



**German Association  
for Defence Technology**  
Centre for Studies and Conferences

# 3<sup>rd</sup> European Military Additive Manufacturing Symposium

8<sup>th</sup> and 9<sup>th</sup> April 2025 | Maritim Hotel Bonn | Germany



## Program

**Conditions of Participation,  
Visitor & Exhibitor Registration**

Supported by:



## The Conference at a glance

Did you know, that Additive Manufacturing (AM) is a production method, that allows

- ◆ the greatest freedom in design even of complex structures, to manufacture complex parts and systems
- ◆ to produce stronger structures with less weight,
- ◆ to (re)generate spare parts with almost no setup costs and in the field?

These are only some of the eye-catching opportunities and advantages AM provides - in a well proven and certified manner.

This is probably the reason why AM has been considered a a serious manufacturing technology in industry already for some time. High performance structures exposed to great stress have already found their way from prototyping into the production line of serial parts! Applications in automotive, aeronautics, medical equipment and even constructions: The list of examples is endless.

From a military perspective, AM technologies can provide operational advantages: reducing the logistical footprint, obsolescence management, and many more.

It is the intention of the 3<sup>rd</sup> European Military Additive Manufacturing Symposium to address military requirements and challenges, while hearing perspectives from

Original Equipment Manufacturers (OEM), AM Machine producers and service providers as well as researchers / academia. The aim of the Symposium is to generate a common understanding on benefits and limitations of AM and to foster sustainable cooperation among stakeholders to materialise the benefits for military applications.

In this light, **this third edition is explicitly addressed to Armed Forces and their planning / procurement departments but also to the AM machine manufacturers and defense OEMs.**

The German Association for Defence Technology - Centre for Studies and Conferences will organise the **3rd European Military Additive Manufacturing (AM) Symposium** on 8th and 9th April 2025 in Bonn, Germany to discuss the military perspective of AM. This symposium is once again supported by the European Defence Agency (EDA).

*Join us!*

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**Please note: this is a meeting for EU / NATO member states.**

The conference is limited to participants and enterprises from / located in EU Member States and NATO countries. Exception for countries sharing same values and objectives only with individual permission by the organizers.

## Our Program on April 08, 2025

08:00 [Conference Office & Exhibition opens](#)  
[Good-Morning-Coffee in the exhibition hall](#)

09:00 **Welcome / opening-remark from the Conference-Chair**  
**Colonel (ret.) Bernd Kögel**, Managing Director  
German Association for Defence Technology, Centre for Studies & Conferences

09:05 **Keynote European Defence Agency**  
**Major General André Denk**, Deputy Chief Executive  
European Defence Agency

09:25 **Keynote Armed Forces**  
**Major General Dr. Eng. Rafael Gómez Blanco**, Director de Ingeniería e Infraestructuras del MALOG (Logistic Support Command), Spanish Air and Space Force

09:45 **How Additive Manufacturing helps us to defend the Ukraine**  
**Colonel Serhii Vereshchak**, Counsellor, Mission of Ukraine to the EU  
**Major Oleksandr Polishchuk**, Armed Forces of Ukraine

10:05 **Additive Manufacturing in Defense Creating the Framework for Innovation**  
**James Nudo**, Vice President, DMG MORI Co. Ltd. Europe

10:25 **Food-for Thought from a Military OEM**  
**Hanno Ackerhans**, KNDS Deutschland

[10:45 Coffee-Break in the exhibition hall](#)

11:20 **The Keynote-Speakers on Stage (moderated dialog)**

12:05 **Additive Manufacturing in the Portuguese Navy - A Case Study**  
**Varela Simões**, Portuguese Navy Base Naval de Lisboa, Portugal

12:25 **Refining Agile Implementation of Additive Manufacturing: Lessons Learned and the Way Forward**  
**Major Alexander Rode**, Bundeswehr Planning Office

[12:45 Lunch-Break in the exhibition hall](#)

14:00 Elevator pitches regarding the following Poster-Sessions

14:30 16 Speakers Corners (Poster Sessions) For Details see page 5.

[15:45 Coffee-Break in the exhibition hall](#)

16:30 Parallel Sessions A1 - C1 (Details see page 6)

[18:00 Beer Call in the exhibition hall](#)

[18:30 Walking Dinner in the exhibition hall](#)

21:30 Last Call

22:00 End of Day 1



## Our Program on April 09, 2025

08:00 Conference Office & Exhibition opens  
Good-Morning-Coffee in the exhibition hall

08:30 **Additive Manufacturing in the Military Domain - way ahead**  
*Martin Huber*, PO Logistics & Additive Manufacturing, EDA

08:50 Way to the following sessions

09:00 Parallel sessions A2 - C2 (Details see page 7)

10:30 Coffee-Break in the exhibition hall

11:15 Parallel sessions A3 - C3 (Details see page 8)

12:45 Lunch-Break in the exhibition hall

14:00 Parallel sessions A4 - C4 (Details see page 9)

15:30 Return to the Main-Conference-Hall ("Saal Beethoven")

15:35 Summary / Farewell *by Martin Huber (EDA) & Bernd Kögel (SGW)*

15:50 End of conference



## Speakers Corners (Poster Sessions) on April 08, 2025

- |  |   |
|--|---|
| <p><b>Poster 1:</b>    <b>Development of large scale metal AM machines in China and consequences for the Western alliances</b><br/><i>Stefan Ritt</i>, AM/3D printing market integration + printing concepts, Germany</p>                          | <p><b>Poster 9:</b>    <b>Laser Powder Bed Fusion for Efficient Copper-Nickel Casting Replacement in Naval Applications</b><br/><i>Dr. Pierre Van Cauwenbergh</i>, 3D Systems, Belgium</p>              |
| <p><b>Poster 2:</b>    <b>Additive Manufacturing: ready for High Performance Defence</b><br/><i>Christoph Hauck</i>, toolcraft AG, Germany</p>   | <p><b>Poster 10:</b>    <b>Additive Manufacturing of safety-relevant components using the example of pressure equipment in accordance with the PED</b><br/><i>Philipp Schwarz</i>, Rosswag, Germany</p> |
| <p><b>Poster 3:</b>    <b>Printer experimentation for Navy MRO</b><br/><i>Marine Moustrous</i>, DGA - Aerospace Systems, France</p>  | <p><b>Poster 11:</b>    <b>High quality pellet printing for large scale polymer parts</b><br/><i>Lukas Groß</i>, Liqtra, Germany</p>  |
| <p><b>Poster 4:</b>    <b>Light additive manufacturing unit - Requirements, advantages and challenges</b><br/><i>Maximilian Krönert</i>, Bundeswehr Research Institute for Materials, Fuels and Lubricants (WIWeB), Germany</p>                    | <p><b>Poster 12:</b>    <b>Simulating manufacturing workflows of DED technologies applied for aerospace and defense Industries</b><br/><i>Abel Ramos</i>, Ansys, Spain</p>                              |
| <p><b>Poster 5:</b>    <b>DED problems and their solutions for metal printing</b><br/><i>Michael Eberhard</i>, Fronius International, Germany</p>  | <p><b>Poster 13:</b>    <b>Getting L-PBF based Heavy Metals Ready for Defense Applications</b><br/><i>Markus Linnenberg</i>, Fraunhofer Institute for High-Speed Dynamics, Germany</p>                  |
| <p><b>Poster 6:</b>    <b>Validating Distortion Predictions in Large-Scale Directed Energy Deposition Components Using Advanced Simulation Techniques</b><br/><i>Dr. Enrique Escobar de Obaldia</i>, Ansys, Germany</p>                            | <p><b>Poster 14:</b>    <b>Printing electric conductive PA</b><br/><i>Felix Wendt</i>, Fiberthree, Germany</p>  |
| <p><b>Poster 7:</b>    <b>Aluminium Scandium powder alloy development for Defense application</b><br/><i>Dr. Hans-Wolfgang Seeliger</i>, Gränges Powder Metallurgy, Germany</p>  | <p><b>Poster 15:</b>    <b>Additive manufacturing of RF absorbing materials - from EMC to defense dedicated applications</b><br/><i>Camille Crouzet</i>, HYMAG'IN, France</p>                           |
| <p><b>Poster 8:</b>    <b>Metal Additive Manufacturing in Armed Forces: Capabilities, Applications, and Strategic Integration</b><br/><i>Till Tetzlaff</i>, Bundeswehr Research Institute for Materials, Fuels and Lubricants (WIWeB), Germany</p> | <p><b>Poster 16:</b>    <b>Security and technological sovereignty in 3D printing</b><br/><i>Jiří Průša</i>, Prusa Research, Czech Republic</p>  |



## Sessions A1 - C1 on April 08, 2025

### Session A1

#### Military meets AM

*Military use cases and operational considerations*

*Moderation: Martin Huber, EDA*

16:30 **Advanced Manufacturing in NATO: AM Use Cases and Technology adoptions at NSPA**

**Joeren Brauer**

NATO Support and Procurement Agency

16:45 **German Navy Navigating the future: Use Cases, Lessons learned, international standards**

**Lieutenant (GE Navy) Dr. Sascha Hartig**

German Navy Support Command

17:00 **Establishing Standardised Technical Data Packs (TDPs) for Efficient and Effective 3D Printing in the British Army**

**Major Richard Cummings**

British Army Army Headquarters, United Kingdom

17:15 **Additive Manufacturing for Logistic Support (AMLS) - An Overview**

**Dr. Felix Zimmer**

Bundeswehr Research Institute for Materials, Fuels and Lubricants (WIWeB), Germany

17:30 Discussion / Q&A

18:00 [Beer Call in the exhibition hall](#)

### Session B1

#### AM Technology

*Selected aspects I*

*Moderation: Tobias Kruemberg, DMFG Solutions*

16:30 **To heat treat or not to heat treat?**

**Prof. Eric Jäggle**

Bundeswehr University Munich, Germany

16:45 **ColdMetalFusion – Achieving Smooth Surfaces efficiently with Green Part Processing**

**Christian Staudigel**

Headmade Materials, Germany

17:00 **In-house powder production for additive manufacturing using ultrasonic atomization**

**Jakub Ciftci**

AMAZEMET, Poland

17:15 **Development of a high-strength wire material for WAAM applications**

**Tom Hahn**

Nordmetall, Germany

17:30 Discussion / Q&A

18:00 [Beer Call in the exhibition hall](#)

### Session C1

#### Legal, quality and regulatory considerations

*Moderation: Stefan Ritt,*

*AM/3D-Druck Konzepte & Marktintegration*

16:30 **Legal guardrails for Military Additive Manufacturing and how to comply with them**

**Dr. Andreas Leupold**

Leupold Legal Germany

16:45 **The idea of a mobile laboratory for quality assurance in a deployable AM micro-plant**

**Dr. Tadeusz Gorewoda**

Łukasiewicz Research Network - Institute of Non-Ferrous Metals, Poland

17:00 **Scaling Decentralized Additive Manufacturing in Operational Environments**

**Nils Knofius**

Fieldmade, Norway

17:15 **Risk-Based and Deployability Scenario-Oriented Qualification of AM Parts**

**André Nettermann**

Qualified AM, Germany

17:30 Discussion / Q&A

18:00 [Beer Call in the exhibition hall](#)





## Sessions A2 - C2 on April 09, 2025

### Session A2

#### AM meets Military I

*Considerations from research &  
Industry perspectives*

*Moderation: Frederic Creusen, MoD Netherlands,  
Commando Materieel en IT (COMMIT)*

- 09:00 **Advanced Manufacturing in the German Air Force**  
**Captain Benjamin Wolf**  
Bundeswehr System Centre 23, Germany
- 09:15 **A decision-support model for the implementation of  
additive manufacturing in a military context**  
**Lieutenant Colonel PhD Luís Quinto**  
Military Academy of Portugal
- 09:30 **An example for Defence Innovation with AM:  
Why the Suppressor Industry is Shifting to  
Additive Manufacturing - Enabling the  
Next Generation of Suppressors**  
**Michael Wohlfart**  
EOS Electro Optical Systems, Germany
- 09:45 **Deployable aluminium additive manufacturing for  
in-situ manufacturing**  
**Dr. Jonas Galle**  
ValCUN, Belgium
- 10:00 Discussion / Q&A
- 10:30 [Coffee break in the exhibition hall](#)

### Session B2

#### AM Technology

*Selected aspects II*

*Moderation: Dr. Paula Queipo,  
IDONIAL Technology Centre*

- 09:00 **AM Maturity across different industries**  
**Benjamin Haller**  
AM Academy, Germany
- 09:15 **Improving capability by AM**  
**Klaas Rozema**  
Titomic EU, The Netherlands
- 09:30 **Metal-Ceramic Laminates with controlled layer  
thicknesses prepared by Selective Powder  
Deposition and pressure assisted sintering**  
**Dr. Bram Neirinck**  
Schaeffler Aerosint, Belgium
- 09:45 **Fast, cost-efficient and raw material-saving:  
Advantages of 3D casting production with additively  
manufactured sand molds for the defence sector**  
**Rudolf Wintgens**  
Laempe Mössner Sinto, Germany
- 10:00 Discussion / Q&A
- 10:30 [Coffee break in the exhibition hall](#)

### Session C2

#### Sustainability and Circular Economy

*Moderation: Mathieu Schwander, EDA*

- 09:00 **Direct extrusion of (fiber filled) recycled polymer  
from former and for future structural parts**  
**Jan-Uwe Reinhard Schmidt**  
German Aerospace Center
- 09:15 **Closed material loop? LCA of PA-CF**  
**Felix Wendt**  
Fiberthree, Germany
- 09:30 **Metal composites for Additive Manufacturing to  
produce complex metallic components in an easy,  
cost effective and sustainable way for Defense sector**  
**Dr. Juan Naranjo**  
AIMPLAS, Spain
- 09:45 **Lightweight Thermal Management Solutions by  
Additive Manufacturing**  
**Felix Gemse**  
Günter-Köhler-Institut für Fügetechnik  
und Werkstoffprüfung, Germany
- 10:00 Discussion / Q&A
- 10:30 [Coffee break in the exhibition hall](#)



## Sessions A3 - C3 on April 09, 2025

### Session A3

#### AM meets Military II

*Considerations from research &  
Industry perspectives*

*Moderation: Georg Schöpf, x-technik IT&Medien*

- 11:15 **NOVA M Mini Foundry – The Simplest Solution for Rapid Battle Damage Repair**  
*PHD Fernando Lasagni*  
Novaindef, Spain
- 11:30 **Automating 3d scanning and reverse engineering to boost on-site military metal additive for spare parts manufacturing and repair**  
*PhD Daniel Ferreira*  
Danish Technological Institute, Denmark
- 11:45 **UAV Production at the Frontlines: Advancing Hybrid Supply Chains with Distributed Additive Manufacturing**  
*Gino Balistreri*  
Hewlett Packard, Spain
- 12:00 **Supporting Ukraine with additive manufactured drones**  
*Anton Chernysh*, BeeTA Technologies and manager at DrukArmy, Ukraine
- 12:15 Discussion / Q&A
- 12:45 [Luncheon in the exhibition hall](#)

### Session B3

#### AM Certification, Safety- and Quality Management

*Moderation: Dr. Norman Herzig, Nordmetall*

- 11:15 **AM Safety Management: “How safe is Additive Manufacturing?”**  
*Noël Daemen*  
Additive Mindset, The Netherlands
- 11:30 **Digital Certification for Remote Additive Manufacturing**  
*Anders Hjermitsev*  
Danish Technological Institute, Denmark
- 11:45 **Traceability and Security in Additive Manufacturing with Advanced Marking Solutions**  
*Sebastian Matthes*  
3Faktur, Germany
- 12:00 **Handling Large L-PBF In-Process Monitoring Data Sets for Qualification**  
*Philip Sperling*  
Interspectral, Sweden
- 12:15 Discussion / Q&A
- 12:45 [Luncheon in the exhibition hall](#)

### Session C3

#### Also to be considered:

*Supply chains, cyber security, factory planning,  
cost effective cooperation*

*Moderation: Prof. Dr. Christian Seidel,  
Wohlers Associates powered by ASTM*

- 11:15 **Factory planning and operational excellence for AM**  
*Prof. Dr. Christian Seidel*  
Wohlers Associates powered by ASTM, USA
- 11:30 **Cybersecurity "Chain of Trust"**  
*Paul Leendertse*  
Colibrium Additive (GE Aerospace), USA
- 11:45 **Efficient data management in additive manufacturing**  
*Peter Lindecke*  
amsight GmbH, Germany
- 12:00 **Joint procurement of additively manufactured spare parts for the defence sector**  
*Niccolò Maccarini*  
Eindhoven University of Technology, The Netherlands
- 12:15 Discussion / Q&A
- 12:45 [Luncheon in the exhibition hall](#)



## Sessions A4 - C4 on April 09, 2025

### Session A4

#### AM meets Military III

*Considerations from research &  
Industry perspectives*

*Moderation: Ismail Ünsal, Fraunhofer IGCV*

14:00 **AVT-342 - Interoperability of additive manufacturing in NATO operations**  
**Dr. Tom Thorvaldsen**  
Norwegian Defence Research Establishment, Norway

14:15 **How the U.S. Marine Corps Select AM Part Candidates**  
**Aleksander Ciszek**  
3YOURMIND, Germany

14:30 **Advancing Military Readiness through Innovative Additive Manufacturing Materials: Enhancing Performance and Capabilities**  
**Joachim Kasemann**  
Mark3D, Germany

14:45 **Polymer AM for Defence**  
**Matthew Jones**  
Stratasys, Germany

15:00 Discussion / Q&A

15:30 [Return to the Main-Conference-Hall \("Saal Beethoven"\)](#)

### Session B4

#### Special cases: energetic materials, printing concrete, printing antennas, applying AI

*Moderation: Giuseppe Dello Stritto, Head of Unit Land and Logistics, EDA*

14:00 **3D-printing of energetic materials**  
**Daniel Mitró**  
Fraunhofer Institute for Chemical Technologies ICT, Germany

14:15 **New antenna systems using printable magneto-dielectric and dielectric-filled polymers**  
**Günther Pflug**  
TITK (Thüringisches Institut für Textil- und Kunststoff - Forschung e.V.), Germany

14:30 **The ballistic performance of composite walls made of 3D printed concrete**  
**Dr. Richard Dekker**  
TNO, The Netherlands

14:45 **Artificial Intelligence for first-time-right Additive Manufacturing in the defence sector: novel solutions and current perspective**  
**Prof. Marco Grasso**  
Politecnico di Milano, Italy

15:00 Discussion / Q&A

15:30 [Return to the Main-Conference-Hall \("Saal Beethoven"\)](#)

### Session C4

#### Enhanced ballistic protection through AM

*Moderation: Prof. Dr. Bernd Fischer, ISL*

14:00 **AM of hard and super hard ceramics: A protection's best friend**  
**Johannes Abel**  
Fraunhofer-Institut für Keramische Technologien und Systeme IKTS, Germany

14:15 **Design and optimization of nacre-inspired PEKK-TPU laminated materials via 3D printing for enhanced ballistic protection**  
**Davide Giraudo**  
Luxembourg Institute of Science and Technology (LIST), Luxembourg

14:30 **Optimizing Cellular Structures and L-PBF armor steels for Blast and Ballistic Resilience**  
**Aron Pfaff**  
Fraunhofer EMI, Germany

14:45 **Shock and energy absorption of additively manufactured metamaterials**  
**Dr. Wessel W. Wits**  
NLR - Royal Netherlands Aerospace Centre, The Netherlands

15:00 Discussion / Q&A

15:30 [Return to the Main-Conference-Hall \("Saal Beethoven"\)](#)



## Pricing for Visitors

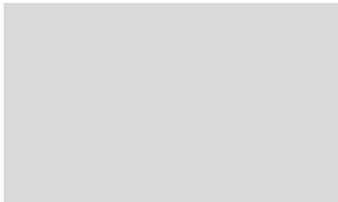
The conference open for members of the armed forces, the civil service, parliaments and ministries, embassies, academia and business from EU & NATO member states. Prices for your attendance include catering:

<b>Category A:</b>	<b>€ 85.00</b> Armed forces from EU & NATO member states, police, BKA, LKA, BND, THW, DRK, other "blue-light organisations", Ministries, offices subordinate to the ministries, parliaments, Embassies.
<b>Category B:</b>	<b>€ 310.00</b> Research institutions, students, universities, companies affiliated with the Federal Republic of Germany (BWI, BwBM, HIL, BwFPS and BwConsulting) as well as persons who cannot be assigned to categories A, C and D.
<b>Category C:</b>	<b>€ 1.190.00</b> Business / Industry
<b>Category D:</b>	<b>€ 0.00</b> Press

**Discounts** for early bird registration (Cat B, C: 10% Early Bird until 07.02.2025), 50% for speakers from industry and research, 100% for speakers from MoD / Armed Forces will be considered in the online booking process. Discount for exhibitors: See below. Prices for participation on individual days will be displayed / taken into account in the booking process on our homepage.

## Pricing for Exhibitors

**Option A | 350,- Euro per m<sup>2</sup>**  
Exhibition Space



### Option A includes

- Stand space in the desired size
- Row / corner / island stand
- **1 full ticket per 6 m<sup>2</sup>**
- 20% discount on additional full tickets
- 50-70% discount on additional tickets without participation in the presentations ("stand service")
- Security at night

**Option B | 450,- Euro per m<sup>2</sup>**  
System Booth



### Option B includes

- Option A
- Octanorm-System-Stand
- Carpet „Expo Rips“ grey
- Booth cleaning at night
- Inserts to the visitor information

**Option C | 550,- Euro per m<sup>2</sup>**  
System Booth All Inclusive



### Option C includes

- Option B
- Illumination of the booth
- Frontbanner 200 x 50 cm
- Furniture (such as Chairs, Table, Sideboard, Counter, Plant, ...)
- Carpet in the colour of your choice

**Option D | 650,- Euro per m<sup>2</sup>**  
Individual Booth Concept



### Option D includes

- Option C
- Individual Booth Building Concept
- Presentation technology (Display, beamer, ...)
- Graphics / Printings

**Click to download latest Floor Plan**



## Please register online: <https://veranstaltungen.dwt-sgw.de/?v=168>

The conference is open for members of the armed forces, the civil service, parliaments and ministries, academia and business.

**Participants from non-NATO or non-EU countries only after prior approval by the organiser!**

Only on separate invitation by EDA: Official representatives from EDA member-states are kindly asked to follow the EDA registration process.

Catering / drinks are included in the conference fees. **The prices do not include VAT.**

With your registration you agree:

1. The electronic storage of the data you provide.
2. That photos and/or film recordings may be made during the event, e.g. for reporting purposes or for publication in invitations to future DWT/SGW events.
3. The distribution of a list of participants (name / function / company or office) and the photos taken during the event to the participants.
4. With your registration/signature, you accept the conditions of participation of this invitation, the General Terms and Conditions and the Data Protection Agreement of the DWT Study Association, which can be viewed at [www.dwt-sgw.de](http://www.dwt-sgw.de).
5. Data Protection regulation (DPR): Please send any objection you may have to [bernd.koegel@dwt-sgw.de](mailto:bernd.koegel@dwt-sgw.de).
6. Cancellation conditions: Cancellations are free of charge for participants up to 5 working days before the conference; a replacement participant can be named at any time. Exhibitors have the option to cancel free of charge up to five weeks before the event.
7. If an event is cancelled for unforeseeable reasons, registered participants and exhibitors will be notified immediately and any participation and exhibition fees already paid will be refunded. The liability of Studiengesellschaft der DWT mbH is limited to the participation and exhibitor fees.

## Accommodation

Here you can book your room in the conference hotel:

Tel.: +49 228 81080 | [info.bon@maritim.de](mailto:info.bon@maritim.de)  
Booking code for the conference rate: "DWT"

[List of other recommended hotels in the vicinity of the conference hotel](#)

### Organisation:

