PROGRAMME AT A GLANCE

	Sunday July 7th	**Monday July 8th**	**Tuesday July 9th**	**Wednesday July 10th**	**Thursday July 11st**	**Friday July 12nd**	**Saturday July 13rd**
8:30-9:00		Registration					
9:00:9:30		Opening					
9:30-10:00		T1	L1	L4	Hands-on session	Hands-on session	
10:00-10:30							
10:30-11:00							
11:00-11:30		Break	Break	Break	Break	Break	
11:30-12:00		T2	L2	K1	Hands-on session	Hands-on wrap-up	
12:00-12:30						Exam	
12:30-13:00				Lunch			
13:00-13:30	20:00 ARRIVAL	Lunch	Lunch		Lunch	Lunch	7:00 DEPARTURE
13:30-14:00							
14:00-14:30				H1			
14:30-15:00		Tour to Salina	K2		Tour to Volcano	Free afternoon	
15:00-15:30				H2			
15:30-16:00			L3				
16:00-16:30				H3			
16:30-17:00							
17:00-17:30				Assignment of hands-on project			
17:30-18:00							

The Summer School

The Lipari School on Advanced Networking Systems is organized in cooperation with the pan-European Scientific Large-Scale Infrastructure for Computing/Communication Experimental Studies Research Infrastructure (SLICES-RI), with the primary goal to provide its participants with an overview of the possible enabling technologies and fundamental research challenges of upcoming 6G systems and networks, as well as an introduction to the tools and methodologies offered by SLICES-RI for conducting experiment-based research in such cutting-edge research areas. The school is organized into three tracks. The first track will introduce state-of-the-art technologies and tools for network and distributed systems programming and virtualization, including NFV, microservice architectures and deployment approaches, and orchestration frameworks. The second track will provide the scientific background on the upcoming technologies, novel applications, and emerging research directions that are targeted by SLICES-RI, and it includes technical lectures focusing on the theoretical and practical aspects of network sensing, distributed intelligence at the edge, the intersection between AI and networking, and the design of disaggregated programmable networks. Finally, the third track will provide the participants with a hands-on experience on these emerging research topics, first by introducing the principles of the SLICES-RI blueprints, namely the comprehensive software and hardware architectures of the critical components of SLICES-RI, with a focus on post-5G systems and the cloud/edge continuum. Then, the trainers will propose group projects to the participants to explore the tools and resources available in SLICES-RI.

The Ph.D. students participating in the summer school are strongly encouraged to submit an extended abstract that describes their current research (ideas, interests, or simply motivation) in relation to the topic of the summer school. Participants will be given opportunities to present their work through pitch presentations in a dedicated summer school session.

Tutorials

T1 Roberto Bruschi, University of Genoa/CNIT, Italy
Fundamentals of virtualization technologies (1.5h)

T2 Paolo Bellavista & Armir Bujari, University of Bologna, Italy
Fundamentals of orchestration for the cloud continuum (1.5h)

Lectures

L1 Giovanni Neglia, INRIA, France.
Networking challenges with Federated Learning (1.5h)

L2 Tommaso Melodia, Northeastern University, USA.
O-RAN: Towards openness and programmability in the RAN (1.5h)

L3 Joerg Widmer, IMDEA, Spain.
Integrated Sensing & Communication (IAC) in 6G (2h)

L4 Raymond Knopp, EURECOM, France.
3*GPP evolutions towards disaggregated architectures* (1.5h)

Keynotes

K1 Larry Peterson, Princeton University, USA.
Democratizing 5G: Open Source and More (1h)

K2 Abhimanyu Gosain, Northeastern University, USA.
6G Standards development roadmap (1h)

Hands-on Training:

H1 Nikos Makris, UTH, Greece / Damien Saucez, INRIA, France.
An introduction to the post-5G component of the SLICES blueprint (1h)

H2 Armir Bujari, Univ of Bologna, Italy.
An introduction to the cloud-continuum component of the SLICES blueprint (1h)

H3 Salvatore D'Oro/Michele Polese/Leonardo Bonati, Northeastern University, USA
An introduction to OpenRAN Gym and AI-based applications in O-RAN (1h)