



**leti**  
cea tech

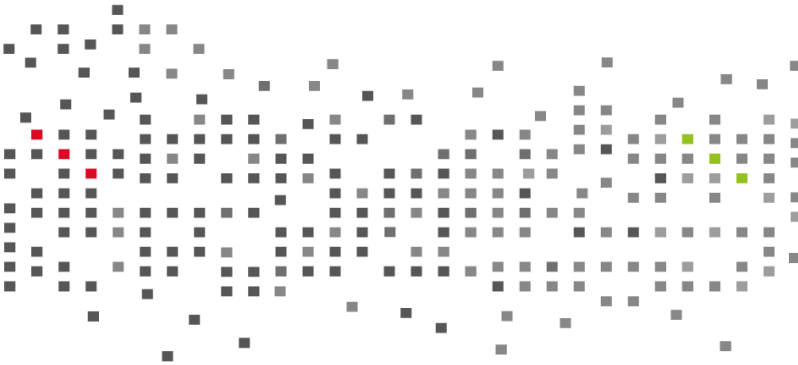
February 5, 2020

# Leti Photonics Workshop

W-Hotel, San Francisco

**SPIE.** PHOTONICS  
WEST

*Disruptive photonic concepts for new applications & markets*

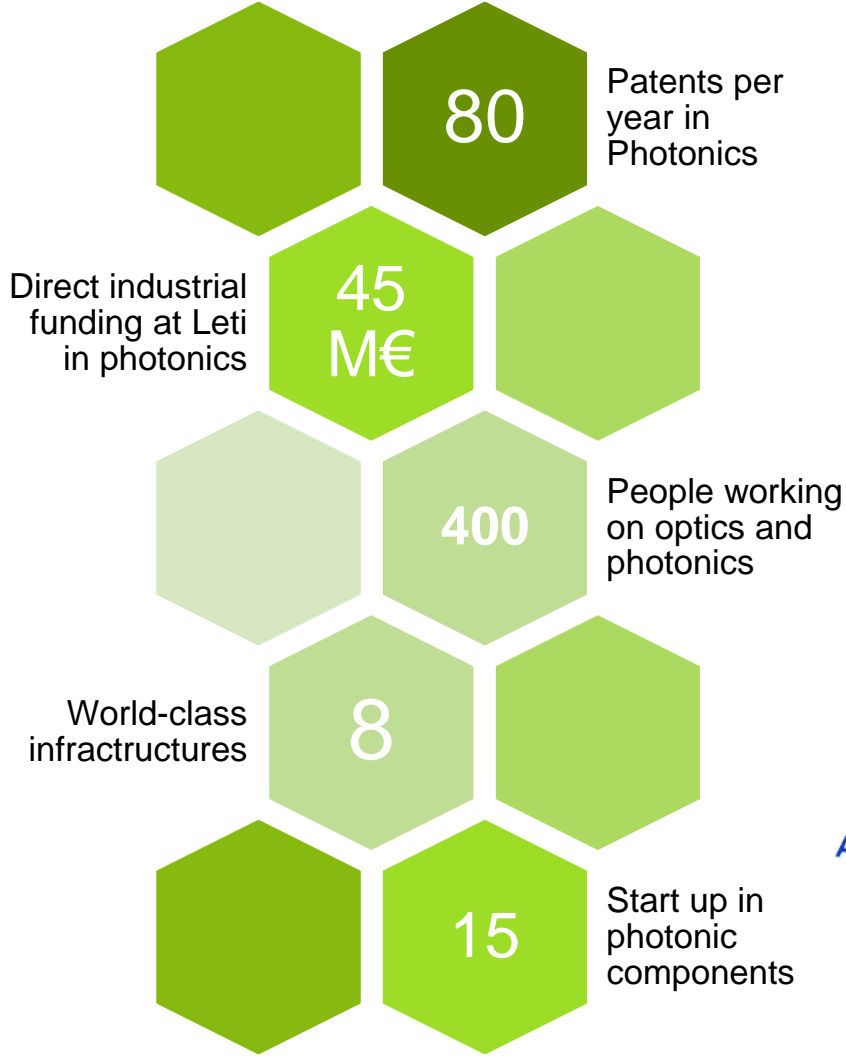


# DISRUPTIVE PHOTONICS CONCEPTS FOR NEW APPLICATIONS & MARKETS

Agnès ARNAUD - PHOTONICS WEST - 2020

# PHOTONICS @LETI IN A FEW KEY FIGURES

|   |   |
|---|---|
| <b>300 mm wafer processing</b><br><br>12" Nanoelectronics Platform<br>5800 m <sup>2</sup> | <b>200 mm wafer processing</b><br><br>8" & 12" Microsystems Platform<br>4200 m <sup>2</sup>           |
| <b>CHARACTERIZATION</b><br><br>Nanocharacterization Platform<br>2200 m <sup>2</sup>       | <b>HEALTHCARE</b><br>   |
| <b>IC DESIGN</b><br><br>Integrated Circuits Design Platform                               | <b>&lt;200 mm wafer processing</b><br><br>III-V and II-VI materials 4" or less<br>2000 m <sup>2</sup> |
| <b>COMPLEX SYSTEMS</b><br>  | <b>COMMUNICATION</b><br>  |



# PHOTONICS ACTIVITIES @ LETI - RESEARCH TOPICS



## DISPLAY

- OLED
- μLED
- LCOS
  
- UV LED



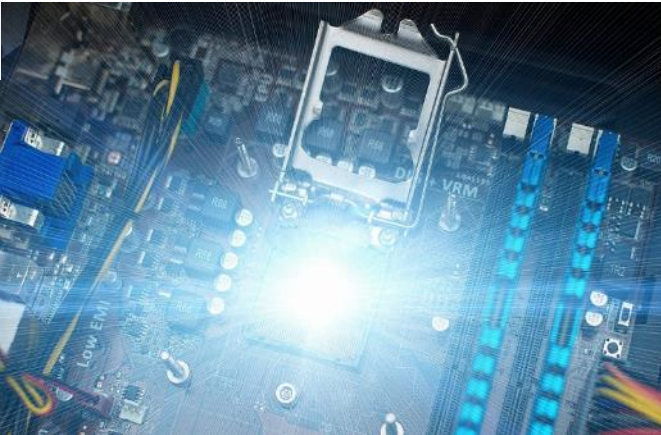
## IMAGING

- 3D Imaging & LIDAR
- Smart Imaging
- Visible, IR, THz, mm
- X & Gamma
- Lens Free



## SENSING

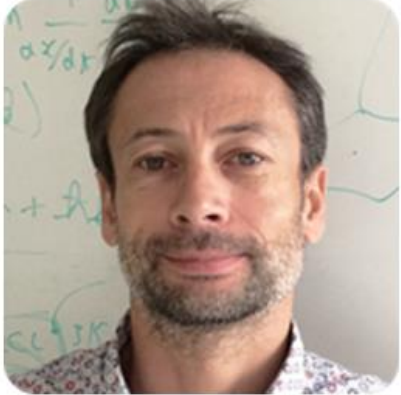
- Gas
- Particulate matter
  
- Environment & Health monitoring



## SILICON PHOTONICS

- Quantum Photonics
- Integrated Lasers
  
- Integrated Photonics on Silicon

# DISRUPTIVE PHOTONICS CONCEPTS FOR NEW APPLICATIONS & MARKETS



**New miniature sensors of particulate matter using angular spectral imaging**

**Laurent Duraffourg**  
CEA-Leti, Photonics Sensors Lab. Manager



**Toward miniaturized solid State Lidar using the convergence between silicon photonics & electronics**

**Francois Simoens**  
CEA-Leti, Executive Strategic Program Manager



**Computational microscopy**

**Cédric Allier**  
CEA-Leti, PhD Project Manager, Live Cell Imaging



**Low-loss silicon photonics platform for quantum technologies**

**Eleonore Hardy**  
CEA-Leti, Business Developer, Silicon Photonics

# DISRUPTIVE PHOTONICS CONCEPTS FOR NEW APPLICATIONS & MARKETS



**Keynote : Working backwards from the customer to the sensor**

**Pat Tang**

Amazon, Lab 126, VP Technology

**Thank you  
for your  
attention**



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**See Leti's demonstrators at booth 857A  
France Pavilion (South Hall)**

**And welcome in  
Grenoble in June >>**



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