



Summer School Enabling Technologies for Industrial IoT

15-20 July 2019

Meeting Room, DII, Ground, Floor, Via G. Caruso 16, Pisa 56127

Scientific Coordination: Prof. Sergio Saponara

Administrative Coordination: Dr. Sara Andrenucci, Dr. Rosanna Le Rose

Day 1, 9.00 – 18.30, 15th July 2019, Monday

9.00 - 10.30 Prof. S. Saponara, Prof. G. Manara

Introduction and syllabus of the Summer School *Enabling Technologies for Industrial IoT*:
presentation of the course, structure of the lessons, structure of the exam

10.30 - 13.30 Prof. S. Saponara

Integrated circuits and architectures for Industrial IoT applications: communication aspects

13.30 – 14.30 Break

14.30 - 16.30 Prof. S. Saponara

Integrated circuits and architectures for Industrial IoT applications: remote sensing aspects

16.30 - 18.30 Prof. G. Manara

Advanced phased arrays for communications and wireless power transfer in industrial scenarios

Day 2, 9.00 – 18.30, 16th July 2019, Tuesday

09.00 - 13.00 Prof. P. Andreani

IEEE SSCS Distinguished Lecture “RF Harmonic Oscillators Integrated in Silicon Technologies”

13.00 – 14.30 Break

14.30-16.30 Prof. A. Monorchio

Small antennas design and propagation issues for WSN and IIoT

16.30-18.30 Prof. L. Klinkenbusch

Electromagnetic propagation issues for IIoT

Day 3, 9.00 – 18.30, 17th July 2019, Wednesday

Special Day on Networking for IoT and Industry 4.0

09.00 - 13.00 Prof. S. Giordano

Networking protocols and architectures for IIoT and Cyber Physical Systems

13.00 – 14.30 Break

14.30-16.30 Prof. E. Mingozzi

Web of Things: architectures, protocols and platforms for IoT applications

16.30-18.30 Prof. C. Vallati

Integration of IoT devices into Cloud computing platforms: methods and practical examples

Day 4, 9.00 – 18.30, 18th July 2019, Thursday

Special Day1 on RFID as a Key Enabling Technology for Industry 4.0

09.00 - 9.15 Prof. P. Nepa

Introduction on RFID technology for Industry 4.0

9.15 - 12.15 Prof. G. Iannaccone

RFID operating principles and basic system components

12.15-13.30 Dr. A. Michel

Antennas for tags and readers- Part I

13.30 - 14.45 Break

14.45 - 16.00 Dr. A. Michel

Antennas for tags and readers- Part II

16.00 - 18.30 Dr. F. Costa

Chipless RFID technology

Day 5, 9.00 – 18.30, 19th July 2019, Friday

Special Day2 on RFID as a Key Enabling Technology for Industry 4.0

9.00-10.00 Dr. D. Mazzei

Things on Internet

10.00 – 12.30 Prof. S. Genovesi

Tag Sensing with chipless RFID technology

12.30 –13.30 Dr. A. Buffi

Positioning, Tracking and Navigation with UHF-RFID technology part I

13.30-15.00

15.00 –16.00 Dr. A. Buffi

Positioning, Tracking and Navigation with UHF-RFID technology part II

16.00 – 16.30 Prof. P. Nepa

Conclusions: future trends and open problems of RFID Technology for Industry 4.0

16.30 – 18.30 Prof. S. Saponara

New trends in the internet of autonomous vehicles

Day 6, 9.00 – 18.30, 20th July 2019, Saturday

9.00 – 11.00 Prof. M. Macucci

Ultra-low-power circuits and systems, and application of new materials above 100 GHz

11.00 – 13.00 Prof. S. Saponara

Embedded High Performance Computing: the challenge of the H2020 European Processor Initiative

13.00 – 14.00 Break

14.00 – 18.30 Prof. S. Saponara

(14.00-16.00) Final written Exam plus (16.00-18.30) exam correction and registration

