The International Association of Geodesy
Update

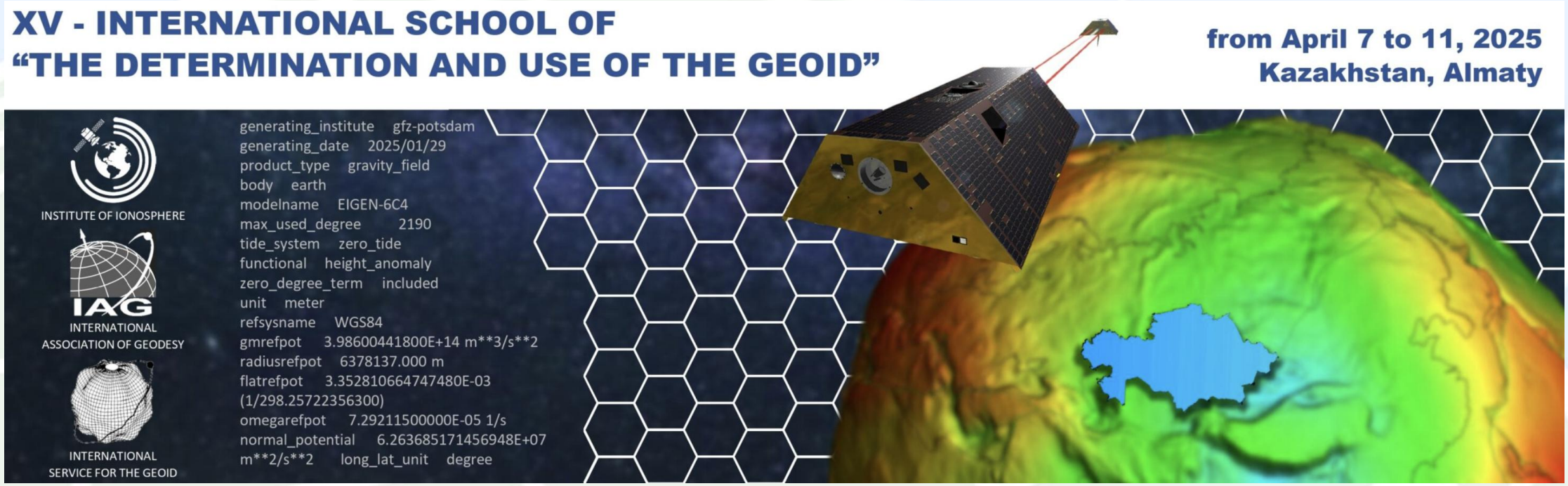
Richard S. Gross
International Association of Geodesy

6th Plenary of the UN-GGIM
Subcommittee on Geodesy

March 9-12, 2026
Bonn, Germany

Capacity Development

15th International School
The Determination and Use of the Geoid



The intensive week-long Geoid School is aimed at training students, early-career scientists, and professionals from national agencies, universities, and research institutes by providing them with the knowledge and skills necessary for computing and applying gravimetric geoids in various scientific and technical geodetic applications. Participants will gain valuable insights into the latest advancements in geoid determination and have the opportunity to establish international collaboration and interaction with experts in gravity field modeling.

DORIS Days
November 3 and 5, 2025

The IDS is organizing a new edition of the "DORIS Days" designed to offer both a foundational and hands-on experience with DORIS and the IDS community, tailored especially to early-career researchers and students.

Monday, 3 November (second half of UTC day)

Introductory and advanced presentations on the DORIS system, IDS, precision applications, and associated tools and products.

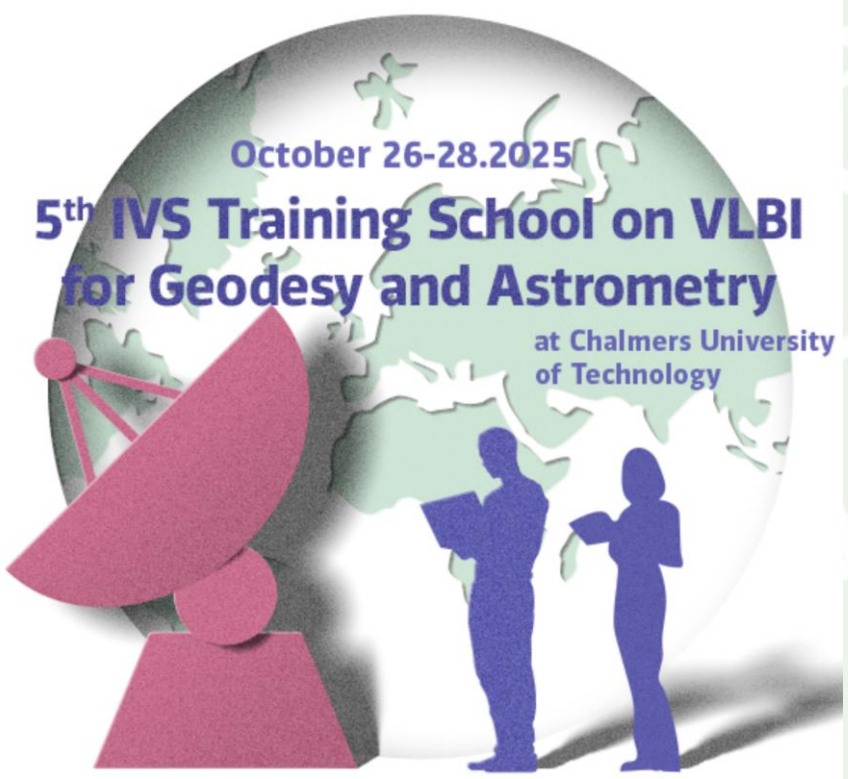
Venue: online only

Wednesday, 5 November (full day, hybrid with **in-person participation strongly encouraged**)

Introduction to handling and processing DORIS data, with theoretical lectures and guided practical sessions using Jupyter Notebook.

Venue: National Technical University of Athens, Greece – Zografos Campus, School of Rural Surveying & Geoinformatics Engineering, Labadarion Building 9 Heroon Polytechniou Street, 15780 Athens

5th IVS Training School
VLBI for Geodesy and Astrometry



The 5th IVS Training School on VLBI for Geodesy and Astrometry will be held from October 26 to 28, 2025 at Chalmers University of Technology. The aim of this training school is to prepare for the next generation of VLBI, both in terms of the technical development and knowledge transfer between generations of researchers. The new VLBI Global Observing System (VGOS) is being installed worldwide and continues to develop. VGOS promises significant improvement in the accuracy of VLBI results. Thus, VGOS will be of great importance for geosciences and global change research as part of the Global Geodetic Observing System (GGOS).

The successful development of VLBI technology in the future requires training and educating the young generation of scientists and their familiarization with all aspects of VLBI technology, starting with VLBI station instrumentation receiving and converting the radio signal, data processing and analysis and obtaining the final results, such as Terrestrial and Celestial Reference Frames and Earth Orientation Parameters.

The IVS Training School will be organized by the IVS Committee on Education and Training (IVS CTE, more information at IVS CTE webpage) and teaching team consisting of excellent experts in the field.

1st GGOS IberAtlantic Summer School

July 14-18, 2025 Yebes, Spain

The **1st GGOS IA Summer School** offers a unique educational opportunity focused on GGOS-related topics. Over five days, participants will engage in theoretical and practical sessions covering techniques such as VLBI, GNSS, SLR, DORIS, Gravimetry, and Local Tie measurements. The event will showcase the RAEGE project and provide hands-on exposure to operations in fundamental geodetic stations worldwide, including data post-processing and analysis. Additionally, the program fosters networking not only with peers who share similar academic interests but also with experienced professionals, providing valuable insights into real-world applications and expertise in geodetic sciences.

16th SIRGAS School
VLBI and SLR Data Processing

🗓️ **Dates:** From Monday, **October 27th to Saturday, November 1st, 2025**

📍 **Location: San Juan, Argentina**

🎯Course Objective:

This course aims to provide the theoretical concepts and **practical tools necessary for the analysis and processing of VLBI and SLR techniques**, delving into their **application in the definition a**nd maintenance of geodetic reference frames.

SIRGAS Virtual School 2025

Terrestrial Reference Frame, Geodynamic & Atmospheric Monitoring

🎯 **Course Objective**: The objective of the 2025 School is to provide the most important concepts on the definition, implementation, and maintenance of global, continental, and national reference frameworks, as well as their importance in various applications. It will also address advances in Earth System monitoring in response to the challenges posed by climate change, which is already affecting us and impacting our most vulnerable societies.

School: "Terrestrial Reference Frame, Geodynamic and Atmospheric Monitoring"

Module	Session	Time (UTC -03:00)	Affair	Possible Trainers
June 3, 2025 Tuesday	1.a	09:00-09:25	International Association of Geodesy (IAG), coordination, data, products and services	Richard Gross
		09:30-09:55	-International Celestial Reference System and Frame (ICRS/ICRF) -International Terrestrial Reference System and Frame (ITRS/ITRF)	Daniela Thaller
		10:00-10:20	VLBI: Features, advantages, contributions in ICRF, ITRF and terrestrial orientation parameter estimation.	Aletha De Witt
		10:25-10:45	DORIS: Features, advantages, contributions in ICRF, ITRF and terrestrial orientation parameter estimation.	Guilhem Moreaux
		10:50-11:10	SLR: Characteristics, advantages, contributions in the ICRF, ITRF and earth orientation parameters estimation.	José Rodriguez
	BREAK			
	1. b	11:30-11:50	GNSS: Characteristics, advantages, contributions in the ITRF and earth orientation parameters estimation.	Paul Rebischung
		11:55-12:05	AGGO: A fundamental geodetic observatory in South America	Mauricio Gende
		12:10-12:30	ITRF Definition, materialization, calculation, contributions from techniques.	Zuheir Altamimi
		12:35-13:00	The Global Geodetic Observing System of the International Association of Geodesy	Laura Sánchez
June 5, 2025, Thursday	2.a	09:00-09:35	GNSS Concepts, Constellations, Observables and Frequencies Positioning Methods – PPP – Post-processing and Real-time Ambiguity Resolution – "Floating" and "Fixed" Solutions	João Francisco Galera Monico
		09:40-10:00	GNSS networks, regional and national densification. Coordination, cooperation, and standards.	Victor Cioce
		10:05-10:25	Structure, topographic marker type, equipment (receiver and antennas), calibration. Antenna phase center variation (PCV) corrections. Formats.	Victor Cioce
		10:30-10:50	Atmospheric models and parameter estimation (Troposphere and Ionosphere used in processing, DCB, ambiguity resolution methods/models).	M. Virginia Mackern
	BREAK			
	2. b	11:20-11:45	-SIRGAS-CON network processing. -SIRGAS products: weekly coordinates.	Sonia A. Costa
		11:50-12:15	SIRGAS products: multi-year coordinates, velocities and velocity models	Laura Sánchez
		12:20-13:00	Geodesy in Africa: Policy frameworks, the state of geodetic infrastructure, and aspirations for strengthening the geodesic supply chain across the continent.	Aletha De Witt

June 6, 2025, Friday	3. a	09:00-09:50	Scientific GNSS network processing using Gamit Globk.	Demian Gómez
		10:00-10:50	Scientific GNSS network processing using Bernese.	José A. Tarrio
	BREAK			
	3.b	11:20-11:45	Geodynamics. Plate tectonics. Geophysical models. Geodetic estimations.	-Demian Gómez -Mara Figueroa
		11:50-12:15	Dynamic Reference Frameworks, experiences in the SIRGAS region.	-Demian Gómez -José A. Tarrio -Mara Figueroa
		12:20-13:00	Deformation models, post-seismic deformation.	-Demian Gómez -José A. Tarrio -Mara Figueroa
June 10, 2025 Tuesday	4. a	09:00-09:30	- Concepts of Heights.. Reference surfaces. Types of heights. -Vertical reference system. Existing height systems.	Laura Sánchez
		09:40-10:00	Gravimetry and gravity infrastructure in Latin America	Denizar Blitzkow
		10:05-10:25	Modernization of altimetric and gravimetric networks (case of Uruguay).	Walter Subiza Piña
		10:30-10:50	Geoid models, data, calculations, precision, resolutions.	Ana Cristina O. C. de Matos
	BREAK			
	4. b	11:20-11:40	Status of the International Height Reference System (IHRS) and its realisation, the International Height Reference Frame (IHRF)	Laura Sánchez
		11:45-12:00	Status of the International Terrestrial Gravity Reference System and Frame (ITGRS/ITGRF)	Ezequiel Antokoletz
		12:05-12:20	The International Height Reference Frame Coordination Centre (IHRF-CC).	Claudia Tocho
		12:25-12:40	Contribution and integration of SIRGAS to the IHRF and ITGRF. Requirements.	Gabriel Guimarães
		12:45-13:00	Contribution and integration of Africa to the IHRF and ITGRF. Requirements.	Simphiwe Mphuthi
June 12, 2025, Thursday	5. a	09:00-09:25	Atmospheric remote sensing: Contributions of geodetic techniques to atmospheric monitoring.	Kyriakos Balidakis
		09:30-09:55	Tropospheric delay from GNSS, VLBI and SLR Intra- and Inter-Technique Atmospheric Ties	-Johannes Böhm. -Daniela Thaller
		10:00-10:30	ZTD estimates on regional and international networks. Contributions to climatology and meteorology.	Rosa Paccione
		10:35-11:00	Real-time tropospheric monitoring	Galina Dick
	BREAK			
	5. b	11:30-11:55	ZTD and IWV of SIRGAS GNSS stations.	M. Laura Mateo
		12:00-12:25	Ionospheric modeling with GNSS and altimetry satellite data	Francisco Azpilicueta
		12:30-13:00	-Real-time ionospheric monitoring and modeling. -VTEC models for high-precision, high-resolution applications.	Manuel Hernández-Pajares

Outreach and Advocacy

Closing Event of Research Project

Development & Implementation of a Kinematic Geodetic Reference Framework

November 10, 2025 Universidad de Santiago de Chile

Temática	Hora	Duración	Actividad	Detalle / Ponente
Proyecto IDEA I+D ID23I10147	15:00 – 15:05	05 min	Bienvenida institucional	**Dr. Marcelo Caverlotti Silva** Director del Departamento de Ingeniería Geoespacial y Ambiental, USACH
	15:05 – 15:10	05 min	Palabras de autoridades Ministerio de Minería	**Sr. Andrés León** Director Servicio Nacional de Geología y Minería
	15:10 – 15:30	***20 min***	***Conferencia Magistral***	***Dr. Richard Gross,*** ***Presidente de la IAG, Senior Research Scientist (NASA/JPL)*** ***"Marcos de Referencia Terrestres: la visión de la Asociación Internacional de Geodesia (IAG)"***
	15:30 – 15:40	10 min	Presentación de resultados del proyecto IDEA I+D ID23I10147	**Dr. José Antonio Tarrío,** director proyecto IDEA I+D ID23I10147 Productos, herramientas y resultados alcanzados
	15:40 – 15:50	10 min		**Ing Marcela Webar, Geocom** Transferencia tecnológica de los resultados
IGS Workshop 2026	**15:50 – 16:10**	**20 min**	**Conferencia Magistral**	**Dr. Richard Gross, Presidente de la IAG, Senior Research Scientist (NASA/JPL)** **"Servicio Internacional de GNSS"**
	16:10 – 16-20	10 min	Lanzamiento del Congreso Internacional	**Comité Organizador Local (LOC USACH)** "International GNSS Service (IGS) Workshop 2026 – Santiago de Chile"
Cierre	16:20 – 17:00	40 min	Preguntas y debate técnico	Moderador: Dr. Marcelo Caverlotti Silva
	17:00 – 17:30	30 min	Cierre y cóctel de honor	Palabras finales autoridades

African Astronomical Society Conference & General Assembly
March 20-28, 2025 Gauteng, South Africa

Special Session: Geodesy: Fundamental Astronomy Meeting Space Science for Global Impact

Alet de Witt (SARAO)

The Importance of Geodetic Observations to Science and Society
Richard Gross

1/1-1 - Main Auditorium: Senate I, Emperors Palace Hotel Ca…
16:30 - 16:45

The Hidden Risk That Poses a Threat to Critical Infrastru…
Albert Momo

Towards GGOS Africa *Jack Radcliffe et al.*

1/1-1 - Main Auditorium: Senate I, Emperors Palace Hotel Casino Convention Resort
17:00 - 17:15

South Africa's Government Initiatives in Geodesy and the Role of Astronomy
Alet de Witt

Panel Discussion *Albert Momo et al.*

1/1-1 - Main Auditorium: Senate I, Emperors Palace Hotel Casino Convention Resort
17:30 - 18:00

The International Association of Geodesy

Serving Science and Society Since 1862

presented by

Richard S. Gross

President, International Association of Geodesy

Improving IAG's Resilience

GGOS / IERS Unified Analysis Workshop
March 5-6, 2026 Munich, Germany

Session: Resilience of IAG Scientific Services

Conveners Richard Gross (President of the International Association of Geodesy)
Hansjörg Kutterer (Chair of GGOS D-A-CH)

Program Friday, 6th March 2026, 10:30 – 12:00

10:30 – 11:15 Panel Resilient Scientific Data Infrastructures in Geodesy – State, Constraints, and Threats
10:30 – 10:40 Introductory presentation by Hansjörg Kutterer
10:40 – 11:15 Discussion

11:15 – 12:00 Panel Improving the Resilience of IAG's Products
11:15 – 11:25 Introductory presentation by Richard Gross
11:25 – 12:00 Discussion

Panellists

Resilient Scientific Data Infrastructures in Geodesy – State, Constraints, and Threats

Allison Craddock (UN Global Geodetic Centre of Excellence, Germany)
Martin Lidberg (Chair of EUREF, GGOS-BNO Deputy Director)
Daniela Thaller (Director of the IERS Central Bureau)
Kirsten Elger (Chair of the GGOS Committee on DOIs)
Taylor A. Yates (IGS ACC Representative)
Martin Sehnal (Director of the GGOS Coordinating Office)

Improving the Resilience of IAG's Products

Robert Heinkelmann (IERS Analysis Coordinator)
Tom Herring (IGS Analysis Coordinator)
Frank Lemoine (ILRS Science Coordinator)
Benedikt Soja (IVS Analysis Coordinator)
Petr Štěpánek (IDS Analysis Coordinator)
Riccardo Barzaghi (IGFS Chair)

Panel Discussion
Resilient Scientific Data Infrastructure in Geodesy
State, Constraints, and Threats

- Discuss ways of improving availability of geodetic data
  - Develop strategies to preserve geodetic data in perpetuity
    - Redundant data centers distributed globally (?)
    - Identify data repositories that are at risk and / or datasets that may no longer be available (now and in the future)
  - Sustain access to geodetic data
    - To both scientific and societal users
- Define ways to make geodetic infrastructure more resilient
  - Identify challenges in storing, curating, and indexing geodetic data
    - Including personnel resources and legal issues
  - Evaluate suitability of using cloud environments as geodetic data repositories

Panel Discussion
Improving the Resilience of IAG's Products

- Eliminate single sources of failure
  - Most Services have numerous Analysis Centers that reduce data and derive products
    - Geodetic data and products are reasonably resilient at AC level
  - But most Services have only one source of combined products
    - Only one Analysis Center Coordinator or Combination Center
- Discuss ways of making combined products more resilient
  - Multiple Combination Centers
    - Having independent processing chains
    - Providing consistent combined products
      - Given in same format
      - Seamlessly available to users


شكراً جزيلاً
thank you
danke
謝謝
ngiyabonga
teşekkür ederim
gracias
obrigado
merci
dziękuję
bedankt
спасибо
Баярлалаа
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terima kasih
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감사합니다
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