

NEWSLETTER 02

H2020-WIDESPREAD-2018, Project No. 857124

March 2021

Main events:

1st Winter School: Trends on Additive Manufacturing for Engineering Applications, Timisoara, Romania & On-line, 24-28 January 2021

⇒ **11 Lectures:** **L1: *Presentation of the SIRAMM project*, Prof. L. Marsavina** (UPT, Timisoara, ROMANIA), **L2: *Opening the design space by removing constraints with Additive Manufacturing and Topology Optimization*, Prof. J. Torgensen** (NTNU, Trondheim, NORWAY), **L3: *Review on AM of polymeric materials*, Prof. R. Brighenti, Prof. A. Spagnoli** (Univ. of Parma, ITALY), **L4: *Fatigue properties of metallic materials produced by AM*, Prof. L. Kunz** (IPM Brno, CZECH REP.), **L5: *Experimental Fracture Mechanics*, Prof. D. Constantinescu** (UP Bucharest, ROMANIA), **L6: *How to apply for research funding: funding opportunities for Early Stage Researchers and grant writing tips*, Dr. S. Tavernini** (Univ. of Parma, ITALY), **L7: *Numerical simulation of fatigue crack growth*, Dr. A. Grbovic** (Univ. of Belgrade, SERBIA), **L8: *Simulation for additive manufacturing: opportunities and challenges*, Prof. F. Auricchio** (Univ. of Pavia, ITALY), **L9: *Application of Fracture Mechanics parameters on structural integrity assessment*, Prof. A. Sedmak** (Univ. of Belgrade, SERBIA), **L10: *Local approaches in fatigue*, Prof. F. Berto** (NTNU, Trondheim, NORWAY), **L11: *Gender (im) balance in science and engineering across cultures*, Prof. R. Ghita** (UPT, Timisoara, ROMANIA)

⇒ **All lecture presentations available on YouTube:** <https://www.youtube.com/watch?v=jDH-Dz86-r4&list=PLqdhWx9LI8U6bBqIA4R4aU9Qzqa-XKvk5>

⇒ **All lectures, practical sessions and PhD presentations are available for registered participants at [unicampus.ro](https://unicampus.ro/cursuri/login/index.php) platform of University Politehnica Timisoara:** <https://unicampus.ro/cursuri/login/index.php>

⇒ **2 Practical sessions:** PS1: Designing and manufacturing of specimens (Univ. of Belgrade, Serbia), PS2: Testing of Specimens (Univ. Politehnica Timisoara, Romania)

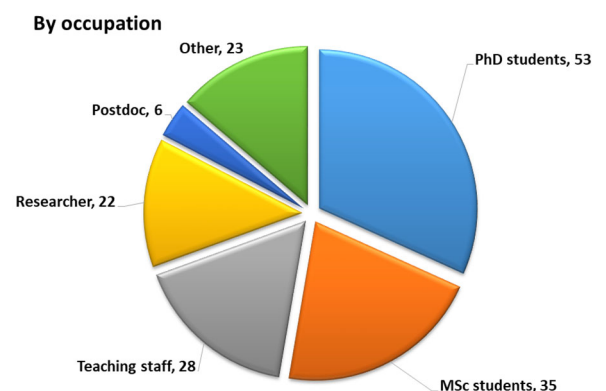
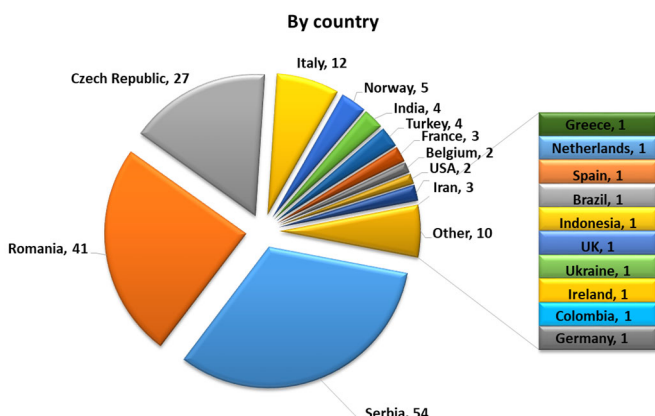
⇒ **Discussions regarding grant applications and opportunities, Dr. S. Tavernini** (Univ. of Parma, ITALY)

⇒ **1 PhD presentations session (14 presentations)**



Timisoara, 25 January 2021

⇒ **Other presentations**



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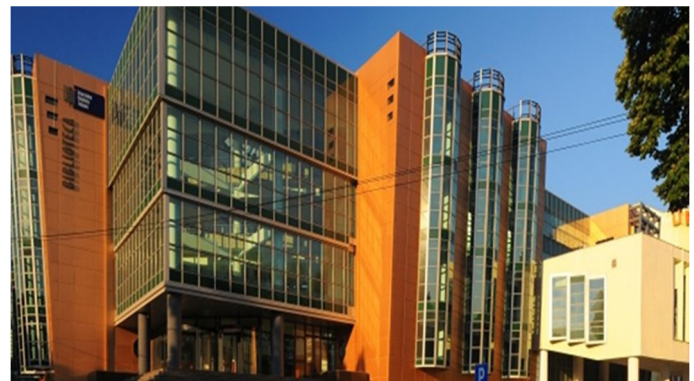
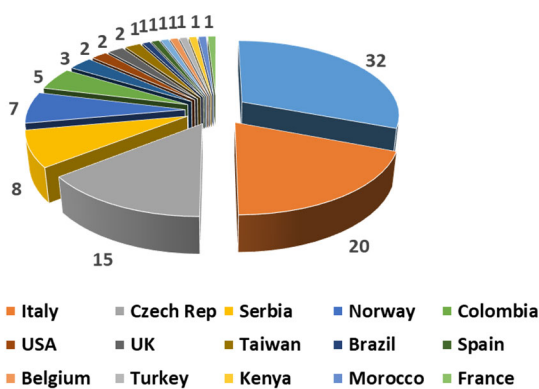
1st Workshop: Structural Integrity of Additively Manufactured Materials (SIAMM20), Timisoara, Romania & On-line, 25-26 February 2021

- ⇒ 4 keynote lectures
- ⇒ 40 papers presented in 5 sessions:
 - ◆ Characterization of AM materials;
 - ◆ AM technologies advancements;
 - ◆ Modeling of AM processes and materials;
 - ◆ Quality and control of AM materials;
 - ◆ Mechanics and damage of AM materials
- ⇒ 104 participants



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Participants countries



- ⇒ Papers to be submitted to Special Issue in *Material Design & Processing Communications* journal published by Wiley



Published papers

- Journal papers

Brighenti R., Li Y., & Vernerey F.J. (2020). Smart polymers for advanced applications: a mechanical perspective review. *Frontiers in Materials*, 7: 196, 1-18.

Brighenti R., Cosma M.P., Marsavina L., Spagnoli A., Terzano M. (2021). Laser-based additively manufactured polymers: a review on processes and mechanical models. *Journal of Materials Science*, 56 (2), 1524-1532.

Marsavina L., Linul E. (2020). Fracture toughness of rigid polymeric foams: A review. *Fat. & Fract. of Eng. Mat. & Struct.*, 43(11), 2483-2514.

Linul E., Marsavina L., Stoia D. I. (2020). Mode I and II fracture toughness investigation of Laser-Sintered Polyamide. *Theoretical and Applied Fracture Mechanics*, 106: 102497.

Stoia D. I., Marsavina L., Linul E. (2020). Mode I Fracture Toughness of Polyamide and Alumide Samples obtained by Selective Laser Sintering Additive Process. *Polymers*: 12(3), 640.

- Conference papers

Valean C., Marsavina L., Marghitas M., Linul E., Razavi J., Berto F., Effect of manufacturing parameters on tensile properties of FDM printed specimens, *Procedia Structural Integrity*, 26, 2020, p.313-320

Valean C., Marsavina L., Marghitas M., Linul E., Razavi J., Berto F., Brighenti R., The effect of crack insertion for FDM printed PLA materials on Mode I and Mode II fracture toughness, *Procedia Structural Integrity*, 28, 2020, p.1134-1139

Galatanu S.-V., Scano M., Pietras D., Pirvulescu L.-D., Porcu M.C., Marsavina L., Sadowski T., Bending behavior of AM50 Magnesium alloy under static and dynamic loading, *Procedia Structural Integrity*, 26, 2020, p. 269-276.

Milovanović A., Sedmak A., Grbović A., Golubović Z., Mladenović G., Čolić K., Milosević M. (2020) Comparative analysis of printing parameters effect on mechanical properties of natural PLA and advanced PLA-X material. *Procedia Structural Integrity*, 28, 2020, 1963-1968.

Milovanović A., Sedmak A., Grbović A., Milosević M., Golubović Z. (2020) Influence of second-phase particles on fracture behaviour of pla and advanced pla-x material. In: 4th International Conference on Structural Integrity and Durability, September 15 - 18, 2020, Dubrovnik, Croatia

Forthcoming Events

East European Conference on AM materials, Belgrade, Serbia, 2-4 September 2021

2nd Winter School: **Trends on Additive Manufacturing for Engineering Applications**, Brno, Czech Rep., 6-10 February 2022

2nd Workshop: **Structural Integrity of Additively Manufactured Materials**, Brno, Czech Rep., 11-12 February 2022

• **The participation at the Events is free. However a limited number of places are available and registration is required!**

• **More informations about future events at:**

<http://www.sirammm.unipr.it/Events.htm>

<https://www.facebook.com/SIRAMM2020>

<https://twitter.com/SIRAMM1>

All open access available at

<http://www.sirammm.unipr.it/Publications.htm>

Contact Us

Contact us for more information about our project

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