



# MAM

# 2019

Study Days

ADDITIVE MANUFACTURING:  
THE PRODUCTS

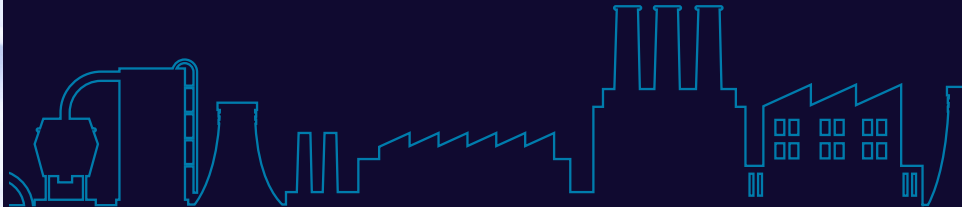
27<sup>th</sup> - 29<sup>th</sup> November 2019, Florence

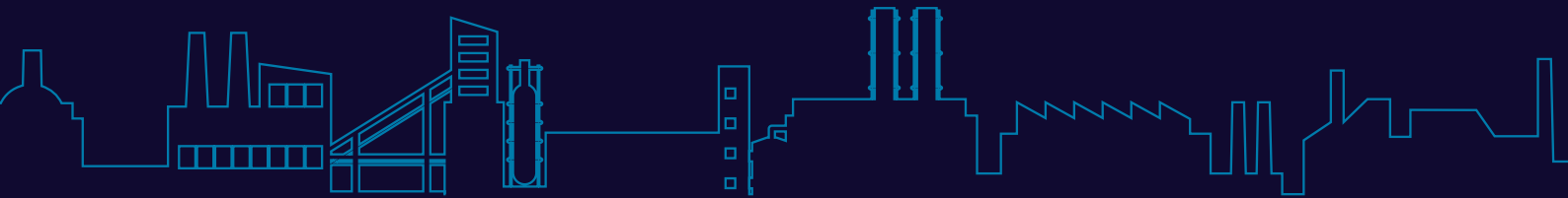
GE FLORENCE LEARNING CENTER  
Via de Perfetti Ricasoli, 78 - Florence, Italy

Organized by



Sponsored by





This year RINA organizes the fourth edition (2019) of its Master on Additive Manufacturing (MAM).

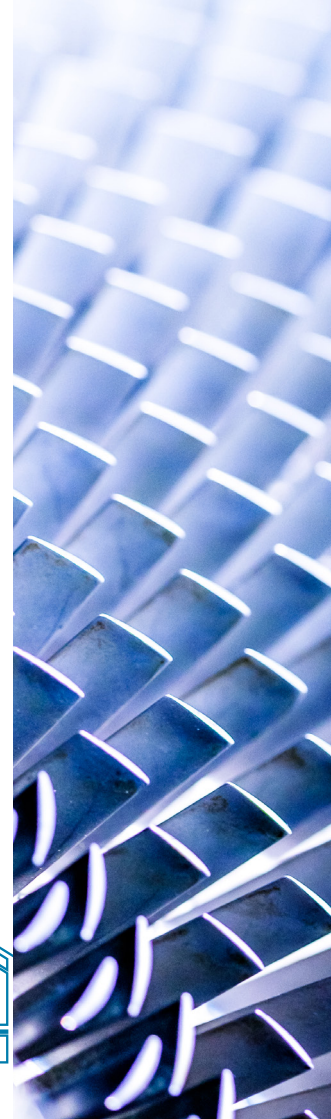
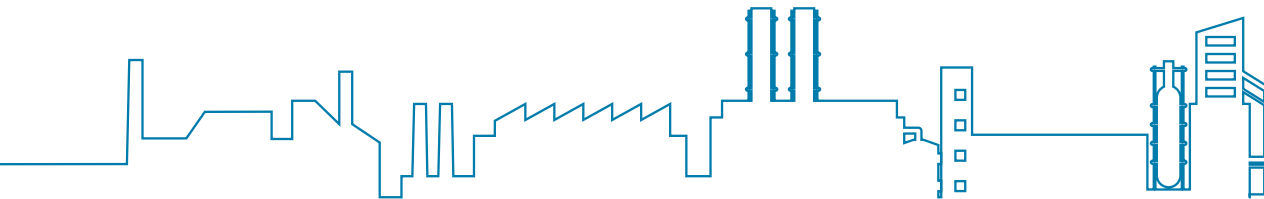
This edition 2019 is hosted by BHGE - Baker Hughes - General Electric in Florence on 27, 28 and 29 November.

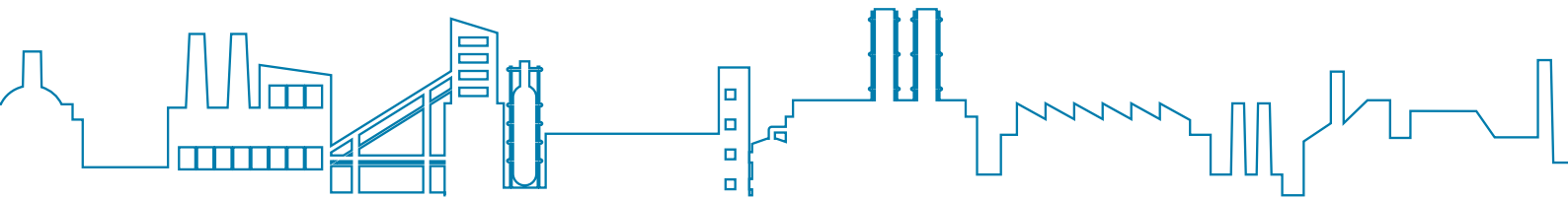
The content is strongly oriented towards the “product” themes: top technical papers including experiences of industries in the automotive, aerospace, marine, power-gen and other main industrial sectors.

We include in the Master a deep discussion on new applications and the evaluation of some specific opportunities through dedicated sessions with our scientists and technology experts.

We take this opportunity to share with the participants RINA certification services and guidelines on Additive Manufacturing.

The visit to BHGE Plant, including AM laboratories, concludes the “three study days” offering a complete updating on AM technologies.





## ADDRESSED TO

Managers, technical experts, researchers and students.

## ORGANIZERS/SUPPORTERS

The course is organized by RINA.  
Sponsored by BHGE.

## SCIENTIFIC COMMITTEE

Laura Alleva, *RINA*  
Cristiano Sciaboni, *RINA*  
Roberto Sorci, *RINA*  
Oriana Tassa, *RINA*

## COURSE DIRECTOR

Dante Pocci, *RINA*

## INTRODUCTION SPEAKERS

Paolo Noccioni, *Chief Innovation Officer - BHGE*  
Teodoro Valente, *Vice Chancellor for Research, Innovation and Technology Transfer, Università di Roma La Sapienza*  
Guido Chiappa, *Executive Vice President Industry RINA*

## ORGANIZING COMMITTEE

Dante Pocci, *RINA*  
Stefano Lionetti, *RINA*  
Roberta Valle, *RINA*

## CONTACT US

Roberta Valle  
[roberta.valle@rina.org](mailto:roberta.valle@rina.org)

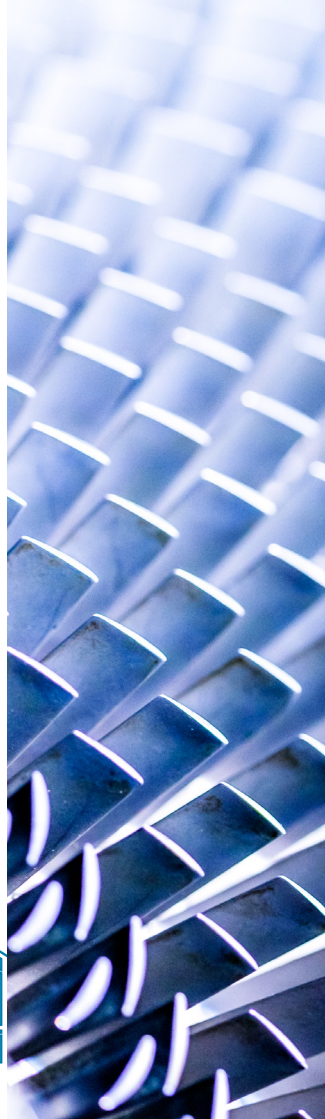
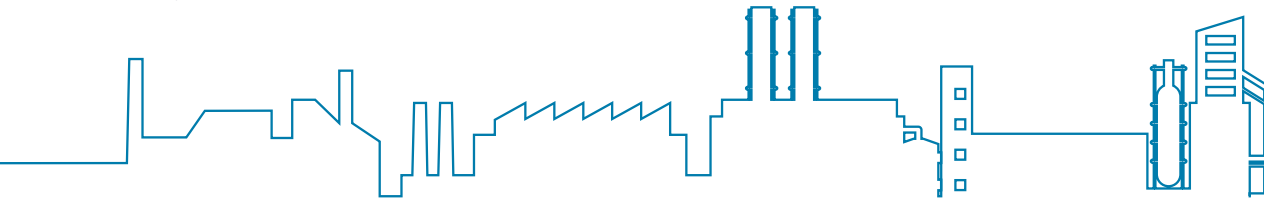
Elisabetta Amici  
[elisabetta.amici@externals.rina.org](mailto:elisabetta.amici@externals.rina.org)  
cell: +39 335 6682147

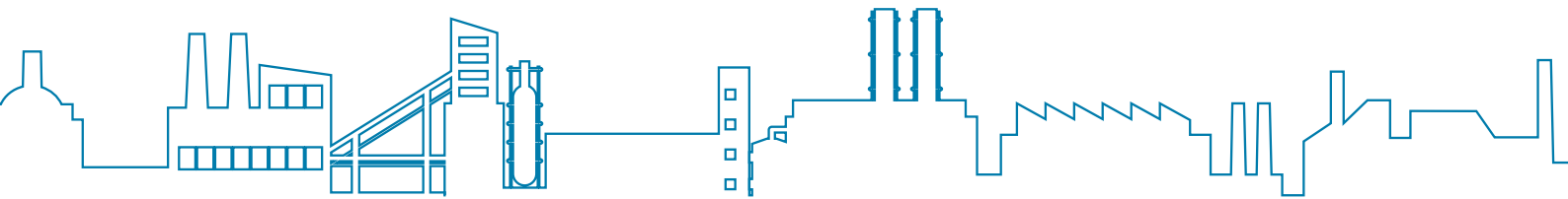
Info: [mam-add@rina.org](mailto:mam-add@rina.org)

## NOTE

The official language is Italian.  
Simultaneous translation from Italian to English is provided.

All slides are in English.





## REGISTRATION FEE

### Full fee

600,00 Euro (+VAT) Full fee including lunch, teaching material and social dinner.

### Reduced fee

540,00 Euro (+VAT) Fee with discount including lunch, teaching material and social dinner).

This fee is valid for registration by 15 October 2019, for members of OICE, AITA, AIAD and for multiple registrations.

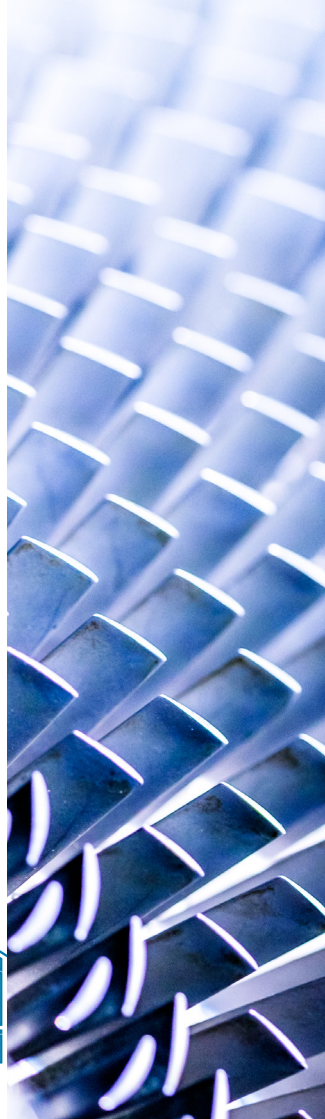
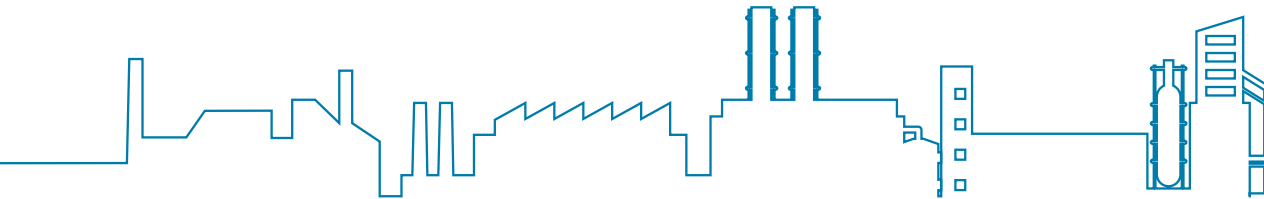
### Student fee

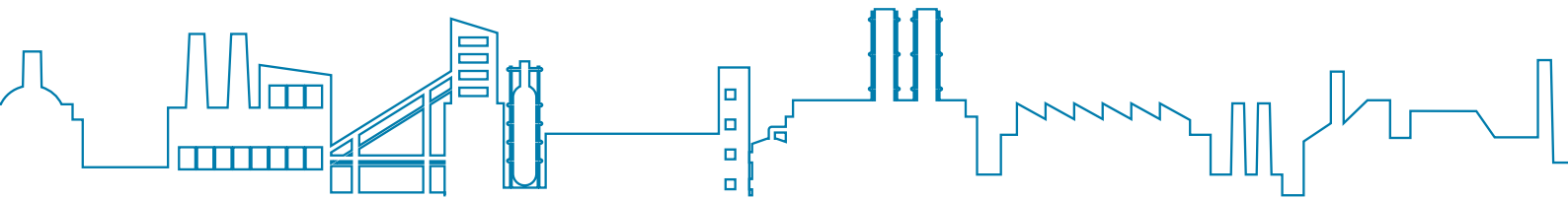
300,00 Euro (+VAT) Student fee including lunch, teaching material and social dinner.

Travel, dinner and hotel accommodation are not included

## REGISTRATION

[Registration](#) can be made online on the [rina.org](#) website or through the registration form which can be downloaded from the [website](#)







27<sup>th</sup>

NOVEMBER

TURBINE (AERONAUTIC, POWER GEN, OIL&GAS)

28<sup>th</sup>

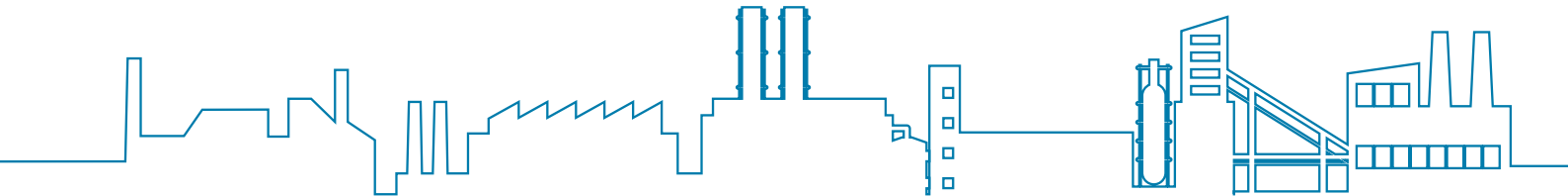
NOVEMBER

AUTOMOTIVE

29<sup>th</sup>

NOVEMBER

AEROSPACE & DEFENCE - MARINE



# MAM

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# 2019

27<sup>th</sup>

NOVEMBER



## INTRODUCTION

09,30 - 09,40	<b>Welcome</b> Paolo Noccioni, <i>BHGE</i>	14,30 - 15,00	<b>Gas turbine components: the Siemens opportunities and challenges</b> Vladimir Navrotsky, <i>Siemens</i>
09,40 - 09,50	Guido Chiappa, <i>RINA</i>	15,00 - 15,30	<i>Coffee break</i>
09,50 - 10,50	<b>Keynote Lecture: AM as strategic KET in the digital transformation of the manufacturing industry</b> Teodoro Valente, <i>Università di Roma La Sapienza</i>	15,30 - 16,30	<i>Open discussion</i>
10,50 - 11,20	<i>Coffee break</i>		

## TURBINE (AERONAUTIC, POWER GEN, OIL&GAS)

*Chair: Oriana Tassa*

11,20 - 12,00	<b>State of the Art</b> Flaviana Calignano, Diego Manfredi <b>Centro Interdiparimentale di Integrated Additive Manufacturing Politecnico di Torino</b>
12,00 - 12,30	<b>Turbomachinery in Oil&amp;Gas Sector: the AM experiences</b> Massimiliano Cecconi, <i>BHGE</i>
12,30 - 13,00	<b>Laser Metal Deposition and Powder Bed Fusion in</b> <b>Ansaldo Energia</b> Benedetto Gallo, <i>Ansaldo Energia</i>
13,00 - 14,00	<i>Lunch</i>
14,00 - 14,30	<b>Gas Turbines engine and hot part turbine components: the RR experience</b> Clive Stapleton, <i>Rolls Royce</i>

## RINA WORKSHOP SESSIONS

16,30 - 17,30	<b>CERTIFICATION</b> <ul style="list-style-type: none"><li>• <b>Guidelines</b> for the certification of metallic products made by AM</li><li>• <b>RINA Powder</b></li></ul>
17,30 - 18,30	<b>SERVICES</b> <ul style="list-style-type: none"><li>• <b>Roadmapping and Feasibility studies</b></li><li>• <b>Alloy Design</b></li><li>• <b>Prototypes</b></li><li>• <b>Testing</b></li></ul>
18,30	<i>End of the day</i>

# MAM

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# 2019

28<sup>th</sup>

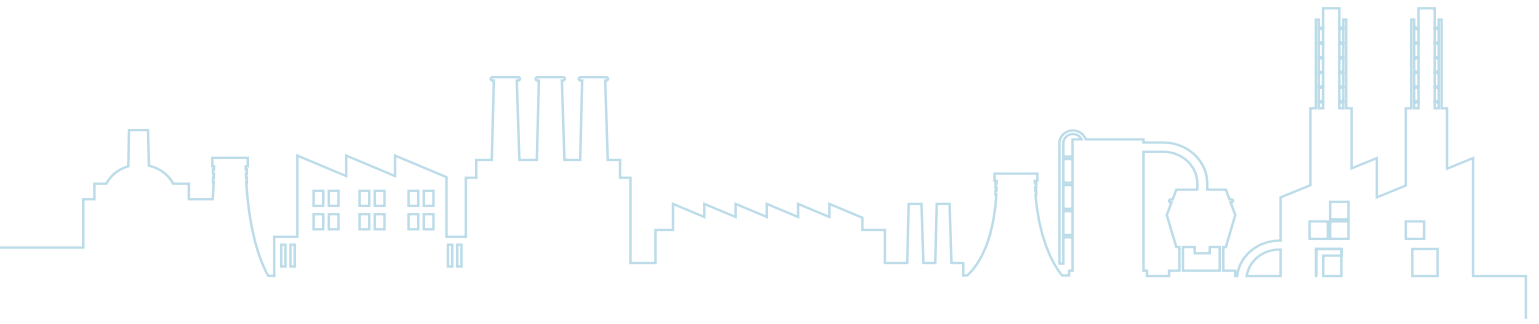
NOVEMBER



## AUTOMOTIVE

*Chair: Cristiano Sciaboni*

09,00 - 10,00	<b>State of the Art</b> Michele Lanzetta, <i>Università di Pisa</i>	14,30 - 17,00	<b>Visit to BHGE Plant including AM laboratories</b>
10,00 - 10,30	<b>AM: Experiences and challenges in FCA Group</b> Roberta Sampieri, <i>FCA</i>	17,00	<i>End of the day</i>
10,30 - 11,00	<i>Coffee break</i>	20,00	<i>Social dinner</i>
11,00 - 11,30	<b>The experiences in evolution: how AM can support the Ferrari challenges</b> Aurelio Occhinegro, <i>Ferrari Gestione Sportiva</i>		
11,30 - 12,00	<b>The opportunities and the future challenges of the AM technologies</b> Leonardo Lombatti, <i>Dallara</i>		
12,00 - 12,30	<b>Research and development on alloy design for additive manufacturing</b> Eric Jagle, <i>Max Planck Institute</i>		
12,30 - 13,00	<i>Open discussion</i>		
13,00 - 14,00	<i>Lunch</i>		



# MAM

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# 2019

29<sup>th</sup>

NOVEMBER



## AEROSPACE & DEFENCE

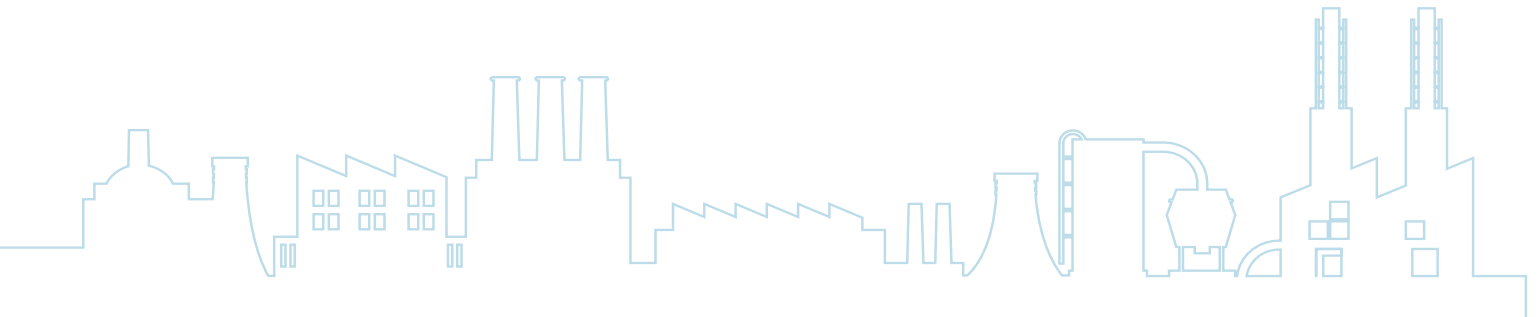
*Chair: Laura Alleva*

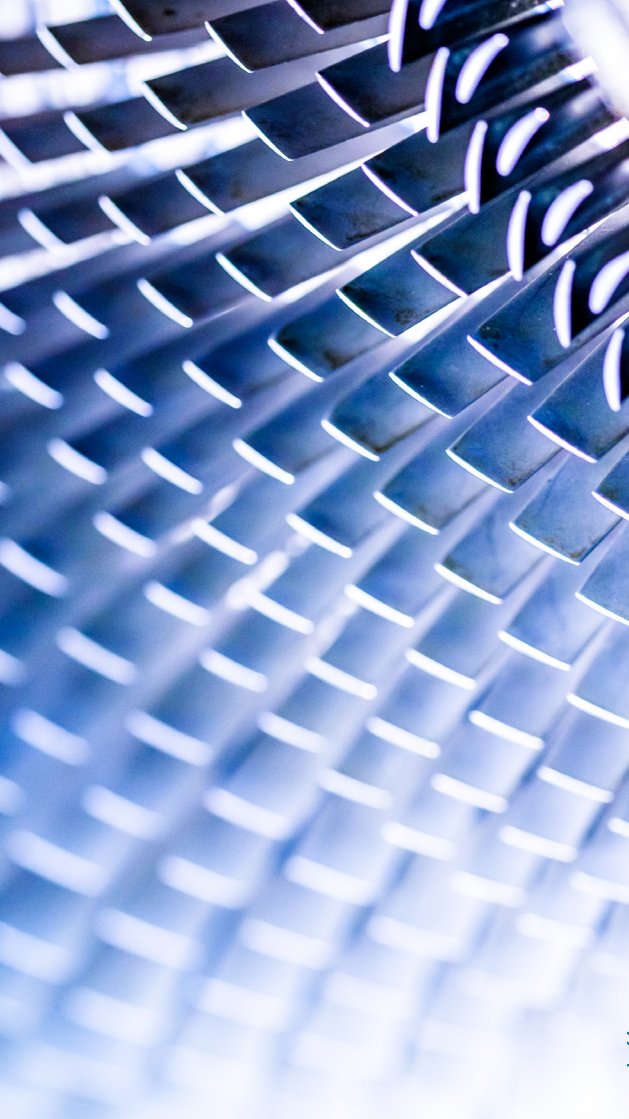
- 09,00 - 10,00 **State of the Art**  
Barbara Previtali, *Politecnico di Milano*
- 10,00 - 10,30 **The strategic role of the Additive Manufacturing in Leonardo Company**  
Marco Vitucci, *Leonardo*
- 10,30 - 11,00 *Coffee break*
- 11,00 - 11,30 **AM: Case studies and new opportunities in MBDA Company**  
Pasquale Corrado, *MBDA*
- 11,30 - 12,00 **AM: Experiences and challenges in Avio Group**  
Daniele Liuzzi, Daniele Drigo, *Avio*
- 12,00 - 12,30 **AM: Experiences and challenges in Thales Alenia Space**  
Francesco Lumaca, *Thales Alenia Space*
- 12,30 - 13,00 *Open discussion*
- 13,00 - 14,00 *Lunch*

## MARINE

*Chair: Roberto Sorci*

- 14,00 - 15,00 **State of the Art**  
Stefano Lionetti, *RINA*
- 15,00 - 15,30 **Manufacturing needs for marine components using 3D printing technologies**  
Rocco Cavaliere, *Fincantieri*  
Piero Travi, *Detra*
- 15,30 - 16,00 **The effective use of AM components for Marina Militare needs**  
Capitano di Fregata Raffaele Vita, *Marina Militare*
- 16,00 - 16,30 *Coffee break*
- 16,30 - 17,00 **AM Case Studies in Marine context**  
Paolo Licinio Nazzaro, *Superfici*
- 17,00 - 17,30 *Open discussion*
- 17,30 *End oh the day*





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