

# CALL FOR PROPOSALS 2023

## Education & Knowledge

### 1. About the German-French Academy for the Industry of the Future

The German-French Academy for the Industry of the Future (GFA) is a bilateral initiative created and officialized during the German-French digital conference on October 27, 2015.

Technical University of Munich (TUM) and Institut Mines-Télécom (IMT) have been appointed to convert the political wish expressed by both our governments, which is to enhance the competitiveness of our economies, foster the French-German cooperation, and address the digital transformation of our industry. In order to pursue these objectives, the GFA acts in three areas: research, education and innovation.

In recent years, TUM and IMT have developed new tools to support the digital transformation in the field of Higher Education and life-long learning for future students, students, employees, professionals, and executives. These two institutions have proven expertise in diverse competencies in media and higher education pedagogy linking research in teaching and learning with the practical experience of the IMT schools and TUM faculties lecturers and the innovative teaching techniques afforded by educational technology and digitalization.

The GFA builds upon the expertise of its two institutions and has been therefore developing a set of French-German initiatives dedicated to the initial education of graduate students and life-long learning of professionals. In addition to the production of online courses, the GFA offers a portfolio of summer and winter schools<sup>1</sup> for junior scientists in cooperation with industry and provides additional support for their organization. In 2020 to 2022, the GFA allowed more than 1.800 auditors to follow its hybrid PhD schools and workshops, and made it possible to leverage the student's skills as well as their know-how on digital transformation.

### 2. Context of the Call for Proposals

The digital revolution has drastically changed the landscape of industries, paving the way for Industry of the Future. With the emergence of advanced technologies and increased automation, it has become imperative for higher education institutions to incorporate up-to-date learning formats to meet the skill-set demands of current industrial needs. Alongside traditional classroom teaching, innovative learning methodologies such as workshops, hackathons and PhD schools are gaining importance. Hackathons are commonly used to cultivate problem-solving and brainstorming abilities in students. Workshops and PhD schools provide students with hands-on experience and exposure to real-world challenges. Networking with experts from the industry and the academic field is also a major asset. These formats enable students to stay abreast of cutting-edge

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<sup>1</sup> Following Summer and Winter Schools have been supported by the GFA:

- "Future of IoT" - <https://school.future-iot.org/>
- "Intelligent Cars on Digital Roads" - <https://www.summerschool.bmw/en>
- "Trustful AI for Industry" - <https://ai4industry.wp.imt.fr/>
- "Human Factors Aspects of Cooperative Systems Design" - <http://afa-hufaco.eurecom.fr/>
- "Data Sharing: Next Mobility" - <https://www.future-industry.org/datasharing21/>
- "RoAming" - <https://www.mec.ed.tum.de/fileadmin/w00cbp/lbam/NEWS/Flyer-WinterSchool-2022.pdf>

technologies and develop competencies needed for careers in the Industry of the Future. Consequently, the integration of such modern learning formats can be a game-changer for higher education institutions looking to prepare students for the latest developments in the industry.

### 3. Objectives of the Call for Proposals

The call is addressed to researchers from TUM and IMT or to researchers that want to team up with researchers of these institutions. (In the second case the GFA can help you find collaborators from these institutions. Please contact us beforehand.) It is obligatory to have at least one founding member of the GFA (IMT or TUM) involved in your proposal. As it is one of our core missions to foster the French-German relations, it is very important to us that the project takes place on a French-German scale.

The GFA supports:

- High quality events, such as:
  - Hackathons
  - PhD Schools
  - Scientific Workshops and scientific symposia
  - Other innovative event-like formats
- Initiation of Erasmus Mundus Joint Master Degrees or Doctoral Colleges,
- Executive educational programs for professionals
- Projects regarding education and life-long learning aspects for students, young graduates and companies, especially new and creative formats.

#### **Please note:**

The production of **new online courses (MOOCs)** will not be supported in this CfP.

### 4. Expected Outcomes

Expected outcomes of the CfP “Education & Knowledge” include **increased French-German and European collaboration in higher education** through initiatives such as Erasmus Mundus and the French-German organization of scientific events. With this call the GFA wants to **promote innovation in teaching and learning formats**, including new approaches for digital campuses, digital exams, and hybrid formats.

We also expect the **development and exchange of good practices in higher education**. This could include sharing successful strategies for student engagement, enhancing diversity and inclusion, and improving academic outcomes in our French-German network and beyond.

Through the call **informal learning formats beyond universities' walls, such as workshops, hackathons, and PhD schools are supported**. This would help foster **collaboration and skill-sharing between students, young entrepreneurs, and industrial experts**.

To ensure participants are equipped with **interdisciplinary capabilities, career competencies and technological skills**, the call could promote the delivery of such capabilities and **encourage knowledge exchange between graduate or PhD students and industry experts**.

Overall, we expect our call for proposals to help strengthen the **quality and relevance of higher education across French-German and European universities, while also preparing participants for success in their future careers.**

## 5. Requirements for events such as Workshops and Summer/Winter Schools

To make the GFA-supported Workshops, PhD Schools and Hackathons stand out regarding quality, there are some criteria that are obligatory:

- Frame
  - Involvement of industry partners
  - Positioning of the GFA logo on websites, slides, etc.
  - Recurring event: the event should not be a single but a recurring event (annual or at least biennial)
- Format of the event
  - Length: 1 – 5 days
  - Hybrid format (on site and online), if applicable
  - On site in France and Germany or alternating in one of the two countries per year
  - Recording of the event or at least of the keynotes and official parts
- Didactical structuring
  - Keynotes and talks from partners of academia and industry
  - Active parts: hands-on, challenges, hackathons, social and networking events
  - English language: as the event should foster the German-French collaboration as well as the international collaboration, the content of the event should be in English to make it available to a broad audience

## 6. Topics and Collaboration Areas

The GFA focuses on activities addressing the whole spectrum of Industry 4.0 and its related challenges. This includes among others applied artificial intelligence, cybersecurity, ICT, advanced manufacturing, materials and process engineering, logistics and supply chain, robotics, human-machine interaction, agile management methods, etc.

Moreover, the GFA aims at addressing bilaterally additional scientific and technological topics of major importance for French and German governments as well as for Europe.

Keywords: AI, data sharing, cybersecurity, IoT, IIoT, hydrogen, energy efficiency, quantum computing, digital twins, 5G/6G, digital sovereignty, DeepTech.

## 7. Funding

The GFA funding is based on the quality of the proposals and the justification of the planned investments and ranges in total between 1.000€ and 50.000€ per project. The amount of funding is individual for each project.

The maximal allocated budget will depend on the number of selected projects and available resources.

The funding is equally split between TUM and IMT and is subject to terms and conditions of use specific to each institution.

This funding mainly aims at covering the following expenses: travel, workshops and events organization, relevant material and equipment, and limited human resources.

**Please note:**

TUM has specific regulations for the use of funding that must be followed. For example, a certain percentage of the funding amount on the TUM side must be contributed by the applying TUM school itself. In addition, TUM funds cannot be used to pay for catering or purchases with a lifetime beyond the workshop or summer school (tablets, T-shirts, etc.). Should your project be selected, a document with the most relevant TUM regulations will be sent to you. You can also check the TUM Service Compass (“Dienstleistungskompass”) for more detailed information.

## 8. Scale for Funding of Summer/Winter Schools

In the case of Summer/Winter Schools, we aim at recurrent events.

As new events need time to get well known in the community and attract more supporting partners, we provide higher funding for new Schools as a kick-off funding and scale it down over the following editions. The scale for recurrent events is as follows:

- 1<sup>st</sup> edition of School: up to 20 000 EUR funding
- 2<sup>nd</sup> edition of School: up to 15 000 EUR funding
- 3<sup>rd</sup> edition of School: up to 10 000 EUR funding
- from 4<sup>th</sup> edition of School: up to 6 000 EUR funding

## 9. Complementary Funding

We strongly suggest acquiring complementary funding as the GFA might only grant partial funding of your project. We inform our network regularly about new CfPs in the community.

For example, the “Deutsch-Französische Hochschule (DFH)” (Université Franco-Allemande UFA) organizes CfPs three times a year for scientific events in a Franco-German context (these funds can for instance be used to cover catering fees):

[https://www.dfh-ufa.org/en/information-for/hochschulen/ausschreibungen/wissenschaftliche-veranstaltungen?noredirect=en\\_US](https://www.dfh-ufa.org/en/information-for/hochschulen/ausschreibungen/wissenschaftliche-veranstaltungen?noredirect=en_US)

We see it also as good practice to involve industrial companies in the projects. We will be happy to get you in contact with our industrial network to find speakers and participants. Also, it is possible for companies to become a partner of your project by supporting it financially. We advise a scale, for instance like the following:

- Gold Partner: Provides the funding for a research stay for the winning team
- Silver Partner: Provides a challenge for your event in exchange for funding
- Bronze Partner: Provides gifts and goodies for participants

## 10. Application and Proposal

**We strongly advise researchers to contact the coordinators of the GFA before submitting their proposal. The coordinators will provide you additional information according to your planned initiative.**

Proposals should be jointly submitted by the principal investigators of the project of TUM and IMT<sup>2</sup> and should contain following items:

- Description of the involved researchers and associated partners,
- Description of the project or initiative (addressed topics, related issues),
- Relevance in terms of initial and vocational education and/or life-long learning,
- Target group(s) and selection process (in case of summer/winter schools),
- Implementation methods and measures,
- Added value of the German-French collaboration,
- Finance Plan with complementary funding and requested funding of the GFA.

### 11. Criteria for selection

- Relevance of the topic,
- Relevance of the project and fit to the German-French Academy,
- Complementarity and planned collaboration of the teams,
- Feasibility of the project,
- Impact towards education and German-French collaboration.

### 12. Time Frame

Launch of the call:	Wednesday, May 3 <sup>rd</sup> , 2023
Deadline for submission:	Wednesday, May 31 <sup>st</sup> , 2023, EOB
Evaluation Committee:	Week 26, 2023 (exact date tbc)
Notification of the selected projects:	Monday, July 10 <sup>th</sup> , 2023
Kick-off of the project:	September 2023 (the latest)

### 13. Contact

Please contact the project managers of the GFA should you need any further information and help in identifying researchers at the partner institution and experts from the industry.

Primary contact: Olivia Pahl, Education Coordinator of the GFA (on leave until Mid-May): [olivia.pahl@imt.fr](mailto:olivia.pahl@imt.fr)

Further contacts:

- Diane Baumer: [diane.baumer@tum.de](mailto:diane.baumer@tum.de)
- Cosima Stocker: [cosima.stocker@tum.de](mailto:cosima.stocker@tum.de)
- Paul-Guilhem Meunier: [paul-guilhem.meunier@imt.fr](mailto:paul-guilhem.meunier@imt.fr)

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<sup>2</sup> Events such as Summer/Winter schools, workshops, etc. can be co-organised jointly by TUM and IMT or by either of these institutions together with at least one other French or German academic partner. However, the involvement of both, TUM and IMT, is preferred (gladly with further academic and industrial partners). The event should be strived through the participation of researchers and PhD or Master students from the organizing parties.