTD Estimation
Alessandra Maria De Pace, Rachele Fratini, Augusto Mazzoni, Mattia Crespi

15:45 Simultaneous Troposphere Estimation with Precise Point Positioning (STEPPP)
Tomasz Hadaś, Thomas Hobiger, Grzegorz Marut, Rui Wang

16:00 Improving the spatial resolution of atmospheric water vapor estimation using low-cost GNSS sensors (withdrawn)
Szabolcs Rozsa, Bence Turák, Abir Khaldi, Bence Ambrus

16:00 Real-time tropospheric delay mapping using a geographic similarity-based neural network
Chengbo Liu, Cuixian Lu, Yuxin Zheng, Xuanzhen Zhang

16:15 Global Evaluation of Low-Cost GNSS Networks for Positioning and ZTD Estimation: Assessing Spatial and Seasonal Performance
Milad Bagheri, Andrea Masiero, Paolo Dabove

16:30 Response analysis of multiple atmospheric parameters during the 2023 boreal summer heat wave: A case study in mainland Spain
Zeqi Li, Nan Jiang, Yan Xu, Luísa Bastos, Ranran Jia, Tianhe Xu

16:45 Enhanced SSR-based GNSS precise positioning by using NWM-based a priori tropospheric delays: applications for airborne quantum gravimetry
Francesco Darugna, Henning Albers, Temmo Wübbena, Jannes Wübbena, Gerhard Wübbena

BORGO ROOM - G06

G06-1: Contribution of geodesy to Earth observations

Chairmans: *Hansjörg Kutterer, Laura Sanchez, Richard Gross*

15:30 Essential Geodetic Variables (EGVs) – Status and Roadmap towards Implementation (solicited)
Thomas Gruber, Detlef Angermann, Laura Sánchez

15:50 The Rationalization of the Essential Climate Variables (solicited)
Andreas Güntner, Peter Thorne, Stephan Bojinski, Carlo Buontempo, Sarah Connors, C. García Izquierdo, Isabelle Gärtner-Roer, Martin Herold, Stefan Kern, Belén Martín Míguez, Katrin Schroeder, Blair Trewin

16:10 Gauging and Weighting the Earth System as a Whole to Uncover the Dynamics of Climate Change (solicited)
Alexandre Couhert, Adrian Banos-Garcia, Suzanne Blondel, Alice Chapiron, Marie Cherrier, Pierre Exertier, Pascal Gegout, Théo Gravalon, Sabine Houry, Hugo Lecomte, Jean-Michel Lemoine, Flavien Mercier, Benoit Meyssignac, John Moyard, Maya Nocet-Binois, Maxime Rousselet, Alvaro Santamaria, Eléonore Saquet

16:30 Contribution of IAS Pilot Service to the Global

Geodetic Observing System (highlighted)
Xiaoli Deng, C.K. Shum, Jérôme Benveniste, Stefano Vignudelli

16:45 Proceedings of the GGOS Committee on Performance Simulations and Architectural Trade-Offs (GGOS-PLATO) (highlighted)
Alexander Kehm, Benjamin Männel, Hanane Ait-Lakbir, Mathis Bloßfeld, Johannes Böhm, Ingrid Fausk, Susanne Glaser, Lisa Kern, Tomasz Kur, Jürgen Müller, Joanna Najder, Shrishail Raut, Anton Reinhold, Matthias Schartner, Patrick Schreiner, David Schunck, Manuela Seitz, Benedikt Soja, Krzysztof Sósna, Daniela Thaller, Helene Wolf, Mingyue Zhang

LAVATOIO ROOM - G07

G07-5: Geodetic quality/integrity modelling, monitoring and design

Chairmans: *Safoora Zaminpardaz*

15:30 Sensitivity analysis of GNSS single point positioning with penalized testing and user-defined safe area
Serge Kaplev, Peter J. G. Teunissen, Sandra Verhagen

15:45 The Errors-In-Variables Model with singular covariance matrices: The choice of matrix S if the extended covariance matrix Q₁ is still singular
Shahram Jazaeri, Burkhard Schaffrin, Kyle Snow

16:00 A Comparative Assessment of Penalty-Based Detection, Identification, and Adaptation (DIA) Estimator with False Alarm Probability Control
Carlos Fortuny-Lombraña, Peter Teunissen, Christiaan Tiberius, Safoora Zaminpardaz

16:15 A proposal of DIA-testing procedure for multiple outlier identification
Krzysztof Nowel, Artur Fischer, Sebastian Ciuban

16:30 A Unified Framework for Geodetic Model Selection
Vinicius Rofatto, Ivandro Klein, Marcelo Matsuoka

16:45 Use of Finite Element Basis Functions for the Spatial and Spatio-Temporal Modeling of Geodetic Signals
Jan Martin Brockmann, Susanne Glaser, Lukas Jendges and Wolf-Dieter Schuh

COFFEE BREAK

GROUND FLOOR – POSTER SESSION

G02-1: Gravity Field and Reference Systems in Physical Geodesy

P. 1 The contribution of satellite missions in the determination of an Earth's gravity field model
Ilios Benikhlef, Sid Ahmed Benahmed Daho, Hicham Dekkiche

P. 2 Towards a refined gravimetric geoid model for Greece in support of vertical datum modernization
Georgios S. Vergos, Vassilios N. Grigoriadis, Dimitrios A. Natsiopoulos, Vassilios D. Andritsanos, Melissinos Paraskevas, Nestoras Papadopoulos

P. 3 A new gravimetric and hybrid geoid model in Albania
Dimitrios Natsiopoulos, Georgios Vergos, Kristaq Qirko, Oltjon Balliu, Endri Qershija, Perparim Ndoj

- P. 4 Geoid Closed-Loop Simulator for the FCC at CERN
Julia Azumi Koch, Benedikt Soja, Markus Rothacher
- P. 5 Physics-Informed Neural Networks for geoid modeling
Tao Jiang, Zejie Tu, Jiancheng Li, Yamin Dang, Shaojie Zhang
- P. 6 Modeling the dynamic component of the gravimetric geoid model for Japan
Koji Matsuo
- P. 7 Gravity field recovery and accelerometer calibration for GOCE
Juanxia Pan, Xiancai Zou, Minxing Zhao, Bingshi Liu, Han Liu
- P. 8 One-step Estimation of Earth Gravity Field from GRACE and Ground-based GPS Measurements Combination
Minxing Zhao, Xiancai Zou, Juanxia Pan, Luping Zhong, Han Liu, Bingshi Liu
- P. 9 Study of Residual Terrain Modeling methods for local quasigeoid determination at Argentinean stations of the International Height Reference Frame (IHRF)
Agustín Reynaldo Gómez, Claudia Tocho, Ezequiel Antokoletz, Sergio Cimbaro
- P. 10 AFRgeo2025: Geoid model for Africa implementing Moho information
Hussein Abd-Elmotaal, Norbert Kühtreiber, Kurt Seitz, Thomas Grombein, Bernhard Heck, Hansjörg Kutterer
- P. 11 'EAlpG' project – the FEM approach for local gravity field modelling in the Ehrwald/Zugspitze test area
Robert Čunderlík, Marek Macák, Pavol Zahorec, Juraj Papco, Zuzana Minarechová
- P. 12 Afro-Euro Unified Height System: Proof of Concept
Mostafa Ashry, Hussein Abd-Elmotaal, Wenbin Shen, Atef Makhloof, Abdelrahim Ruby, Mostafa Abd-Elbaky
- P. 13 Topographic Treatment in Australian Quasigeoid Modeling: Methods, Comparisons, and Future Directions (withdrawn)
Neda Darbeheshti, Jack McCubbine
- P. 14 Revisiting the establishment of the IHRF core site AUT1
Georgios S. Vergos, Ilias N. Tziavos
- P. 15 The Geomed2 project: new computations and last refinements
Riccardo Barzaghi, Georgios Vergos, Daniela Carrion, Sean Bruinsma, Sylvain Bonvalot, Corinne Salaun, Ilias Tziavos, Vassilios Grigoriadis, Lucia Seoane, Franck Reinquin, Dinh Toan Vu, Pascal Bonnefond, Per Knudsen, Ole Andersen, Tomislav Basic
- P. 16 The definition of the IHRF/IHRF in Italy
Daniela Carrion, Riccardo Barzaghi
- P. 17 Comparative Analysis of Vertical Deflections from Astrogeodetic Observations and Gravity Model Predictions
Yinhu Zhan, Anbang Yin, Shaojie Chen, Kai Xiao
- P. 18 Status of the European Alps Geoid Project
Joachim Schwabe
- P. 19 Properties of the geoid-quasigeoid separation in extreme topographic situations in the Mount Qomolangma (Everest) region
Jakob Flury, Moneeshwar Srinivasan
- P. 20 Evaluation of the performances of latest releases GOCE-Based GGMs with Ground-Based Gravity and GPS/Levelling Data over Algeria
Benahmed Daho Sid Ahmed
- P. 21 Evaluation and optimization of techniques to grid gravity anomalies for geoid modelling
Ajay S, Ropesh Goyal, Onkar Dikshit
- P. 22 A Model of the Temporal Variation of the Gravity Field in Italy based on the Integration of Historical and Modern Gravimetric Data
Gabriele Esposito, Roberta Ravanelli, Mattia Crespi
- P. 23 Impact of High-Resolution LiDAR Data on Geoid Heights in Mountainous Regions: The Case of Taiwan
Sevda Olgun, Cheinway Hwang
- P. 24 Combining RTM and equivalent source method in gravity field synthesis for the determination of Airborne Gravity Gradiometer test site
Meng Yang, Weikai Li, Wei Feng, Min Zhong
- P. 25 Application of GRACE mascon products in detecting co-seismic signals of large earthquakes
Jing Li, Jin Li, Jianli Chen
- P. 26 Enhanced GRACE-FO Gravity Field Recovery by Integrating OpenIFS Weather Model into Accelerometer Transplant and Tropospheric Delay Correction (withdrawn)
Sanam Motlaghzadeh, Felix Öhlinger, Angel Navarro Trastoy, Torsten Mayer-Gürr, Heikki Järvinen
- P. 27 Effects of the hydrosphere on topographical mass density
Michael Sheng, Cliff Shaw, Kynan Hughson, Ismael Foroughi, Robert Kingdon (presented by Marcelo Santos)
- P. 28 Geoid Determination using combinations of scalar and vector gravity observations in the New South Wales Australia
Ismael Foroughi, Mehdi Goli, Stephen Ferguson, Spiros Pagiatakis
- G02-2: Hydrological and Cryospheric Applications from Gravity and Satellite Altimetry**
- P. 29 Quantifying Coastal Vulnerability to Sea Level Rise and Land Subsidence Through Satellite Observations and Statistical Modeling
Rafailia Adam, Georgios Vergos
- P. 30 Monitoring the Spatiotemporal Evolution of Droughts by Dense GNSS network
Qian Zhao, Lina Su, Tonie Vandam, Tao Jiang
- P. 31 Analysis of GRACE/GRACE-FO time series for Danube River basin

*Juraj Janák, Pavol Letko, Zuzana Danáčová,
Barbora Korekáčová, Laura Pénzešová*

- P. 32 Monitoring glacier changes in the Pamir Plateau using multiple satellite observations (withdrawn)
Guangbin Zhu, Xiaotao Chang, Wei Liu, Song Zhang
- P. 33 A robust approach to integrate InSAR and GNSS displacements by least square collocation
Chong-You Wang, Demián Gómez
- P. 34 NGGM/MAGIC simulations for rainfall estimation over Europe by the SM2RAIN model
Muhammad Usman Liaqat, Luca Brocca, Lorenzo Rossi, Mirko Reguzzoni, Carlo Iapige De Gaetani, Riccardo Barzaghi
- P. 35 The Consistency of mass variations over the Antarctic Ice Sheet Revealed by Three Mascon Datasets
Qing Long, Xiaoli Su, Zhicai Luo
- P. 36 Assessing the performances of the space-wise approach against the time-wise approach for NGGM/MAGIC simulations: the case of Alpine divide and the Po river basin hydrological cycle
Alfonso Vitti, Bruno Majone, Diego Avesani, Lorenzo Rossi, Mirko Reguzzoni, Federica Migliaccio
- P. 37 Reconstructing Water Storage Anomalies in High-Latitude Basins Based on a Improved Empirical Model
Bingshi Liu, Xiancai Zou, Jiancheng Li, Taoyong Jin
- P. 38 Improving W3RA Hydrological Model Simulation by Assimilating GRACE/GRACE-FO Terrestrial Water Storage Observations in the Yangtze River Basin
Jun Huang, Wei Feng, Min Zhong
- P. 39 Estimation of hydrologic mass changes at the sub-catchment level using global fast mascons
Vikas Kapale, Balaji Devaraju, Saumyen Guha
- P. 40 Investigating Orthometric Height Variations Across Lake Surfaces Using Satellite Altimetry: Preliminary Results Using SWOT
Alireza Hamoudzadeh, Roberta Ravanelli, Mattia Crespi
- P. 41 Improving spatial resolution of ice sheet mass change: satellite gravimetry and altimetry data fusion
David Wiese, Johan Nilsson, Alex Gardner, Nicole Schlegel, Matthias Ellmer

G02-3: Oceanography and Solid Earth Science from Gravity and Satellite Altimetry

- P. 42 Estimation of the impact of topographic corrections on GOCE SGG data and application of downward continuation methods in the wider Hellenic and Eastern Mediterranean regions
Eleftherios Pitenis, Georgios S. Vergos
- P. 43 Inversion of GOCE based and GGM gravity data for estimation of Moho depths in mainland Greece
Eleftherios Pitenis, Georgios S. Vergos
- P. 44 The Calculation of Marine Full Tensor Gravity Gradient and Its Application in Bathymetry Recovery (withdrawn)
Zhourun Ye

- P. 45 3D numerical modelling of altimetry-derived marine gravity data and their testing by the GRAV-D airborne gravimetry
Marek Macák, Robert Cunderlik, Michal Kollar, Zuzana Minarechová, Karol Mikula
- P. 46 The DTU25 high-resolution altimetric gravity field from SWOT
Ole Andersen, Bjarke Nilsson, Per Knudsen
- P. 47 Towards the next series of DTU25 mean dynamic topography models
Per Knudsen, Ole Baltazar Andersen, Nikolai Maximenko, Jan Hafner
- P. 48 Based on Shipborne Gravity Anomaly Data Analyse Covariance Characteristic of Ocean Gravity Field (withdrawn)
Ke Baogui, Xue Shuqiang, Dong Jie
- P. 49 Comparison of airborne gravimetry with global models, marine and SWOT derived gravity data in the Norwegian coastal zone
Bjørnar Dale, Rene Forsberg, Ole Baltazar Andersen, Bjarke Nilsson, Tim Jensen, Ove Christian Dahl Omang
- P. 50 BathDNN25: A Deep Learning Model for High-Resolution Bathymetry Modeling Using SWOT-Derived Geophysical Features
Farshad Salajegheh, Xiaoli Deng, Ole Baltazar Andersen, Richard Coleman, Mehdi Khaki
- P. 51 Compatibility of Mean Dynamic Topography models with other models and data sets
Sten Claessens, Mick Filmer
- P. 52 SYSU_Topo: A SWOT-derived global bathymetric model via the gravity-geological method
Dechao An, Wei Feng, Mingzhi Sun, Xiaodong Chen, Meng Yang, Min Zhong
- P. 53 Signal sensitivity analysis for gravitational inversion of Earth and planetary mass distribution
Jin Li, Jing Li, B. F. Chao
- P. 54 Refinement of Marine geometric geoid and gravity disturbances using SWOT satellite altimetry
Aleksei Kupavoh, Artu Ellmann, Sander Varbla, Nicole Delpeche-Ellmann
- P. 55 Isostatic compensation of the Cornubian Batholith observed by a Joint Inversion of the area.
Gerardo Maurizio, Carla Braitenberg

G11-1: Data Management, Dissemination of Results, and Stakeholder Networking

- P. 56 A web-based GIS platform for integrated environmental permitting management and industrial emissions monitoring
Giada Giglione, Mirco Sturari, Gianni Giantomassi, Eva Savina Malinverni, Jonathan Fratini, Roberto Pierdicca
- P. 57 Spatial and temporal reference frames for positioning the “Aula della Meridiana” meridian (Genoa, Italy)
Ilaria Ferrando, Walter Riva, Domenico Sguerso

- P. 58 rinexmod & autorino: two tools to enable multi-GNSS and near real-time data acquisition and pre-processing
Pierre Sakic, Patrice Boissier, Jean-Marie Saurel, Cyprien Griot, Diane Pacaud
- P. 59 Satellite Geodesy related software for academic services
Xanthos Papanikolaou, Dimitrios Anastasiou, Vangelis Zacharis, Maria Tsakiri
- P. 60 The IERS Central Bureau: Coordination, Data Management, and Web Services
Daniela Thaller, Lisa Klemm, Wolfgang Dick, Sonja Geist, Sandra Schneider-Leck
- G11-2: Geodesy at the Intersection of Science and Policy**
- P. 61 Authorization of private GNSS CORS - How private GNSS CORS could be utilized for geodetic reference frame, deformation monitoring and wider applications -
Basara Miyahara, Tokuro Kodama, Michiko Umei
- G11-3: Communication, Education and Outreach in Geodesy**
- P. 62 Seeing Geodesy clearly: suitable colours for effective and inclusive visualization
Rebekka Steffen, Fabio Cramer
- P. 63 Competence acquisition in education for sustainable development as part of university studies
Michael Mayer, Hansjörg Kutterer
- P. 64 Visual Storytelling in Geodesy: Connecting Science with Society
Martin Sehnal, Riccardo Barzaghi, Laura Sánchez, Detlef Angermann
- P. 65 The Importance of Communication in Science, with a Focus on VLBI and the RAEGE project
Esther Azcue, Mariana Moreira, Luis Moura, Clara Pérez Esteban, Santiago Belda, Maria Karbon
- P. 66 Inspiring the Next Generation: The “Weltvermesserer” Campaign for Geodesy Awareness
Marlene Rybka, Annette Eicker
- J02-1: Geodetic machine learning: Theoretical challenges and opportunities for geodesy**
- P. 67 Physics-Informed Deep Learning for Estimating the Spatial Distribution of Frictional Parameters in Slow Slip Regions (withdrawn)
Rikuto Fukushima, Masayuki Kano, Makiko Ohtani, Kazuto Hirahara
- P. 67 Full-scale validation of LSTM Neural Networks for Sea Level Forecasting: Case Study in Saronikos Gulf, Greece
Nestoras Papadopoulos, Vassilis Gikas
- P. 68 Velocity Field Clustering Using Objective Weights in a Distance Metric (withdrawn)
Momo Hayashi, Masayuki Kano, Keisuke Yano, Atsushi Takahashi, Yoshikazu Terada
- P. 68 Smartphone precise positioning in complex urban areas using a novel deep-learning approach
M. Mahdi Alizadeh, Amir Hossein Pourmina, Harald Schuh
- P. 69 Sea Level Rise estimation in the Hellenic coastal zone using Tide Gauge records and Machine Learning models
Anastasia Keramitsi, Stylianos Bitharis
- P. 70 Evaluating Machine Learning Methods for Downscaling GRACE-Derived LWE
Anastasia Triantafyllou, Georgios Vergos
- P. 71 Reconstruction of The Greenland Ice Sheet Mass Variations Using Automated Machine Learning
Peisi Shang, Xiaoli Su, Zhicai Luo
- P. 72 Investigation of Neural Network-Based Modelling of Non-Tidal Surface Loading Using VLBI Data
Shivangi Singh, Johannes Böhm, Hana Krásná, Sigrid Böhm, Onkar Dikshit, Nagarajan Balasubramanian
- P. 73 Conditional Diffusion Model for Sea level Prediction using SWOT Satellite Altimetry with Uncertainty Quantification
Saeed Rajabi-Kiasari, Nicole Depeche-Ellmann, Artu Ellmann
- J02-2: AI for Deformation Analysis and GNSS Remote Sensing: Earth, Atmosphere and Natural Hazards**
- P. 74 Ionospheric Modeling Based on GNSS and VLBI Data Fusion with Machine Learning
Arno Rüegg, Benedikt Soja
- P. 75 Advancing High-Resolution Integrated Water Vapor Retrieval through AI-Driven Models
Lingke Wang, Duo Wang, Hansjörg Kutterer
- P. 76 Homogenization of GNSS integrated water vapor time series using statistical machine learning
Olivier Bock, Emilie Lebarbier, Ninh Khanh Nguyen
- P. 77 Detection of short-term slow slip signal based on deep learning of the real GNSS displacement time series of southwest Japan
Yusuke Tanaka, Masayuki Kano, Keisuke Yano, Tatsu Kuwatani
- P. 78 The potential of using Smartphone GNSS as a Cost-Effective Alternative for Ionospheric Estimation
Alireza Atabati, Masoud Mashhadi Hossainali, Linda See, Benedikt Soja
- P. 79 Prediction of Ionospheric Irregularities Using Machine Learning Algorithms: A Case Study of the April 2023 Geomagnetic Storm in Greenland
Sahand Abedpour, Iraj Jazireeyan, Alireza Atabati, Linda See, Benedikt Soja
- P. 80 Developing Anomaly Detection Model For Insar Time Series To Detect Slow Slip Events
Ryunosuke Sakurai, Yohei Kinoshita

- P. 81 Intergrating Feature Augmentation and Graph Reasoning for Topology-Aware Road Extraction in Remote Sensing Images
Ruiqi Liu, Hua Chen, Qusen Chen, Zhao Li, Jian Wang, Weiping Jiang
- P. 82 Accuracy Analysis of Error Compensation of BDS Broadcast Ionospheric Model Based on ABC-BP Neural Network
Xing Su, Jiajun Zeng, Qiang Li, Zhimin Liu, Bin Wang, Guangxing Wang
- P. 100 Unravelling Groundwater-Associated Surface Deformation in the Indo-Gangetic Plains Using Space Geodetic Observations, Multivariate analyses and modelling
Shivprasad More, Virendra M. Tiwari, Hriday J. Mahanta
- J02-3: Decoding Earth's Dynamics: Machine Learning Frontiers in EOP and Gravity Field Assessment**
- P. 83 Short-Term Space Object Orbit Prediction Using Physics-Informed Neural Network (withdrawn)
Chunmei Zhao, Haoyue Zhang
- P. 84 EOP Prediction Using Deep Learning with Diverse Input Datasets
Sonia Guessoum, Santiago Belda, Sadegh Modiri, Daniela Thaller, Maria Karbon, Jose Manuel Ferrandiz
- P. 85 Advancing Earth Orientation Parameter Forecasting through Machine Learning: Activities and Insights from the GGOS Joint Study Group 3 (AI4EOP)
Sadegh Modiri, Justyna Śliwińska-Bronowicz, Santiago Belda, Dimitrios Ampatzidis, Alireza Ardalan, Esther Azcue, Jan Becker, Liliane Biskupek, Sharyl Byram, Maria Davis, Sujata Dhar, Robert Dill, Sonia Guessoum, Dzana Halilovic, Ibnu Nurul Huda, Junyang Gou, Mostafa Kiani Shahvandi, Qiaoli Kong, Tomasz Kur, Arnab Laha, Zhao Li, Marcin Ligas, Wei Miao, Maciej Michalczak, Mariana Santos Moreira, Johnson Oguntuase, Jessica Page, Xanthos Papanikolaou, Aleksander Partyka, Victor Puente, Haibo Que, Shrishail Raut, Ole Roggenbuck, Mohammad Ali Sharifi, Sahayan Shirafkan, Robert Galatiya Suya, David Schunck, Harald Schuh, Yi Shen, Xueqing Xu, Kehao Yu, Danso Sampson Williams, Yuanwei Wu, Jihye Park, Na Wei, Qianxin Wang, Lin Wang, Kailing Yan, Zhongkai Zhang, D. Yao
- J03: Geohazards Monitoring through Geodesy**
- P. 86 GNSS Interferometric Imaging for Land Subsidence in Coal Mining Area
Tianhe Xu, Yunwei Li
- P. 87 Mapping and modeling ground deformation of last 10 years on Sebei gas field in Qinghai province, China
Yonghong Zhang, Pengchen Ding, Yonghui Kang
- P. 88 Innovation-Based Adaptive Kalman Filter for Precise GNSS Co-Seismic Displacement Estimation
Walid Bouaoula, Hicham Dekkiche, Salem Kahlouche, Mohamed Hamoudi
- P. 89 Comparisons of different vertical velocity sources: GNSS, InSAR, physical heights. Case study in Central Macedonia, Greece
Dimitrios Ampatzidis, Antonios Mouratidis, Elisavet Mamagiannou, Georgios Vergos
- P. 90 Earthquake Precursor Prediction Based on Ionospheric GNSS Total Electron Content and Multi-Input 1-D Convolutional Mixer Model
Hakan Uyanik, Mehmet Kokum, Erman Şentürk, Mohamed Freeshsh, Salih Ozcelik, Muhammed Akpınar, Serenay Çelik, Abdulkadir Sengur
- P. 91 GNSS and InSAR observations for landslide monitoring: a case study in the south-eastern Alps
Lavinia Tunini, David Zuliani, Federico Di Traglia, Lorenzo Borselli, Claudio De Luca, Teresa Nolesini, Francesco Casu
- P. 92 Tropospheric monitoring and seismic precursors analysis using data from ASI's national GNSS fiducial network
Ilaria Ferrando, Bianca Federici, Abubakr Khalid Ahmed Albashir, Gabrio Pinnizzotto, Catia Benedetto, Francesco Vespe, Domenico Sguerso
- P. 93 Analyzing the Effects of Tectonic Movements with Helmert Transformation Parameters
Pakize Küreç Nehbit
- P. 94 Detection of co-seismic ionospheric disturbances with machine learning: Case studies from the 2011 Tōhoku and 2015 Illapel Earthquakes
Marcel Iten, Laura Crocetti, Shuyin Mao, Federica Fuso, Benedikt Soja
- P. 95 Qualitative assessment of noise in sub-daily kinematic GNSS time series under varying instrumental and tectonic condition
Cristian Garcia, Benjamin Männel, Jens Wickert, Jonathan Bedford
- P. 96 A Fusion Framework of 3D Physical Model and InSAR Monitoring for Mining-Induced Deformation Analysis
Teng Wang, Yunjia Wang, Feng Zhao, Sen Du, José Fernández
- P. 97 Enhanced Two-Step InSAR Phase Unwrapping Using L2-Norm and Central Difference Information Filtering
Yansuo Zhang, Shubi Zhang, Yandong Gao, Sen Du, Juan F. Prieto, José Fernández
- P. 98 Intraplate strain rate variations associated with reservoir triggered seismicity (RTS): a study from Koyna RTS site, Western India
Himanshu Chaube, Anup Kumar Sutar, Sukanta Roy
- P. 99 Large-Scale Analysis of GNSS data in the Euro-Mediterranean region for ground deformation measurement
Letizia Elia, Leonardo Martelli, Adriano Cavaliere, Patrizia Pizzulo, Daniele Randazzo, Paolo Perfetti, Michele Proietto, Antonio Avallone, Nicola D'Agostino, Roberto Devoti, Grazia Pietrantonio, Enrico Serpelloni
- 19:00 **CLOSING OF THE REGISTRATION DESK**

Eni a *Ravenna* 2024



SCARICA IL REPORT LOCALE
DI SOSTENIBILITÀ E SCOPRI LE INIZIATIVE
DI ENI NEL TERRITORIO DI RAVENNA



Friday
September 5, 2025

8:15	OPENING OF THE REGISTRATION DESK	10:15	GNSS-Derived Ionospheric Total Electron Content (TEC) Data to Enhance Tsunami Early Warning Systems in the Mediterranean Sea <i>Federica Fuso, Michela Ravanelli – presented by Michela Ravanelli</i>
	MARINA ROOM - G02		BORGIO ROOM - G11
	G02-1: Gravity Field and Reference Systems in Physical Geodesy Chairmans: <i>Daniela Carrion, Georges Vergos, Hartmut Wziontek, Hussein Abd-Elmotaal, Ismael Foroughi, Tao Jiang</i>		G11-1: Data Management, Dissemination of Results, and Stakeholder Networking Chairmans: <i>Anna Riddell, Markus Bradke, Roger Fraser, Taylor Yates</i>
09:00	Challenges and achievements in establishing the International Height Reference Frame (IHRF) <i>Laura Sanchez, Georgios Vergos, Riccardo Barzaghi, Jianliang Huang, Jonas Agren, Bihter Erol, Claudia Tocho</i>	09:00	Construction of regional millimeter-level nonlinear epoch reference frame in China <i>Yamin Dang, Yingyan Cheng, Yuanxi Yang, Qiang Yang, Xiaoqing Wang, Tao Jiang</i>
09:15	Towards height systems based on atomic standards: perspectives in view of recent breakthroughs observing the relativistic frequency redshift <i>Jakob Flury, Martina Sacher, Gunter Liebsch, Laura M. Sanchez</i>	09:15	Geodesy in Australia <i>Anna Riddell, Lisa Hall, Ryan Ruddick</i>
09:30	Investigation of systematic errors due to stochastic modification of Stokes' formula in the realisation of IHRF <i>Jonas Agren, Anders Alfredsson</i>	09:30	Advancing the Accessibility and Quality of GNSS Data and Products through EPOS-GNSS (solicited) <i>Rui Fernandes, Carine Bruyninx, Luis Carvalho, Paul Crocker, Gael Janex, Juliette Legrand, Jean-Luc Menut, Anne Socquet, Mathilde Vergnolle</i>
09:45	The harmonic correction for the height anomaly vs. a new spherical harmonic approach in residual terrain modelling - a case study in the Central European Alps <i>Joachim Schwabe, Torsten Mayer-Gürr, Christian Hirt, Tobias Bauer</i>	09:45	FAIR GNSS data and metadata: lessons learned and way forward <i>Ivana Ivánová, Ryan Ruddick, Roger Fraser</i>
10:00	The impact of topographic density information on the quasigeoid in a remove-compute-restore procedure <i>Josef Niedermaier, Roland Pail, Thomas Gruber</i>	10:00	CDDIS Archive – Collections, Operational Support, and Users <i>Justine Woo, Taylor Yates, Colin McLaughlin, Nathan Pollack, Anna Kelley</i>
10:15	GEOID2022 alpha Debrief and Its Error Estimate <i>Ismael Foroughi, Jianliang Huang, Mark Véronneau, Yan Wang, Xiaopeng Li, Kevin Ahlgren, Ryan Hardy, David Avalos-Naranjo</i>	10:15	The Global Geodetic Observing System: Facilitating Opportunities for Strategic Outreach, Collaboration, and Engagement with External Stakeholders <i>Allison B. Craddock, Richard S. Gross, Martin Sehnal, José C. Rodríguez, Detlef Angermann, Laura Sánchez, Anna Riddell</i>
	PARCO ROOM - J03		LAVATOIO ROOM - J02
	J03-1: Geohazards Monitoring through Geodesy Chairmans: <i>Jean-Mathieu Nocquet, Masayuki Kano, Michela Ravanelli, Susanna Ebmeier, Tim Melbourne</i>		J02-2: AI for Deformation Analysis and GNSS Remote Sensing: Earth, Atmosphere and Natural Hazards Chairmans: <i>Ashutosh Tiwari, Milad Asgarimehr, Monique Kuglitsch</i>
09:00	Mediterranean submarine volcano unrests and detectability through NGGM/MAGIC <i>Carla Braitenberg, Angelo De Min, Teresa Trua, Michael Marani, Gerardo Maurizio, Federico Bernardini</i>	09:00	Detection of GNSS-TEC signatures related to seismic events through Machine Learning <i>Federica Fuso, Laura Crocetti, Michela Ravanelli, Benedikt Soja – presented by Michela Ravanelli</i>
09:15	GNSS-enhanced Earthquake & Tsunami Early Warning, Tonga Pilot Project <i>Timothy Melbourne, John Labrecque, Viliami Folau</i>	09:15	Ionospheric Slant TEC Modeling Based on GNSS Data with Machine Learning <i>Arno Rüegg, Shuyin Mao, Benedikt Soja</i>
09:30	Integrated Geodetic Processing for long-term land motion monitoring <i>Freek van Leijen, Hans van der Marel, Ramon Hanssen</i>	09:30	A Deep Learning-Based Precipitation Nowcasting Model Fusing GNSS-PWV and Radar Echo Observations <i>Mengjie Liu, Weixing Zhang, Yidong Lou, Xingping Dong, Zhenyi Zhang, Xiaohong Zhang</i>
09:45	Origin of Pre-Earthquake Common Mode Error in High-Rate Position Estimates Before the 2011 Great East Japan (Tohoku) Earthquake <i>Jeffrey Freymueller, Athina Peidou, Paul Ries</i>	09:45	Empirical Hybrid Physics and Deep Learning Model for the Vertical Correction of Atmospheric Integrated Water Vapor <i>Peng Yuan, Zhiguo Deng</i>
10:00	Probabilistic Flood Monitoring Using Normalized SAR Time Series Data for Dynamic Inundation Mapping <i>Liangyu Ta, Chen Yu, Zhenhong Li</i>		

10:00	Slant tropospheric models based on machine learning <i>Zhenyi Zhang, Benedikt Soja</i>	11:45	Automatic Detection of Turning Points for Partial Trend Analysis in InSAR Deformation Time Series: EGMS Ortho Products <i>Rasoul Eskandari, Marco Scaioni</i>
10:15	GNSS ambiguity validation through machine learning <i>Jianghui Geng, Jiang Guo</i>	12:00	Natural hazards monitoring, understanding and warning by GNSS <i>Shuanggen Jin</i>
10:30	COFFEE BREAK	12:15	Infrastructure Damage Risk Assessment due to Land Subsidence in the Joshimath town of Uttarakhand: Using advanced MT-InSAR Remote Sensing Technique <i>Shivam Chawla, Chandrakanta Ojha</i>
	MARINA ROOM - G02		BORGIO ROOM - G11
	G02-1: Gravity Field and Reference Systems in Physical Geodesy Chairmans: <i>Daniela Carrion, Georges Vergos, Hartmut Wziontek, Hussein Abd-Elmotaal, Ismael Foroughi, Tao Jiang</i>		G11-3: Communication, Education and Outreach in Geodesy Chairmans: <i>Martin Sehnal, Öykü Koc, Sujata Dhar, Szabolcs Rozsa</i>
11:00	The geoidal model for South America (SAM_GEOID2023) and the connection of local vertical datums to the IHRF <i>Gabriel N. Guimarães, Ana Cristina O. C. Matos, Denizar Blitzkow</i>	11:00	Making Geodesy Visible: IAG & GGOS Efforts to Communicate Geodetic Science <i>Martin Sehnal, Laura Sánchez, Detlef Angermann, Szabolcs Rózsa, Daniela Thaller, Riccardo Barzaghi</i>
11:15	The quest for a 1 cm geoid model in Finland <i>Mirjam Bilker-Koivula, Jussi Hedemäki, Timo Saari</i>	11:15	Strengthening the Future of Geodesy: Empowering Early Career Scientists <i>Julia Azumi Koch, Rebekka Steffen, Anna Klos, Rebecca McGirr, Anna Riddell, Artur Fischer, Michela Ravanelli, Pierre Sakic, Franck E. Ghomsi, Öykü Koç</i>
11:30	Quantum gravity and geoid determination – cases from the north (withdrawn) <i>Rene Forsberg, Hergeir Teitsson, Tim Jensen</i>	11:30	Telling Geodesy stories for maximum impact <i>Anna Riddell</i>
11:30	Physics-Informed Neural Networks for geoid modeling <i>Tao Jiang, Zejie Tu, Jiancheng Li, Yamin Dang, Shaojie Zhang</i>	11:45	Building India's Geodetic Future at NCG-IIT Kanpur <i>Onkar Dikshit, Nagarajan Balasubramanian, Sujata Dhar, Jagadish Boodala, Arnab Laha, Shivangi Singh, Ratnesh Kushwaha, Vikash Kumar, Rashmi Malik, Shilpi Chakraborty, Vipul Sharma, Revathi Nagarajan, Sushant Shekhar, Somalin Nath, Drishti Agarwal, Anuradha Sharma</i>
11:45	Evaluation of comparisons of absolute gravimeters at the Geodetic Observatory Wettzell, Germany <i>Hartmut Wziontek, Vojtech Pálinkáš, Ezequiel D. Antokoletz, Erik Brachmann</i>	12:00	Geo-understanding your land: didactic experiences <i>Paola Salmona</i>
12:00	Incorporating Atmospheric Mass into the Normal Gravity Field of the Earth <i>Ilya Oshchepkov, Irina Mezhenova, Ilmur Nevretdinov</i>	12:15	How to see from far away: Engaging Young Minds in Geodesy and Environmental Awareness through Remote Sensing <i>Sabina Mammadova, Saba Gachpaz, Matteo Bozzano</i>
12:15	Absolute gravimeters after correction for offset are secondary standards, upending the estimation of uncertainty <i>Jaakko Mäkinen</i>		LAVATOIO ROOM - J02
	PARCO ROOM - J03		J02-1: Geodetic machine learning: Theoretical challenges and opportunities for geodesy Chairmans: <i>Alireza Amiri-Simkooei, Lotfi Massarweh, Mostafa Kiani Shahvandi</i>
	J03-1: Geohazards Monitoring through Geodesy Chairmans: <i>Jean-Mathieu Nocquet, Masayuki Kano, Michela Ravanelli, Susanna Ebmeier, Tim Melbourne</i>	11:00	Full-scale validation of LSTM Neural Networks for Sea Level Forecasting: Case Study in Saronikos Gulf, Greece (withdrawn) <i>Nestoras Papadopoulos, Vassilis Gikas</i>
11:00	L-band SAR-based nationwide land deformation monitoring in Japan: application of ALOS-2/-4 satellites <i>Tomokazu Kobayashi, Masayoshi Ishimoto, Yuji Himematsu, Akihisa Hattori, Misa Ichimura, Masahiro Nakashima, Haruka Ueshiba, Momo Tanaka, Basara Miyahara</i>	11:00	Reconstruction of The Greenland Ice Sheet Mass Variations Using Automated Machine Learning <i>Peisi Shang, Xiaoli Su, Zhicai Luo</i>
11:15	Daily Monitoring of Slow Slip Events Using GNSS <i>Jean-Mathieu Nocquet, Javier Ojeda</i>	11:15	Laplacian deep ensembles: a new probabilistic
11:30	Geodetic Evidence of Land Subsidence induced by Aquifer Compaction in Jakarta from GNSS-Extensometers and InSAR <i>Alexandru Mihai Lapadat, Heri Andreas, Dhota Pradipta, Ramon Hanssen</i>		

machine learning approach for geodetic applications <i>Mostafa Kiani Shahvandi</i>		ANFITEATRO ROOM Closing Session	
11:30	Global Ionospheric Forecasting with Uncertainty Quantification using Deep Ensembles and Monte Carlo Sampling <i>Shuyin Mao, Junyang Gou, Benedikt Soja</i>	15:30	Introduction / Summary <i>Daniela Thaller (IAG Secretary General)</i>
11:45	A Deep Learning Approach for Real-Time Detection of Ionospheric Perturbations Induced by Earthquakes and Tsunamis in GNSS-TEC observations <i>Michela Ravanelli, Valentino Constantinou, Hamlin Liu, Jacob Bortnik</i>	15:35	Summary by Symposia Chairs: 11 G symposia and 3 Joint symposia <i>All Symposia Chairs</i>
12:00	Accelerating geodetic models via Neural Networks: A case study of NRLMSISE and IRI <i>Volodymyr Kashyn, Vasyi Choliy</i>	16:20	Proceedings in IAG Symposia Series <i>Jeff Freymueller / Laura Sanchez (Editors in Chief)</i>
12:15	Smartphone precise positioning in complex urban areas using a novel deep-learning approach (withdrawn) <i>M. Mahdi Alizadeh, Amir Hossein Pourmina, Harald Schuh</i>	16:30	Geodesy Cartoon Competition <i>Martin Sehnal (GGOS Coordinating Office)</i>
12:15	Advancing Earth Orientation Parameter Forecasting through Machine Learning: Activities and Insights from the GGOS Joint Study Group 3 (AI4EOP) <i>Sadegh Modiri, Justyna Śliwińska-Bronowicz, Santiago Belda, Dimitrios Ampatzidis, Alireza Ardalan, Esther Azcue, Jan Becker, Liliane Biskupek, Sharyl Byram, Maria Davis, Sujata Dhar, Robert Dill, Sonia Guessoum, Dzana Halilovic, Ibnu Nurul Huda, Junyang Gou, Mostafa Kiani Shahvandi, Qiaoli Kong, Tomasz Kur, Arnab Laha, Zhao Li, Marcin Ligas, Wei Miao, Maciej Michalczak, Mariana Santos Moreira, Johnson Oguntuase, Jessica Page, Xanthos Papanikolaou, Aleksander Partyka, Victor Puente, Haibo Que, Shrishail Raut, Ole Roggenbuck, Mohammad Ali Sharifi, Sahayan Shirafkan, Robert Galatiya Suya, David Schunck, Harald Schuh, Yi Shen, Xueqing Xu, Kehao Yu, Danso Sampson Williams, Yuanwei Wu, Jihye Park, Na Wei, Qianxin Wang, Lin Wang, Kailing Yan, Zhongkai Zhang and D. Yao</i>	16:40	Invitation to IUGG General Assembly 2027 in Incheon, Korea <i>Jungho Cho (Representative of the LOC)</i>
		16:45	Next IAG SA 2029 <i>Daniela Thaller (IAG Secretary General)</i>
		16:50	Farewell by Conference Center <i>Italian Exhibition Group / Palacongressi Rimini</i>
		16:55	Summary / Farewell by LOC <i>Stefano Gandolfi (chair of LOC)</i> <i>(Full Professor in Geomatics; Civil, chemical, Environmental and Material Engineering Department, University of Bologna)</i>
		17:00	Farewell by IAG <i>Richard Gross (IAG President)</i>
		17:00	CLOSING OF THE REGISTRATION DESK
12:30	LUNCH BREAK		
	ANFITEATRO ROOM - H03 Highlight Session – H03-1: Geodetic Monitoring for Geohazards Chairmans: <i>Jean-Mathieu Nocquet, Laura Sanchez, Tim Melbourne</i>		
14:00	Strain Localization and Inelastic Deformation of Inland Japan and Their Implications for Seismic Hazard <i>Takeshi Sagiya, Angela Meneses-Gutierrez, Ai Tamaoki</i>		
14:20	Synergy of GNSS, InSAR and Seismic data for monitoring of Santorini Volcano (Greece): Insights from Past and Ongoing Volcanic Unrest <i>Stylianios Bitharis, Michael Foumelis, Costas Papazachos, Christos Pikridas, Elisa Trasatti, Elena Papageorgiou, Chrisa Ventouzi, Charalampos Kkallas</i>		
15:00	Exploring ALTRUIST: harnessing GNSS towards the Enhancement of Tsunami Early Warning Systems <i>Michela Ravanelli, Elvira Astafyeva, Mattia Crespi</i>		

e-geos

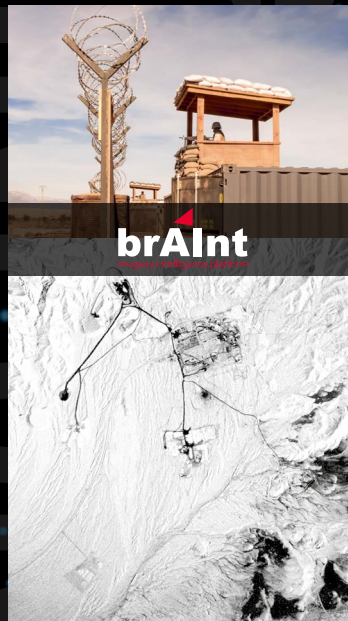
AN ASI / TELESPAZIO COMPANY

WE **UNLOCK** EARTH

Advanced Geoinformation to turn data into knowledge



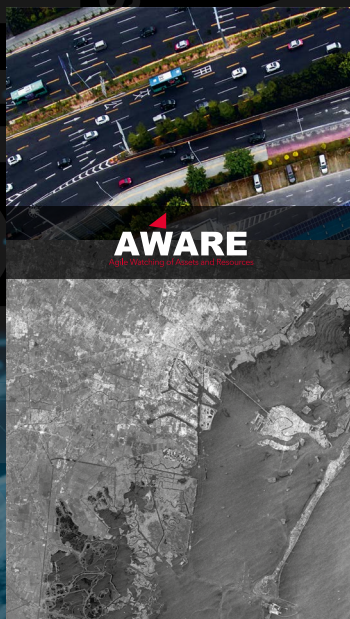
Maritime Surveillance



Defence and Intelligence



Agriculture Management



Asset Management



Emergency Management



sales.info@e-geos.it



e-geos.it



[@e_geos](https://www.linkedin.com/company/e-geos)

