



1st International workshop on Applications of Triply Periodic Minimal Surfaces to Thermal Engineering

June 5, 2025, 9:00-17:00

Auditorium Energy Center, Via Paolo Borsellino, 53, Torino, Italy

Time	Торіс	Presenter
9.00-9:15	Registration, Coffee	-
9:15-9:30	Welcome	Prof. S. Rainieri
9:30-9:55 + 5' Q&A	Intro/Review on TPMS	Prof. L. Savoldi
10:00-11:00 + 15' Q&A	Vascular Design of Porous Materials	Prof. A. Bejan
11:15-11:30	Coffee break	
11:30-11:45 + 5' Q&A	Hydraulic characterization of different TPMS structures at	Prof. L. Marocco
	low Reynolds number: a numerical assessment	
11:50-12:05 + 5' Q&A	Hydraulic characterization of different TPMS structures at	Prof. L. Marocco
	low and high Reynolds number: an experimental assessment	
12:10-12:25 + 5' Q&A	Development of a modified Reynolds analogy for TPMS	Prof. A. Cammi
	lattices at low Reynold number	
12:30-12:45 + 5' Q&A	Fatigue design methods for metal lattice structures in heat	Prof. G. De Pasquale
	sinks and heat exchangers	
12:50-14:00	Lunch and Coffee	
14:00-14:15 (incl. Q&A)	Application 1: Cooling of high heat flux components in a	A Quamori Tanzi
	fusion machine	
14:15-14:30 (incl. Q&A)	Application 2: Development of high-performance heat sinks	C. Piatti
	for gyrotron cavities	
14:30-14:45 (incl. Q&A)	Application 3: Cooling of mirrors in the transmission line of	E. Gajetti
	radiofrequency power to fusion plasma	
14:45-15:00 (incl. Q&A)	Application 4: Application of TPMS structures for moisture	Dr. V. Gentile
	buffering with 3D-printed sorbent materials	
15:00-15:15 (incl. Q&A)	Application 5: Test and performance of TPMS-based heat	W. Ferretto
	exchangers	
15:15-15:30 + 5' Q&A	Insight 1: Flow structures in TPMS: is that really periodic?	R. Diperna
15:30-16:00	Coffee break	
16:00-16:15 (incl. Q&A)	Application 6: TPMS for solar receivers	Dr. H. Ebadi
16:15-16:30 (incl. Q&A)	Insight 2: Entropy and exergy in TPMS	Dr. H. Ebadi
16:30-16:45 (incl. Q&A)	Application 7: Design for Additive manufacturing (DfAM)	J. Vargas
	framework for pre-fabricated 3DP building components with	
	cellular infills	
16:45-17:00 (incl. Q&A)	Application 8: Experimental assessment of the surface	C. Piatti
	roughness	
17:00-17:30	Discussion and wrap-up	All

REGISTRATION AT: <u>https://forms.cloud.microsoft/e/ZPg6H46pJK</u> by May 30

