

## SEASONAL SCHOOL "PHOTONIC TECHNOLOGIES FOR SENSING APPLICATIONS"

Topics	Hours	CFU
<b>Basic of optical components</b>	<b>10</b>	<b>1</b>
<b>Optical fiber sensor systems</b>	<b>10</b>	<b>1</b>
<b>Imaging sensors for industrial applications</b>	<b>6</b>	<b>0,6</b>
<b>Basics of photonic integration</b>	<b>10</b>	<b>1</b>
<b>Photonic integration for sensing applications</b>	<b>8</b>	<b>0,8</b>
<b>2 Industrial Seminars</b>	<b>4</b>	<b>0,6</b>

- Introduction to the Seasonal School (Fabrizio Di Pasquale: 2 hours)
- Basic of optical components (Claudio Oton: 8 hours)
- Optical fiber sensor systems (Fabrizio Di Pasquale: 10 hours)
- Imaging sensors for industrial applications (Carlo Alberto Avizzano: 6 hours)
- Basics of photonic integration (Stefano Faralli, Philippe Velha: 10 hours)
- Photonic integration for sensing (Stefano Faralli, Philippe Velha, Claudio Oton, Antonella Bogoni: 8 hours)

Industrial Seminars (4 hours, 2 each):

**Rete Ferroviaria Italiana:** ing. Eugenio Fedeli, R&D Director

**Baker Hughes:** ing. Marco Ruggiero, Ing. Marco Marrasso

October 5, 15:00-17:00 **INTRODUCTION TO THE SEASONAL SCHOOL "PHOTONIC TECHNOLOGIES FOR SENSING APPLICATIONS"**, Fabrizio Di Pasquale

October 6, 09:00-11:00 Basic of Optical Components (Optical Fibers), C. Oton

October 6, 11:00-13:00 Basic of Imaging Sensors (HW), C.A. Avizzano

October 6, 15:00-17:00 Basic of Optical Components (Passive Optical Components), C. Oton

October 7, 09:00-11:00 Basic of Optical Components (Optical Sources), C. Oton

October 7, 15:00-17:00 Basic of Optical Components (Detectors), C. Oton

October 8, 09:00-11:00 Basic of Imaging Sensors (SW), C.A. Avizzano

October 8, 16:00-18:00 Optical Fiber Sensor Systems (Basic of Optical Fiber Sensors), F. Di Pasquale

October 9, 09:00-11:00 Optical Fiber Sensor Systems (Fiber Bragg Grating Sensors), F. Di Pasquale

October 9, 11-13 Basic of Photonic Integration, S. Faralli

October 9, 15:00-17:00 Optical Fiber Sensor Systems (Distributed Sensing: Raman DTS), F. Di Pasquale

**OCTOBER 12 09:00-11:00 INDUSTRIAL SEMINAR Rete Ferroviaria Italiana, ing. Eugenio Fedeli**

***“Photonic Sensing for Railway Applications”***

October 12, 11:00-13:00 Imaging Sensors for Industrial Applications, C.A. Avizzano

October 12, 15:00-17:00 Optical Fiber Sensor Systems (Brillouin based Sensing), F. Di Pasquale

October 13, 09:00-11:00 Optical Fiber Sensor Systems (DAS & Hybrid Optical Fiber Sensing) F. Di Pasquale

October 13, 15:00-17:00 Basic of Photonic Integration, S. Faralli

October 14, 09:00-11:00 Basic of Photonic Integration, S. Faralli

**OCTOBER 14, 14:00-16:00 INDUSTRIAL SEMINAR, Baker Hughes, ing. Marco Ruggiero, ing. Marco Marrazzo**

***“Turbomachinery Development and Advanced Instrumentation”***

October 14, 17:00-19:00 Basic of Photonic Integration, P. Velha

October 15, 09:00-11:00 Basic of Photonic Integration, P. Velha

October 15, 15:00-17:00 Photonic Integration for Sensing Applications: LIDAR, A. Bogoni

October 16, 09:00-11:00 Photonic Integration for Sensing Applications: FBG READING UNITS ON CHIP 1, C. Oton

October 16, 14:00-16:00 Photonic Integration for Sensing Applications: BIO-CHEMICAL SENSING, P. Velha

October 16, 17:00-19:00 Photonic Integration for Sensing Applications FBG READING UNITS ON CHIP 2, S. Faralli