



*Monolithic Integrated Microoptics solutions  
– focus on ultrafast fiber optics applications*

# Who we are?



**Charles GOËLLER, Eng**  
Business Dev & Marketing Officer,  
Associate partner



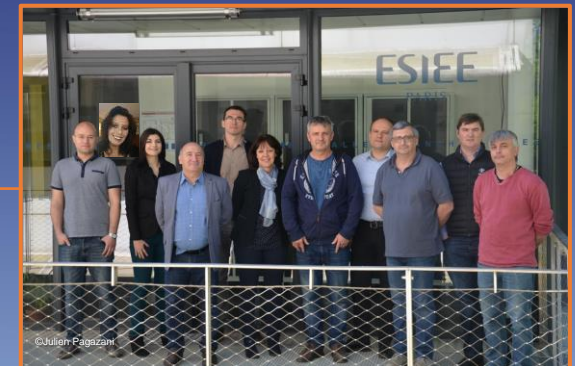
**Carlos VIANA, PhD**  
CEO & co-founder



**Jean-Luc POLLEUX, PhD**  
CSO & co-founder

## ICON Photonics ESIEE-Paris' Spin-off

*650m<sup>2</sup> cleanrooms production-  
line platform and +30 years  
experienced team at micro and  
nano technologies*

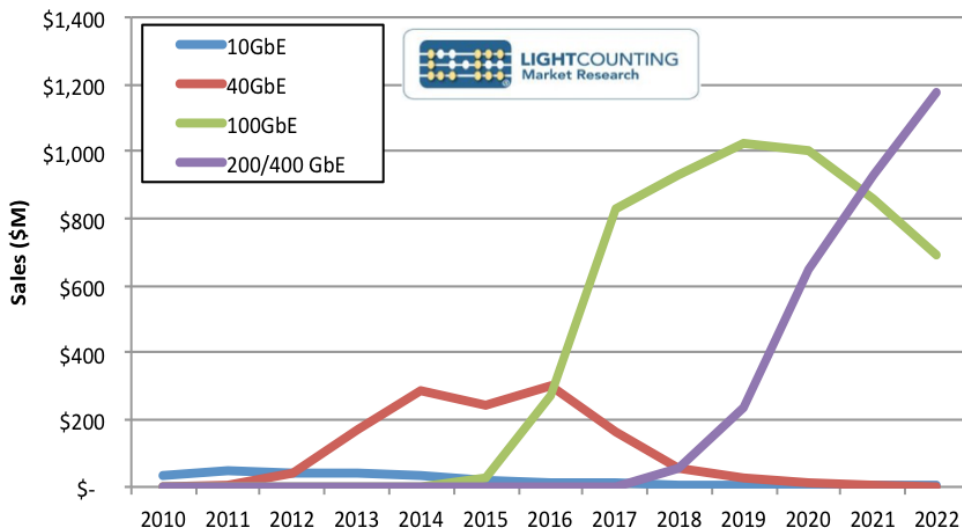


ICON Photonics emerges from an experienced team in micro and nanotechnologies bringing innovative packaging polymer-based solutions inspired by collective manufacturing processes

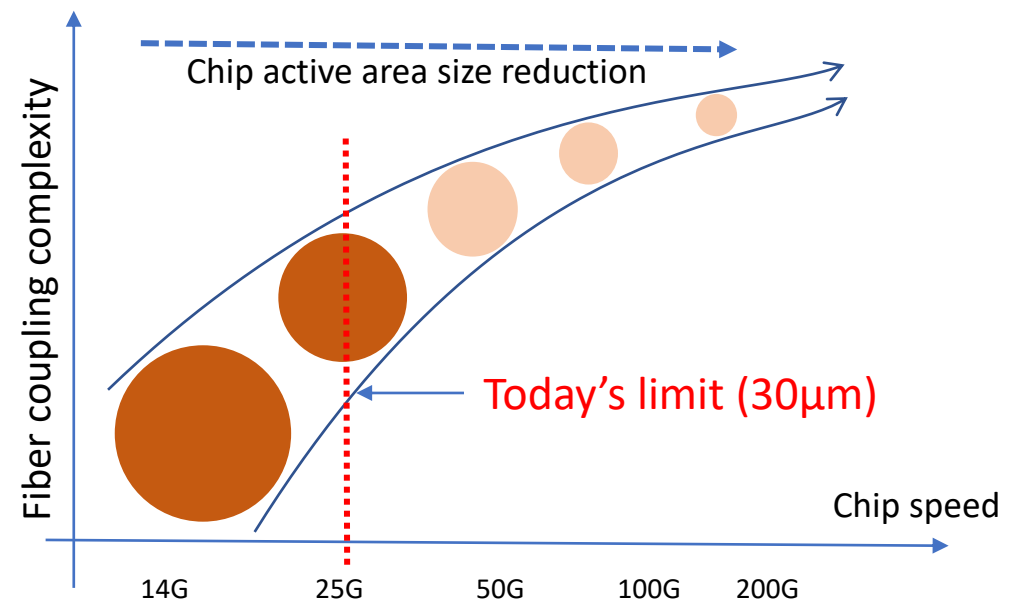
# Datarates evolution

5G, Artificial Intelligence (IA), clouds services are driving an exponential growth of the data-rates need in data centers and high-performance computing environments. The need is not only to address the growing for higher bandwidth at lower cost but also the power per gigabit. The active optical devices must shrink down the active areas in order to follow up the bandwidth increase providing up to 112G per channel in the next few years. Such small active areas will raise up new challenges on fiber coupling and assembly, requiring new microoptics solutions.

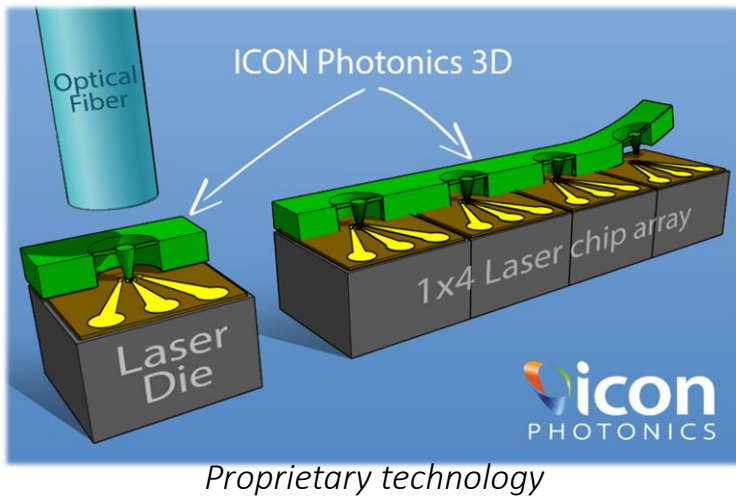
## Ultrafast optical Transceivers



## Active devices



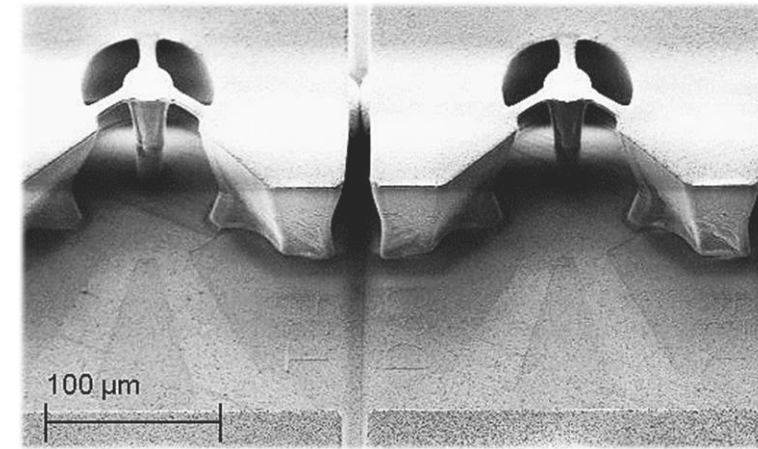




Integrated microoptics: thin 3D polymer film (see green material)

Vertical taper waveguide in order to guide and couple the light

Ongoing : beamshapping and enhanced acceptance angle functionalities



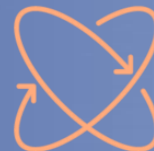
## ICON Photonics added value

Next generation ultrafast pre-coupled Chips



*From 30um down to 1um active areas possible: Reaching more than 400Gbps optical communication*

Custom-made solution



*Applicable with PDs, VCSELs, LED, PIC, ... For communications, quantum, sensing applications*

Industrial compatible



*Monolithic integration at Wafer level: cost-effective mass production solution*

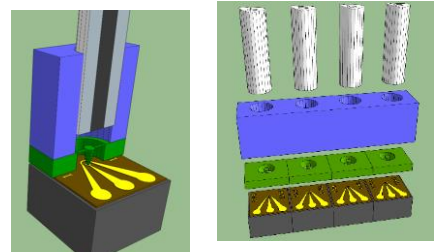
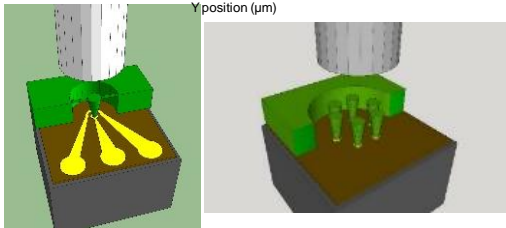
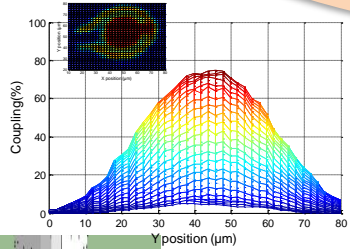
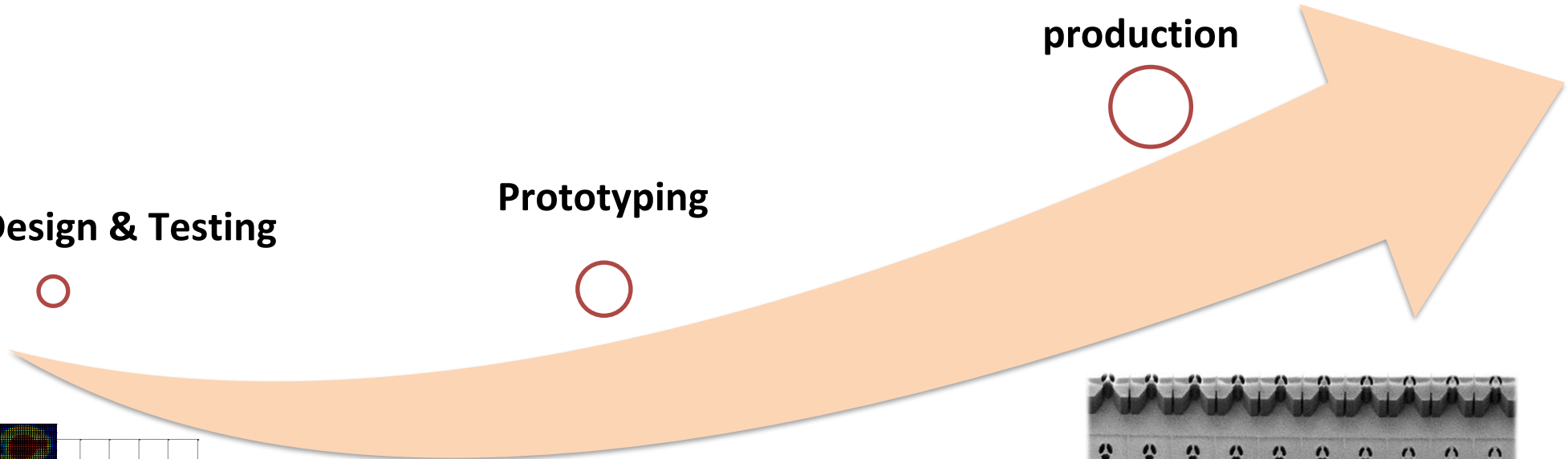
Design & Testing



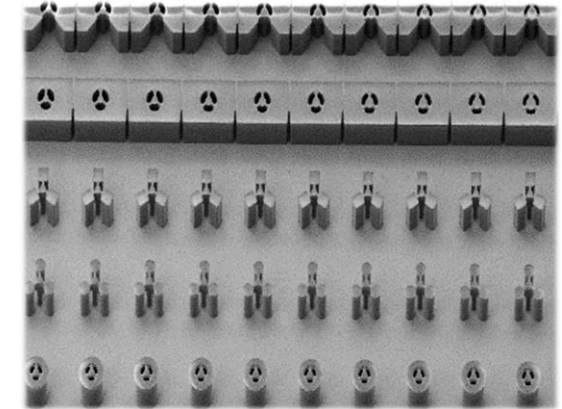
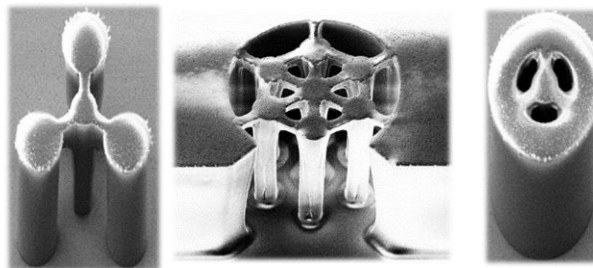
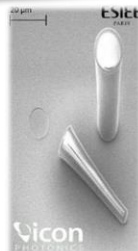
Prototyping



Fabrication & production



Si Fixtures



\*Transfer to fab for HVM possible

Thank you to all EPIC members to all support



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