AACII Aerospace Mobility News 04/2025

Airships – A Climate-Friendly Means of Transport

The second International Airship Conference was honored by the presence of State Minister Joachim Herrmann. The approximately 70 high-ranking experts from all continents were deeply impressed by his perspectives during the panel discussion as well as in the individual conversations. It was an outstanding event, unmatched anywhere in the world. Experts from science and industry, including distinguished speakers, gathered for the initiative of Prof. Dr. Christoph Pflaum of Friedrich-Alexander University Erlangen–Nuremberg (FAU). His topic — Why do airships need numerical simulation? — was addressed in his interview with Ulrike Trapp from AACII. The airship model displayed at the AACII conference exhibition was a major attraction, and his expertise on stage astonished the 300 participants from 20 countries. Here is the link: https://aacii.space/wp-content/uploads/2025/11/Prof_Christoph-Pflaum.pdf

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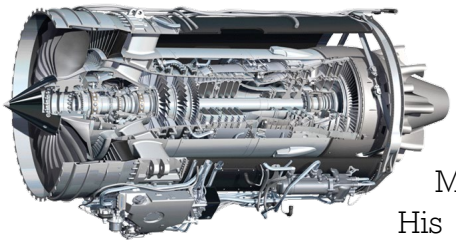
ATT – JV Rolls Royce & Liebherr Aerospace Present sustaninable innovations

Aerospace Transmission Technologies GmbH (ATT), a joint venture between Rolls-Royce and Liebherr Aerospace, focuses on advanced gearbox systems for aviation. Managing Director Tim Sowa explains the company's core innovation: the Power Gearbox, a central component of the UltraFan® engine. It was developed to reduce emissions and fuel consumption by 20%.

ATT faces exceptional engineering challenges and is pushing the boundaries of speed, performance, and reliability in aerospace gear systems. New industry standards are being set through advanced manufacturing technologies, industrial engineering, automation, digitalization, and quality assurance. This is paving the way for the next generation of aircraft engines—supported by significant expansion and expertise in supply chain management.

The company is based in Friedrichshafen on Lake Constance and is made up of 46 specialists and engineers who drive innovation and operational excellence. More information can be found at this link: https://aacii.space/wp-content/uploads/2025/11/2025-07_ATT-Company-presentation.pdf

Adrian Popp of Schaeffler Aerospace in the Museum of Future



Adrian Popp, recipient of the AACII Award in the *New Generation* category, gave a presentation at the AACII Expert Talk at the Future Museum in Nuremberg. His topic was *Mainshaft Bearings for Jet Engines*. He also spoke about the support he receives within the company as a young professional in the aerospace sector, including training opportunities through dual study programs.

Further information can be found at the following link: https://aacii.space/wp-content/uploads/2025/11/Vorstellung_SAG_Nuernberg_Zukunftsmuseum_OV.pdf

VDI Bavaria-Northeast promotes young Engineers

Technology means future — this is the view of the VDI District Association Bavaria-Northeast, represented by spokesperson Michael Gundermann. He explained to the participants from science and industry how excursions and practical projects shape the VDI Young Engineers program and the VDI Zukunftspiloten initiative for school students. The new learning laboratories and the VDI Technothek, with their creative, digital, and AI-based activities, are inspiring. The association offers major opportunities for volunteers and

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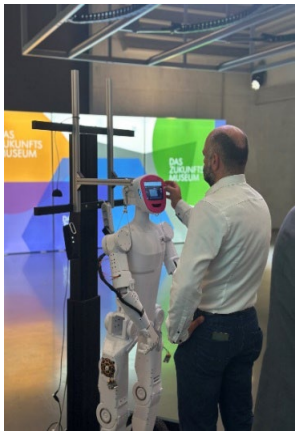
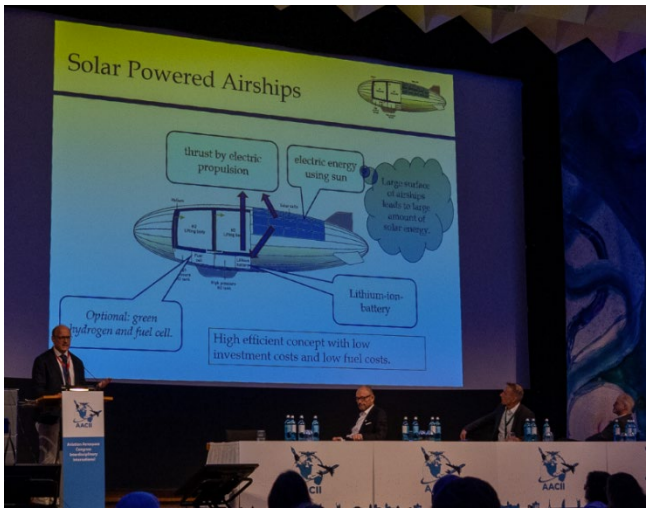
partners through exciting events and projects. Read more at the following link: https://aacii.space/wp-content/uploads/2025/11/VDI-PPT-Gundermann.pdf

The Education Robot developed by Isento is called PIB



When he blinks his eyes, both teachers and students smile. This—and much more—was experienced by participants at the Future Museum through the educational robot. Dr. Jürgen Baier described the path from university to becoming a hidden champion: isento robotics in Nuremberg. The innovative technology company is causing a stir, says TJ Graebe from isento Marketing. Dr. Shota Okojava, shown here in the photo with PIB, explains: His name is PIB because he is a printable intelligent bot and a successful open-source learning platform. In parallel, a fully deployable robotic solution is being further developed. Awards for innovation, design, and education already reveal what the future will look like.

FAU Niklas Heidenreich on the optimisation of Airship travel routes



How airship routes are optimized is something Niklas Heidenreich from FAU knows well. He described the central technical challenge of solar-powered travel involving battery management. Together with his research team at FAU, he developed software to simulate airship journeys — where the key to efficiency lies in deciding when the battery should be charged or discharged. Solar energy production is modeled using datasets on clouds, wind, and surface elevation; simulations estimate radiation coming from all directions. The optimal placement of the solar panels is complex because factors such as cloud cover and ground reflection, known as albedo, play a role. In some scenarios, it may even make sense to install panels on the underside. This work highlights the importance of environmental data and intelligent energy management for sustainable airship operation. Read more here: https://aacii.space/wp-content/uploads/2025/11/PPT-Airships.pdf

Satellite Manufacturer OHB Dr Axel Müller: Expert Center for Moon Dust

Dr. Axel Müller of OHB is well acquainted with the cooperative model between industry and universities for advancing space technology. OHB specializes in high-tech solutions for space missions. Key topics include the analysis of lunar regolith, technology development in robotics, additive manufacturing, and quantum technologies—areas that prepare for future lunar missions. Dr. Axel Müller studied at the renowned Stanford University in California, USA. International collaboration with universities and research

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institutions across Europe is a central focus, enabling practical, hands-on research involving students. Within just three years, the initiative was recognized by ESA as an Expert Center for Moon Dust—an achievement reflecting outstanding collaboration for innovative, practice-oriented learning. https://aacii.space/wp-content/uploads/2025/11/OHB_-Dr-Axel-Mueller.pdf

ITONICS Dr Christian Mühlroth – Technology with prospects in the global competition

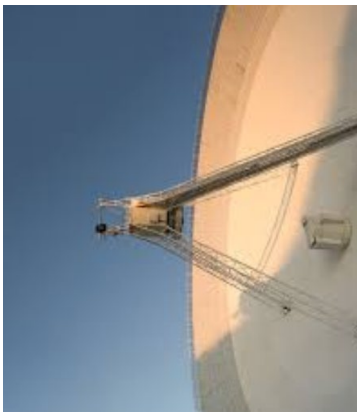
Technological change is accelerating exponentially and presents major challenges for companies, says Dr. Christian Mühlroth, Managing Director of Itonics. He emphasizes that technological sovereignty requires a new ''operating system for innovation.'' His guiding principle is based on three pillars: strategic foresight with AI-supported signal detection, strategic portfolio management, and AI-driven innovation. He sees early warning systems, innovation radars, and the combination of human intuition with AI as essential for identifying opportunities and managing risks. Only in this way can Germany remain competitive on the global stage. You can find more information at the following link: https://aacii.space/wp-content/uploads/2025/11/PPT_Muehlroth_Technologische-Souveraenitaet.pdf

Cyber Security with Lantech Method Günter Meixner

Companies need reliable cybersecurity more than ever, reports Managing Director Günter Meixner. To address this, the specific Lantech method was developed for targeted handling and technology deployment. Training employees using this method has proven effective in countering social attacks such as phishing. The entire infrastructure, including industrial networks and devices, must be secured. Security functions should already be integrated during manufacturing. His motto: Security is work and life quality for everyone. More information can be found at the following link: https://aacii.space/wp-content/uploads/2025/11/Lantech.pdf

Max Planck Institute Bonn - Astronomy on the moon - Lorena Nicotera

The far side of the Moon and the craters at its poles are ideal for astronomical research, says Lorena Nicotera from the Max Planck Institute in Bonn. These areas are shielded from human-made radio interference, providing unique conditions. These regions also contain valuable resources such as water, helium-3, and rare earth elements, but they are threatened by satellite networks, surface instruments, mining, rocket landings, and artificial electromagnetic interference. New regulatory frameworks are needed to protect the radio-quiet environment for lunar research, including designated



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scientific zones. The IAU working group ''Astronomy on the Moon'' advocates for the protection of these sites, communicates the needs to policymakers, and works internationally to ensure effective protection of lunar science. Here is the link: https://aacii.space/wp-content/uploads/2025/11/AACII_Max_Planck.pdf

Munich Aerospace – Science meets industry

Munich Aerospace is a strong magnet, as was evident at the industry event ''Science Meets Industry.'' More than 100 guests from research, politics, and industry attended this important event on the campus of TUM — Technical University of Munich, Ottobrunn. It also marked the anniversary celebration of 15 years of the Bavarian Research Network for Aerospace.

In his keynote, former ESA Director General Jean-Jacques Dordain, as well as Ministerial Director Dr. Markus Wittmann in his greetings, thanked Managing Director Dr. Andreas Lermann for his outstanding, exemplary achievements. Speakers, together with several Munich Aerospace research groups, presented their projects. The innovations showcased in the exhibition inspired professional exchange and networking between research groups and industry. Further information and photos can be found at: https://www.munich-aerospace.de/2025/10/08/jubilaeumsevent-science-meets-industry/

State Reception for the Nuremberg Metropolitan Region

The Nuremberg Metropolitan Region is well known far beyond its borders. The state reception was opened by Minister Joachim Herrmann together with Chairman Prof. Klaus Wübbenhorst, highlighting special milestones over the 20 years of the region's existence. As a role model, the Nuremberg Metropolitan Region received recognition as an EU Innovation Region. Member of Parliament Norbert Dünkel, from the Education Committee

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of the State Parliament, discussed important topics for the next generation of engineers with Ulrike Trapp from AACII on the sidelines of the large state reception (photo with Dipl. Ing. Kurt Fuchs).

The AACII New Generation Expert Talk in the Nuremberg Museum of Future

Following this year's AACII Aerospace Aviation Congress Interdisciplinary International, the *New Generation AACII Expert Talk* on the topic *''The Future of Space Travel''* took place at the Future Museum in Nuremberg. Member of Parliament Norbert Dünkel opened the session with the call: *Passion for technology begins in school.*

Curator Aron Schöpf presented the museum as an out-of-school learning environment that sparks scientific curiosity. Contributions from both science and industry—from satellite projects to educational robots and cybersecurity solutions—demonstrated how diverse and practice-oriented innovation is today.

At the Future Museum, we finally got to experience the educational robot Isento—AI for education. During the AACII Expert Talk at the Nuremberg Aerospace Congress, there were exciting discussions at the Future Museum in Nuremberg.

The Education Committee of the State Parliament was as amazed as ATT Rolls-Royce & Liebherr Aerospace, Schaeffler Aerospace, professors, students, the Max Planck Institute in Cologne, and leading companies at the innovations young professionals are bringing to these fields. Education is the key to the future, and the Future Museum continues to be a treasure for those eager to learn.

The future begins above – this was the theme of the Day of the German Aerospace Regions Saxony-Thuringia

The future begins above! The high-tech aerospace industry is of central importance for addressing the key future challenges of our country. Germany is a global leader in aerospace technology. The backbone of this industry is the outstanding performance of our medium-sized supplier companies—the ''hidden champions'' with their expertise and key technologies.

The federal states of Saxony and Thuringia are among the driving forces of our industry. They were at the centre of the Day of the German Aerospace Regions.

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Under the motto ''The Future Begins Above – Strengthen Aviation, Establish Sovereign Space Capabilities, Ensure Defense Readiness'', current challenges were addressed through exchanges with key stakeholders..

Engineering Science Section Award for Prof. Dr. Klaus Schilling

Small satellites were a major breakthrough in research. Now, AACII awardee Prof. Dr. Klaus Schilling has also received the highest honor in engineering from the International Academy of Astronautics (IAA), the Engineering Science Section Award. The occasion was the IAC in Sydney, the world's largest aerospace conference. The award was presented by IAA President John Schumacher, IAA Vice President for Scientific Activities Ralph McNutt, and IAA Secretary General Jean-Michel Contant.

World Market Leader Innovation Day – Prof. Siegfried Balleis

The dialogue between research, industry, and politics in Erlangen focused on AI and future technologies. This was the *''World Market Leader Innovation Day.''* At the Future Museum during the AACII Expert Talk, Prof. Siegfried Balleis clearly demonstrated that small and medium-sized enterprises and young professionals remain key drivers of digital transformation through AI.The highly awarded honorary professor at Friedrich-Alexander University Erlangen-Nuremberg (FAU) has already inspired audiences as head of the *New Generation Forum* at the AACII Congress with innovative developments.

Wilhelm Löhe University – we are international

Students at Wilhelm Löhe University of Applied Sciences Fürth are moving into the future with a focus on core competencies. President Clemens Werkmeister explained the spirit of Wilhelm Löhe, which shapes the education of bachelor's and master's programs. The university's unique CORE principle for research and teaching, drawing students from many countries, is exceptional in fostering employability, which graduates can carry forward into their careers. The Fürth campus is designed as a modern learning environment to actively shape the future. Read more at this link: https://aacii.space/wp-content/uploads/2025/11/SRH_University_Werkmeister.pdf

Pioneering Research Presented by the University of Applied Sciences Würzburg-Schweinfurt THWS

Another award for THWS University: now at the AERO Friedrichshafen aviation fair, they received the Aerokurier Innovation Award following the Sustainable Aviation Award for the light aircraft *Taifun 17 H2* with fuel cell propulsion. With pride, Fredrik Jantsch described the outcome of excellent research and development—together with Ala Awali from the German Jordan University cooperation—at the Future Museum during the AACII

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Expert Talk. The Faculty of Mechanical Engineering at THWS developed the aircraft, which has a wingspan of 17 meters and a cruising speed of 205 km/h. More information can be found at the following link: https://aacii.space/wp-content/uploads/2025/11/THWS_Pitch.pdf

AACII Partners

Event Calendar

December 2025

01	01	Int. Con. on Aviation Infra. and Space Launch	Geneva, SUI
01	04	CEAS Aerspace Europe Conference	Turin, ITA
01	05	Cyber Summit	Munich, GER
02	02	MQV Einblicke – Quantentechnologie	O'pfaffenhofen, GER
02	03	American Aerospace & Defense Summit	Washington, USA
04	04	KI Sprachmodelle – Energiecampus Nürnberg	Nuremberg, GER
10	11	Aviation Forum 2025	Hamburg, GER
10	12	New Space Economy Expoforum	Rome, ITA
17	20	European Rotors	Cologne, GER

January 2026

12	14	Intersec Dubai	Dubai, UAE
20	22	SPIE Photonics West	San Francisco, USA
27	28	European Space Conference	Brussels, BEL
27	29	US Space & Rocket Center: AI Symposium	Huntsville, USA
28	29	Robotik Messe	Berlin, GER

February 2026

08	12	Defence Show	Riyadh, KSA
11	11	SAP Data & Analytics	Frankfurt a.M., GER
13	15	Munich Security Conference	Munich, GER
23	25	Enforce Tac	Nuremberg, GER

March 2026

04	06	Space Comm Europe	London, GBR
10	11	Robotic Messe	Friedrichshafen, GER
10	12	embedded world	Nuremberg, GER
23	26	Cyber SAT Show	Washington, USA
23	27	Munich Space Summit	Munich, GER

April 2026

04	06	Symposium on Space Educational Activities	Munich, GER
07	12	FIDAE Chile	Santiago, CHI

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08	10	Symposium on Space Edu. Activities SSEA	Munich, GER
20	24	Hannover Messe	Hanover, GER
28	29	Aerospace Tech Week	Munich, GER

June 2026

02	03	European Aerospace & Defence Summit	Düsseldorf, GER
08	11	Eur. Test & Telemetry Conference	Nuremberg, GER
10	14	ILA Berlin	Berlin, GER
15	19	Eurosatory	Paris, FRA

July 2026

07	08	Les Assises du NewSpace – French Space	Paris, FRA
20	24	Farnborough Airshow	London, GBR

August 2026

04	05	Int. Conf. on Aeronautical & Aerospace Eng.	Prague, CZE
04	06	Latin Am. Business Aviation Conf. & Exhib.	Sao Paolo, BRA
28	28	Int. Conf. on Aerospace & Aerodynamics	Krakow, PLN

September 2026

01	03	Saudi Drone Exhibition SADEX	Riyadh, KSA
16	17	ESA Noordwijk	Noordwijk, NED
23	25	Deutscher Luft- und Raumfahrtkongress	Augsburg, GER
24	26	Energie Campus Nürnberg, FAU	Nuremberg, GER
25	26	Int. Conf. on Electric Airships	Nuremberg, GER
28	30	Jeddah Construct	Jeddah, KSA
29	01	Messteli Intersec	Riyadh, KSA
29	03	Int. Astronautical Congress IAC	Sydney, AUS

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