

IAG International Symposium **Reference Frames for Applications in Geosciences** - REFAG2026 -

2 - 4 March 2026

GGOS/IERS Unified Analysis Workshop

5 - 6 March 2026

Munich, Germany

https://geodesy.science/events/munich2026/

The global geodesy community advancing reference frames by tackling science challenges and developing innovative methods.



IAG – International Association of Geodesy GGOS – Global Geodetic Observing System IERS – International Earth Rotation and Reference Systems Service TUM – Technische Universität München, Germany BEV – Federal Office of Metrology and Surveying, Austria LDBV – Landesamt für Digitalisierung, Breitband und Vermessung, Bayern, Germany

# Contents

•	Presentation	3
•	Topics	3
	Important dates	4
•	Format of the meetings	4
•	Participation and registration	4
•	Abstract submission and paper publication	5
•	License and copyright	5
•	Science team	6
•	Coordination team	6
•	Travel awards	6
•	Venue and travel information	7
•	Accommodation	8
•	Visa	9
•	Contact	9

### **Presentation**

The Technical University of Munich (TUM) is proud to lead global geodetic research as it currently holds the presidents of Commission 1 "Reference Frames" of the International Association of Geodesy (IAG) and the IAG Global Geodetic Observing System (GGOS). In this prominent role, TUM is excited to host two landmark events in 2026:

- The IAG International Symposium on Reference Frames for Applications in Geosciences (REFAG2026), 2 – 4 March 2026, and
- The joint GGOS/IERS (International Earth Rotation and Reference Systems Service) Unified Analysis Workshop (UAW2026), 5 – 6 March 2026

These events will bring together leading experts, researchers, and institutions to shape the future of global geodesy — right here at TUM in Munich, Germany.

All IAG members and associates, as well as professionals and individuals interested in the theory and application of reference frames in geodesy, Earth sciences and astrometry, are invited to attend the REFAG2026 conference. Participation in the UAW2026 is by invitation only.

### Topics

Contributions on the following topics are welcome:

**Importance of reference frames for Earth sciences** – Essential geodetic variables, UN-GGCE, GGOS, geodynamics, global change phenomena.

**Theory of reference systems and frames** – Celestial reference system/frame, terrestrial reference system/frame, fundamental constants and geophysical background models, height reference frames methodologies, Earth rotation, stochastic modelling, optimisation, coordinate representation, geodetic datum parameters, apparent geocenter motion.

**National and regional reference frames in deformation zones** – Kinematic reference frames, height reference frames, coordinate transformation, standards, real-time applications, GIS implementation.

**Systematic errors and reference frame consistency** – Consistency between celestial and terrestrial reference frames, consistency between global and regional/national frames, comparison of reference frame realisations, systematics of space-geodetic techniques, IERS Conventions, Earth orientation.

**Development and prospects for optimal geodetic ground-based infrastructure** – GGOS core sites, simulations, instrumental developments, local tie automation, atmospheric ties, clock ties, capacity development.

**Integration of space-based co-locations for enhanced reference frames** – Co-location in space, Genesis, precise orbit determination based on multiple observation techniques, data combination, simulations.

**Lunar and planetary reference systems and frames** – Lunar reference frames, time systems, interoperability between cislunar missions, lunar geoid and rotation, geodetic and navigation systems for the Moon, observation techniques for extra-terrestrial reference system realisations.

### **Important dates**

	4 June 2025 15 June 2025 1 August 2025	   	Website launch, topic description, call for abstracts. Registration and abstract submission open. 2 <sup>nd</sup> call for abstracts.
•	15 October 2025	T	Abstract submission deadline.
	15 November 2025		Draft schedule and abstract acceptance notifications.
	15 December 2025		Early Bird registration deadline.
•	31 January 2026		Registration deadline.

- **31 January 2026** | Final scientific programmes for REFAG2026 and UAW2026.
  - **2-6 March 2026** | REFAG2026+UAW2026.
- **31 May 2026** | Deadline for paper submission to the IAG Symposia Series.

# Format of the meetings

The REFAG2026 Symposium will be held from 2 to 4 March 2026 at the Landesamt für Digitalisierung, Breitband und Vermessung (LDBV), Alexandrastraße 4, 80538, Munich, Germany. Daily sessions are scheduled between 8:30 and 17:30 with a lunch break between 12:00 and 13:00. In the two days following the REFAG2026 Symposium, the GGOS/IERS Unified Analysis Workshop (UAW2026) will take place in the same location. Participation in the UAW2026 is by invitation only.

# **Participation and Registration**

The meetings will take place in person only; online participation is not possible. All colleagues working on the topics of REFAG2026 or related themes are invited to submit an abstract by 15 October. Registration is open from 15 June 2025 to 31 January 2026. The deadline for Early Bird registration is 15 December 2025. By registering, the participants agree that their data will be stored internally in the conference records. The data will only be used for meeting-related organisational issues. Acceptance of abstracts will be confirmed by 15 November 2025.

### **Registration fees**

Category	Meeting	Regular	IAG member	Student/senior
Early Bird (until 15 December 2025)	REFAG	410 Euro	360 Euro	360 Euro
	UAW*	190 Euro	190 Euro	190 Euro
Regular (until 31January 2026)	REFAG	460 Euro	410 Euro	410 Euro
				*Only by invitation

Registration fee for REFAG2026 includes the conference kit, morning and afternoon coffee breaks, lunch each day, and the conference dinner. Registration for UAW2026 includes morning and afternoon coffee breaks and lunch each day. PhD, MSc and undergraduate students will be required to provide a copy of their student ID card or a confirmation letter from the Head of Department/School/University to verify their status.

### **Cancellation policy**

Early bird and regular registrations cancelled before 31 January 2026 are eligible for a 30% refund of the registration fee. No refund is available for cancellations made after 1 February 2026.

The registration form is available at https://geodesy.science/event/munich2026/.

### Abstract submission and paper publication

Abstracts must be submitted before 15 October 2025 using the online form available at <u>https://geodesy.science/event/munich2026/</u>. Abstracts received after the deadline will not be accepted and will not be included in the final programme of the conference. Authors will be informed of the acceptance/rejection of their abstract by email by 15 November 2025. By submitting an abstract, the author or one of the authors of a joint work is required to complete the online registration before 15 December 2025. If no registration has been received by that date for one of the authors of the abstract, it will not be included in the meeting programme. If authors know that their presentation will not be presented, they are asked to withdraw their abstract as soon as possible (by contacting <u>refag-uaw-2026@tum.de</u>).

Participants are invited to submit their papers to the IAG Symposia Series, published by Springer. The IAG Symposia Series is published Open Access, and free of charge to the authors. The cost of publication is borne by the IAG. All presentations, poster and oral, are eligible. All Symposia Series volumes are peer reviewed and submitted for indexing.

Please note that a non-refundable abstract processing fee (APC) of  $\leq$ 40 is charged for each abstract submitted.

No more than one abstract can be submitted by the same first author.

Abstracts cannot be submitted by fax or email.

When submitting an abstract, authors are required to provide the following information:

Title Author(s) Affiliation(s) Main body of the abstract (up to 500 words). Keywords (please include 3–5 keywords). Topic (select 1 out of 7 REFAG2026 topics) Presentation preference (oral/poster) Intention to submit a paper to the IAG Symposia Series (yes/no)

The abstract submission form is available at <a href="https://geodesy.science/event/munich2026/">https://geodesy.science/event/munich2026/</a>.

### Licence and copyright

The following licence and copyright agreement is valid for any abstract submitted to the REFAG2026 Symposium:

In submitting the abstract, the authors certify that (1) they are authorised by their co-authors to submit the abstract; (2) they secure the right to reproduce any material that has already been published or copyrighted elsewhere; (3) they agree to the following license and copyright agreement:

- Copyright on any abstracts is retained by the author(s).
- Authors grant any third party the right to use the abstract freely if its original authors and citation details are identified.
- The abstract is distributed under the Creative Commons Attribution 3.0 Unported Licence.

### **Science team**

- Urs Hugentobler, President IAG Commission 1: Reference Frames, Satellite Geodesy, TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- Xavier Collilieux, Vice-President IAG Commission 1: Reference Frames, Institut de physique du globe de Paris, CNRS, IGN, Université de Paris Cité, Paris, France
- Krzysztof Sośnica, President Sub-Commission 1.1: Coordination of Space Techniques, Institute of Geodesy and Geoinformatics, Faculty of Environmental Engineering and Geodesy, Wrocław University of Environmental and Life Sciences, Wrocław, Poland
- Mathis Bloßfeld, President Sub-Commission 1.2: Global Reference Frames, Deutsches Geodätisches Forschungsinstitut (DGFI-TUM), TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- **Fernand Bale**, President Sub-Commission 1.3: Regional Reference Frames, BNETD -Bureau National d'Etudes Techniques et de Developpement, Abidjan, Côte d'Ivoire
- Maria Karbon, President Sub-Commission 1.4: Interaction of Celestial and Terrestrial Reference Frames Department of Applied Mathematics, University of Alicante, Alicante, Spain
- Laura Sánchez, President Global Geodetic Observing System (GGOS), Deutsches Geodätisches Forschungsinstitut (DGFI-TUM), TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- Robert Heinkelmann, Analysis Coordinator of the International Earth Rotation and Reference Systems Service (IERS), Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences, Potsdam, Germany

# **Local Organizing Committee**

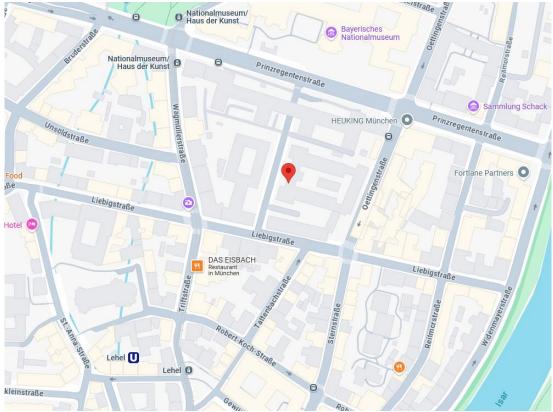
- **Mathis Bloßfeld**, Deutsches Geodätisches Forschungsinstitut (DGFI-TUM), TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- **Urs Hugentobler**, Satellite Geodesy, TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- **Laura Sánchez**, Deutsches Geodätisches Forschungsinstitut (DGFI-TUM), TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- **Stefanie Daurer**, Satellite Geodesy, TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- **Chanye Fu,** Satellite Geodesy, TUM School of Engineering and Design, Technische Universität München, Munich, Germany
- Felix L. Müller, Deutsches Geodätisches Forschungsinstitut (DGFI-TUM), TUM School of Engineering and Design, Technische Universität München, Munich, Germany

# **Travel awards**

The IAG provides the opportunity for young scientists from developing countries to receive a travel award for the REFAG2026 Symposium. Please, refer to the IAG website (<u>https://geodesy.science/iag/awards/iag-travel-award/</u>) for the detailed rules and procedures to apply for an IAG travel award.

# Venue and travel information

The REFAG2026 Symposium and the UAW2026 will be hosted at the *Landesamt für Digitalisierung, Breitband und Vermessung (LDBV)* (<u>www.ldbv.bayern.de/</u>) located at Alexandrastraße 4, 80538 München.



Courtesy of Google maps

#### By air

The Munich Airport MUC provides several national and international connections. This airport is well connected to the Munich public transport system, and you can easily reach the city centre in about 40 minutes.

#### From Munich Airport MUC to Munich City Centre

The S1 and S8 S-Bahn lines connect the airport to the Munich city centre at 10-minute intervals. The S1 travels via the west of the city and the S8 via the east. The trip to the main railway station at the city centre takes approx. 40 minutes.

Tickets for the public transport can be bought at the airport (ticket machines or sales outlets), or via MVV Mobile App. For ticket fares see the latest information at <u>https://www.mvv-muenchen.de/en/tickets-and-fares/tickets-daytickets/index.html</u>.

Please make sure to validate your ticket before you enter any public means of transport if there is no date-stamp on your ticket. You will normally find ticket validators on the platforms or at the stops.

### By train

There are several national and international train connections to Munich railway station (Munich Hbf). You can get train tickets for instance from Deutsche Bahn AG.

#### To get to the conference venue

The conference venue is in a very central location, about a 10-minute walk from Munich's central square (Marienplatz). However, it is also possible to reach it by metro (U-Bahn, U4 and U5 to Lehel station) or tram (Line 16 to Lehel station). It is best to reach the venue by public transport because traffic is usually very heavy, and parking fees can be expensive. See the latest ticket fare information at <a href="https://www.mvv-muenchen.de/en/tickets-and-fares/tickets-daytickets/index.html">https://www.mvv-muenchen.de/en/tickets-and-fares/tickets/index.html</a>.

### Accommodation

Participants are expected to book their accommodation individually. Munich offers a wide variety of hotels in terms of price and location. More information about the city of Munich <u>https://www.munich.travel/en</u>. The following hotels are listed in approximate order of recommendation based on local experience. Prices are indicative and may vary. We kindly recommend booking your accommodation early, as hotels in Munich tend to be busy in early March 2026.

### Hotel Adria München

Liebigstraße 8a 80538 München +49 89 2421170 <u>reception@adria-muenchen.de</u> <u>https://www.adria-muenchen.de/</u> From 84 € 3 min walk

#### **Augusten Hotel**

Augustenstraße 2 80333 München +49 89 5168900 <u>info@augustenhotel.com</u> <u>https://www.augustenhotel.de/</u> From 72 € 20 min by public transport 40 min walk

#### Hotel Europa München

Dachauer Str. 115 80335 München +49 89 542420 info@hotel-europa.de https://hotel-europa.de/en/ From 112 € 24 min by public transport 45 min walk

#### domus Hotel

St.-Anna-Straße 31 80538 München +49 89 2177730 <u>reservation@domus-hotel.de</u> <u>https://hotel-domus.de/</u> From 150 € 6 min walk

### Hotel Ibis München City

Dachauer Straße 21 80335 München +49 89 551930 <u>H1450@accor.com</u> <u>https://all.accor.com/hotel/1450/index.de.sht</u> <u>ml</u> From 71 € 22 min by public transport 40 min walk

#### Leonardo Boutique Hotel Munich

Amalienstraße 25 80333 München +49 89 62039779 <u>reservations.muenchen@leonardohotels.com</u> <u>https://www.leonardo-hotels.de/</u> From 90 € 15 min by public transport 20 min walk

### Hotel Antares München

Amalienstraße 20 80333 München +49 89 2800200 hotel@antares-muenchen.de https://www.antares-muenchen.de/ From 115 € 14 min by public transport 25 min walk

### Das Hotel in München

Türkenstraße 35 80799 München +49 89 2881400 info@das-hotel-in-muenchen.de https://das-hotel-in-muenchen.de/ From 95 € 20 min by public transport 25 min walk

### **Hotel Montree**

Dachauer Str. 91 80335 München +49 89 5427190 info@hotel-montree.de www.hotel-montree.de From 72 €

23 min by public transport 45 min walk

### Visa

Germany is a member of the European Union and part of the Schengen Agreement (https://www.auswaertiges-amt.de/en/visa-service/-/231202). As such, EU citizens and visa holders from Schengen countries do not require a visa. Colleagues from other nationalities may need an entry visa for Germany. Please check visa requirements at https://www.auswaertiges-amt.de/en/visa-service/-/231148 and contact the nearest German embassy or consulate for further information (see https://www.auswaertiges-amt.de/de/ReiseUndSicherheit/deutsche-auslandsvertretungen). This information is provided by the German Federal Foreign Office (https://www.auswaertiges-amt.de/en). Letters of invitation can be obtained from the Coordination Team (refaguaw-2026@tum.de). It is recommended that all guests start the visa process at least three months before the meeting. Travel and medical insurance, if required, are the sole responsibility of the participant.

# Contact

https://geodesy.science/event/munich2026/

Conference Coordination Team, refag-uaw-2026@tum.de