

# LATEST REVOLUTIONS IN DETECTORS

From the visible to the infrared

ONERA Scientific Days / PhOM Research Seminar

## Program

Monday, December 17<sup>th</sup>, 2018

13h30 – 13h45	Introduction - Riad Haïdar / ONERA
13h45 – 15h15	<p><b>Session 1 : Detector requirements for new generation optronic systems</b> Chairs : Riad Haïdar (ONERA) &amp; Jérôme Primot (ONERA)</p> <p><b>Jean-Christophe Peyrard / DGA</b> – “Realistic trends for future detectors, a DGA perspective”</p> <p><b>Emmanuel Kling / Safran Electronics and Defense</b> – “Operational needs and technological trends : still a matter of convergence ?”</p> <p><b>Vincent Guériaux / Thales LAS</b> – “Image quality requirements for an IRFPA”</p>
15h15 – 16h15	<p><b>Plenary talk of Manijeh Razeghi / Center for Quantum Devices</b> – “Breaking spectral and performance barriers for photon detection and imaging from Deep UV to THZ; the power of materials innovation”</p>
16h15 – 16h30	Coffee break
16h30 – 18h	<p><b>Session 2 : Low light level detectors</b> Chairs : Sophie Derelle (ONERA) &amp; David Barate (DGA)</p> <p><b>Christopher Rivers / Teledyne e2v</b> – “Pushing the Boundaries with Low Light Detection”</p> <p><b>David Herisson / Photonis</b> – “When Night becomes digital”</p> <p><b>Jean-Luc Reverchon / III-V Lab</b> – “Status of monolithic InGaAs imagers approach”</p>
18h30 – 20h30	For speakers / chairs only : Lab tour @ ONERA and cocktail reception

**Tuesday, December 18<sup>th</sup>, 2018**

<b>9h – 10h</b>	<b>Plenary talk of Philip Klipstein / SCD</b> – “Evolution and revolution in III-V infrared detectors”
<b>10h – 11h</b>	<b>Session 3 : III-V detectors</b> Chairs : Isabelle Ribet (ONERA) & François Julien (CNRS/C2N)
	<b>Eric Costard / IRnova</b> – “QWIP and Type-II superlattice detectors: a revolution or normal evolution?”
	<b>Philippe Christol / IES - université de Montpellier</b> – “Operating temperature limit of high performance cooled infrared photodetectors”
<b>11h – 11h30</b>	<b>Coffee break</b>
<b>11h30 – 12h30</b>	<b>Session 4 : II-VI detectors</b> Chairs : Sylvie Bernhardt (ONERA) & Philippe Christol (IES)
	<b>Laurent Rubaldo / Sofradir</b> – “Image quality improvement against the backdrop of SWAP and pitch reduction”
	<b>Olivier Gravrand / CEA-LETI/DOPT</b> – “Is the 2-6 material a stable system in today's unstable IR world? Latest achievements on Grenoble side”
<b>12h30 – 14h</b>	<b>Buffet &amp; poster session</b>
<b>14h – 16h</b>	<b>Session 5 : Prospective developments</b> Chairs : Julien Jaeck (ONERA) & Jean-Luc Reverchon (III-V Lab)
	<b>Carlo Sirtori / Ecole Normale Supérieure</b> – “Room temperature detectors and heterodyne receivers at 9 $\mu\text{m}$ wavelength”
	<b>Emmanuel Lhuillier / INSP - Sorbonne université</b> – “Infrared photodetection using colloidal nanocrystals”
	<b>Alain Durand / ULIS</b> – “Advances, developments and challenges in Uncooled Infrared Bolometers Imaging”
	<b>François Julien / CNRS-C2N</b> – “Quantum cascade detectors”
<b>16h – 16h15</b>	<b>Concluding remarks</b>
<b>16h30 – 18h</b>	<b>Lab tours at Institut d’Optique, CNRS/C2N III-V Lab or Sofradir</b> Subject to availability