



9<sup>th</sup> International Summer School on  
**Advanced Material Systems (AMS):**  
**Manufacturing – Characterization – Modeling**  
**July 3-7, 2023, Thessaloniki, Greece**

## Program

### Day 1 – Monday, July 3, 2023 (*Greece Time – EEST*)

*Assembly Room, Building D'-ground floor, School of Engineering*

**10:00-11:00** Registration

- Dr. Dimitrios S. Koveos, Rector, AUTH  
 - Dr. Dimitris C. Lagoudas, Associate Vice  
 Chancellor for Engineering Research,  
 TAMU

**11:00-11:30** Welcome Session / Introductions

- Dr. Kyros Yakinthos, Dean of  
 Engineering AUTH  
 - Dr. George Savaidis, Head of  
 Mechanical Engineering AUTH

**11:30-12:00** Overview / Expectations

Dr. Nikolaos Michailidis, Director of the  
 AUTH-TEES Partnership

<i>Session I:</i>	<i>Advanced Materials &amp; Manufacturing</i>	<i>Instructor</i>
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<b>12:00-12:45</b>	Overview of multifunctional materials	Dr. D. Lagoudas
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<b>12:45-13:45</b>	Lunch break - Get to know each other reception	
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<b>13:45-14:30</b>	Additive Manufacturing of Shape Memory Polymers (SMPs), lattice structures and 3D scaffolds	Dr. N. Michailidis
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<b>14:30-15:15</b>	Micromechanics Workshop Part I	Dr. D. Lagoudas Dr. T. Zhou
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*Move to Lab of Experimental Strength of Materials and Structures, Civil Engineering*

<b>15:30-17:30</b>	Mechanical and thermomechanical testing of shape memory materials, porous, lattice structures and CFRP composites	Mr. A. Argyros Mr. A. Chortis Dr. K. Katakalos Dr. F. Stergioudi Dr. N. Michailidis
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### Day 02 – Tuesday, July 4, 2023

*Computer Lab, Civil Engineering*

<i>Session II:</i>	<i>Micromechanics Workshop</i>	<i>Instructor</i>
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<b>11:00-13:00</b>	Micromechanics Workshop Part II	Dr. G. Chatzigeorgiou
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<b>13:00-14:00</b>	Lunch break	
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<b>14:00-14:45</b>	Processing and Characterization of Porous Materials	Dr. F. Stergioudi
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*Move to Physical Metallurgy Laboratory, Mechanical Engineering*



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**15:00-17:00** 3D printing of lattice structures

Mr. A. Argyros  
Dr. N. Michailidis

**Day 03 – Wednesday, July 5, 2023**

*Computer Lab, Civil Engineering*

<b>Session III:</b>	<b>Simulation of Smart Materials and Student projects</b>	<b>Instructor</b>
<b>11:00-13:00</b>	Student Projects Assignment	Dr. G. Chatzigeorgiou Dr. F. Stergioudi Dr. K. Katakalos
<b>13:00-14:00</b>	Lunch break	
<b>14:00-15:45</b>	Review of progress on projects	Dr. G. Chatzigeorgiou Dr. F. Stergioudi Dr. K. Katakalos

**Day 04 – Thursday, July 6, 2023**

*BETA CAE Systems SA, Kato Scholari, Thessaloniki*

<b>Session IV:</b>	<b>Visit at BETA CAE SYSTEMS for training</b>	<b>Instructor</b>
<b>09:15</b>	Meeting at the entrance of Building D'	All participants
<b>10:00-10:45</b>	Introduction to Computer Aided Engineering – BETA CAE Systems, Company & Products	Mr. N. Trakatelis
<b>10:45-11:00</b>	Coffee break	
<b>11:00-12:30</b>	Pre & Post Processing for FE modelling of Laminated Composite Structures	Mr. V. Palaiokastritis
<b>12:30-13:30</b>	Lunch break	
<b>13:30-15:00</b>	Multiscale Modelling of Composites with Mean Field and FE Homogenization	Mr. V. Palaiokastritis
<b>15:00-15:15</b>	Coffee break	
<b>15:15-15:45</b>	Extended Reality (XR) and collaboration in CAE world	Mr. G. Skouvaklis
<b>15:45-16:00</b>	Q/A	
<b>16:00-</b>	Return to AUTH	

**Day 05 – Friday, July 7, 2023**

*Assembly Room, Building D'-ground floor, School of Engineering*

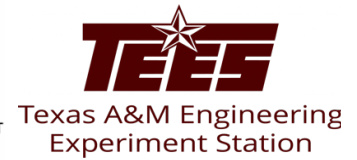
<b>Session VI:</b>	<b>Students' evaluation</b>	<b>Instructor</b>



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<b>09:00-11:00</b>	Students work on their project presentations	
<b>11:00-12:00</b>	Industrial perspectives of shape memory alloys in aviation	Mr. J. Mabe
<b>12:00-13:30</b>	Presentation of Student Projects	All instructors
<b>13:30-14:30</b>	Lunch break	
<b>14:30-15:30</b>	Certificate Awarding Ceremony and Conclusion of Summer School	All instructors
<b>15:30-17:00</b>	Networking session / mini-Party	

**Organizing Institutions:**



**Collaborating Institutions:**



**Under the Auspices of:**



**School of Engineering AUTH**



**Department of Mechanical Engineering AUTH**