



Massimo Camarda, Founder & CEO

- WHO I AM
- WHO WE ARE
- WHAT WE DO
- WHAT WE LOOK FOR

21/12/2022 Automation day

WHO I AM

- Theoretical physicist
- >15y RnD (w/f industries)
- Italy & Switzerland
- >100 paper / >10 patents / >3M€ granted projects
- “Control through knowledge”
- 2020 STLab (IT) / 2021 SenSiC (CH)



WHO WE ARE... THE START-UP

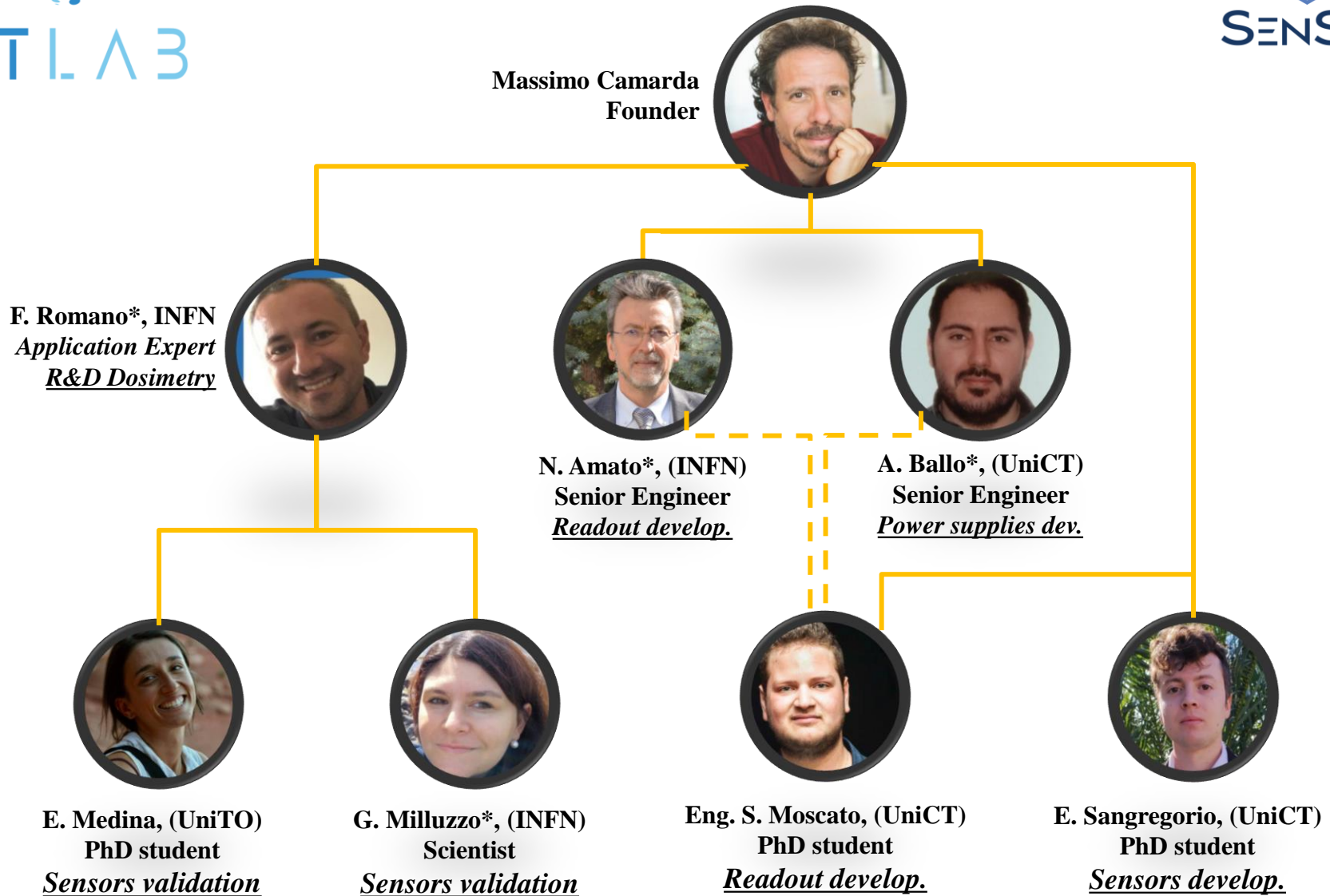


Swiss Light Source (SLS)



- Small start-ups (<2y old...)
- Invoiced 110k€ (2022) - >300k€ (2023) *Beyond the “death valley”*
- >50% in RnD (deep tech...)
- 2 patents, +2 in pipeline
- Recognized Ww leader in Xray beam monitors

WHO WE ARE...OUR TEAM

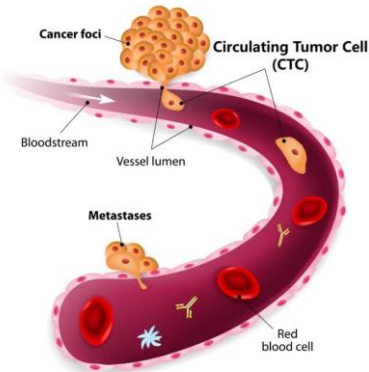


DEP

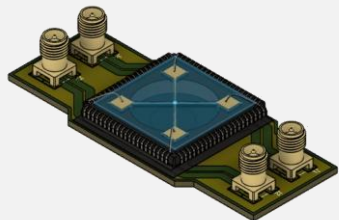
HEALTH APPLICATIONS

RADIATION MONITORS

Cells characterization and separation



TRL<3 GTM>3 years



Radiation dosimetry and real-time monitoring for new cancer treatments



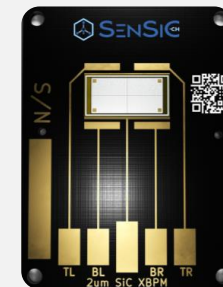
TRL=4 GTM<2 years

X-ray beam monitoring (XBPM)

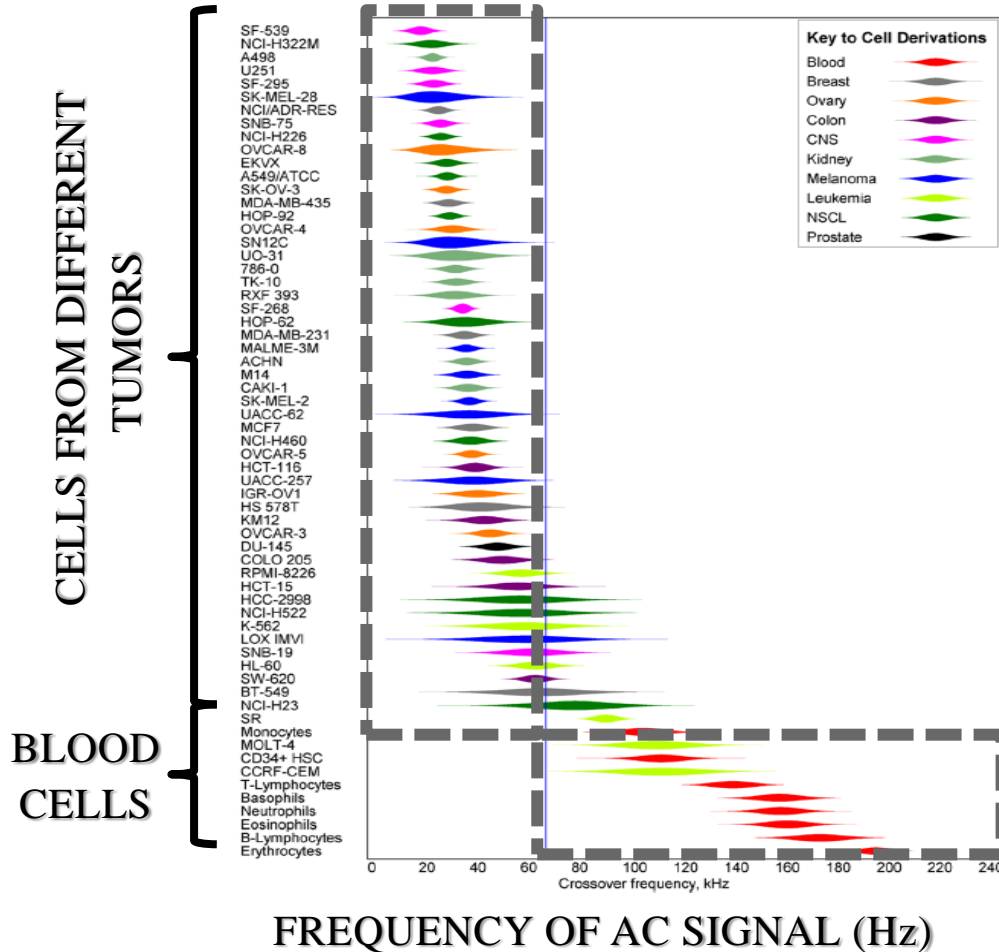


TRL=7 GTM=ACHIEVED!

DEEP TECH
SENSORS & DETECTORS

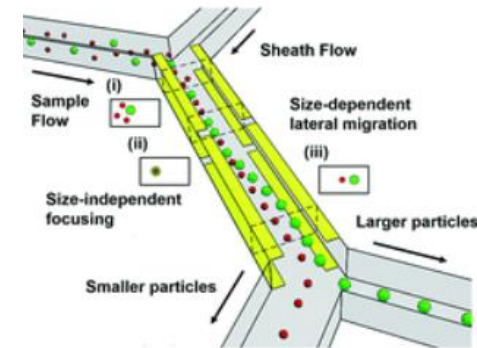


BIOMICROFLUIDICS 7, 011808 (2013)



Issues:

- extreme rarity (1:1M)
- heterogeneity
- high throughputs needed (<1L/h)



Collaboration with Microfluidic LAB
(DIEEI/UniCT)

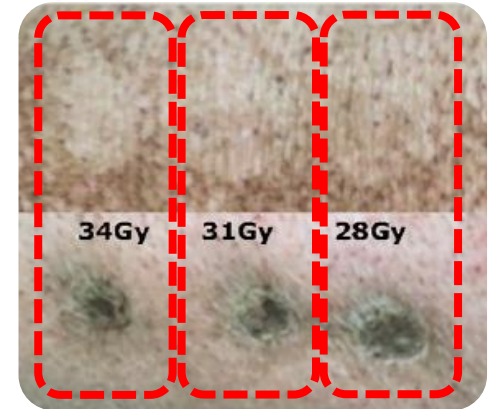


treatments will last <1sec!

BETTER PATIENTS CONFORT



Lower costs for
hospitals!



***LOWER COLLATERAL DAMAGE
MORE EFFECTIVE TREATMENTS***

Realtime imaging
of the radiation
beam



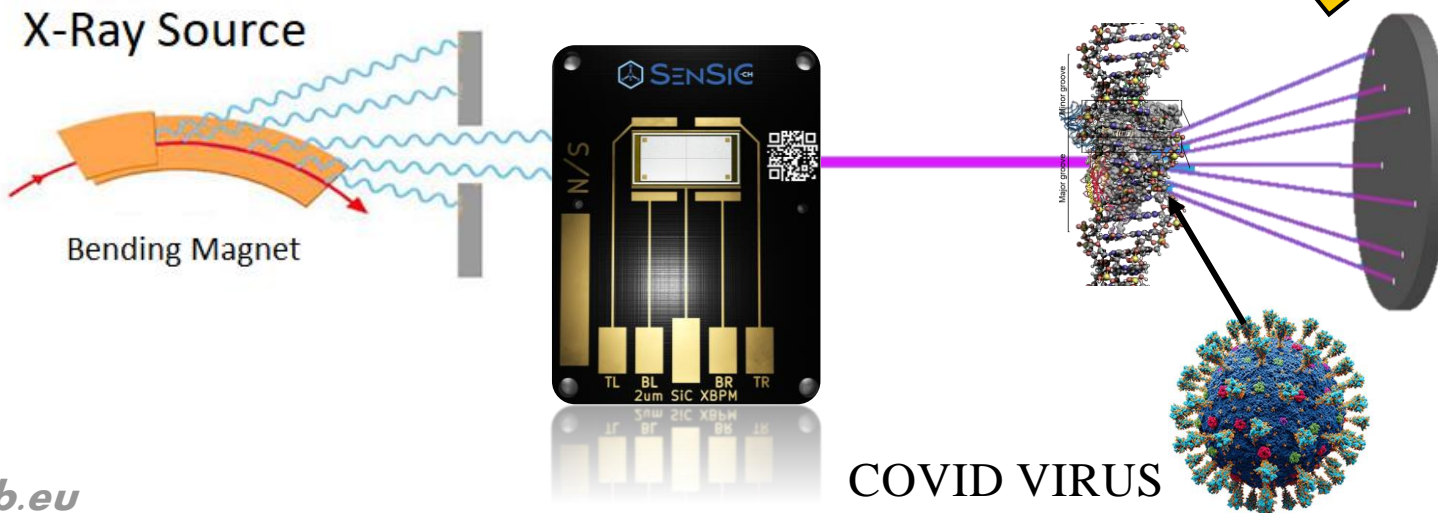
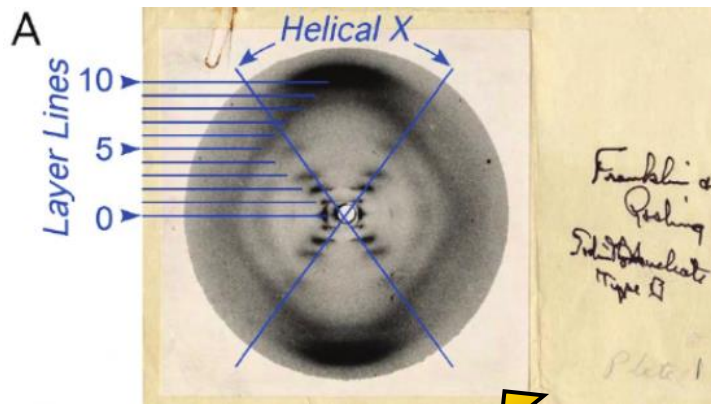
WHAT DO WE DO

X-ray beams position monitors for synchrotron facilities

Swiss Light Source (SLS)

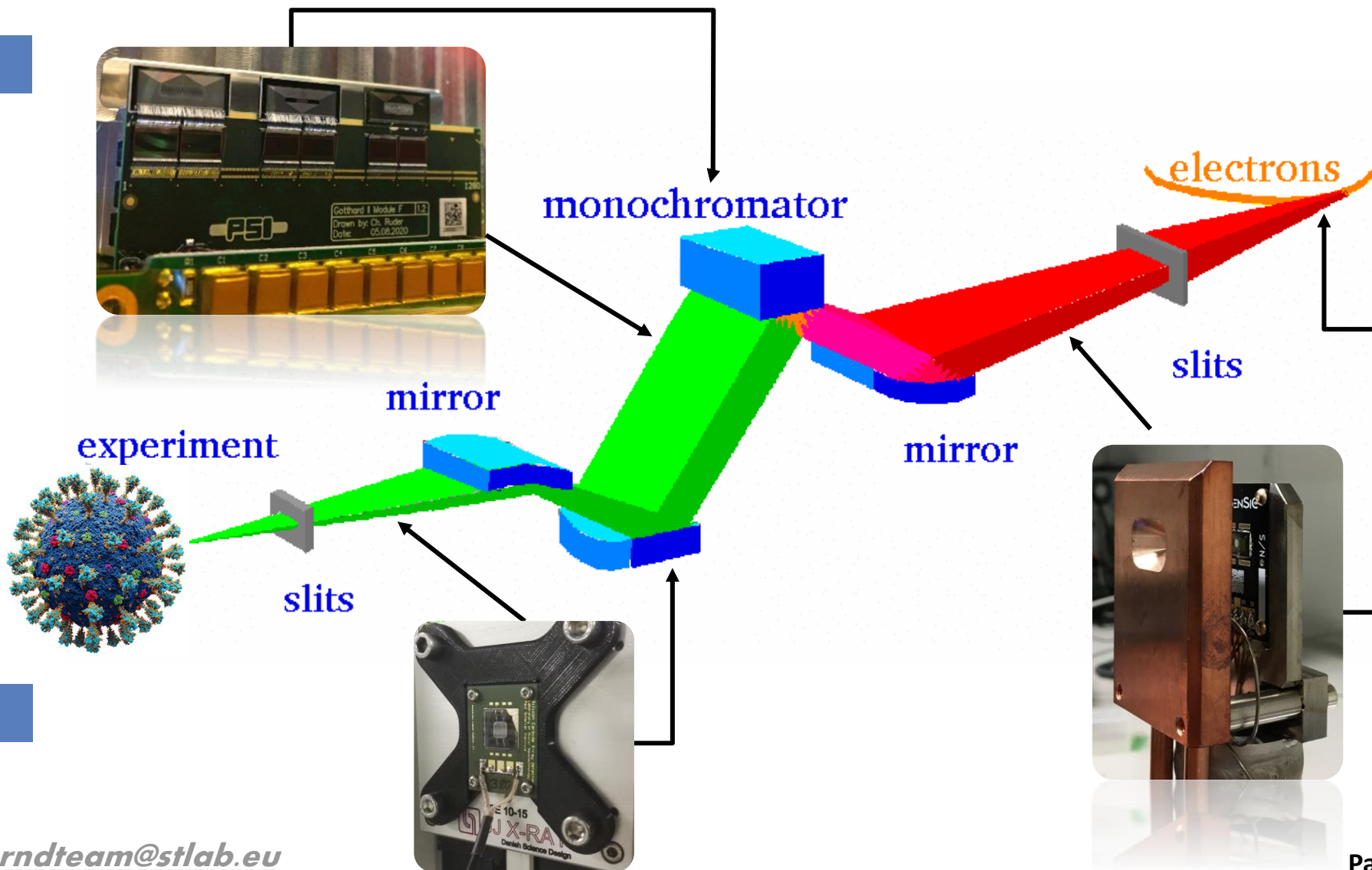


X7 soccer fields

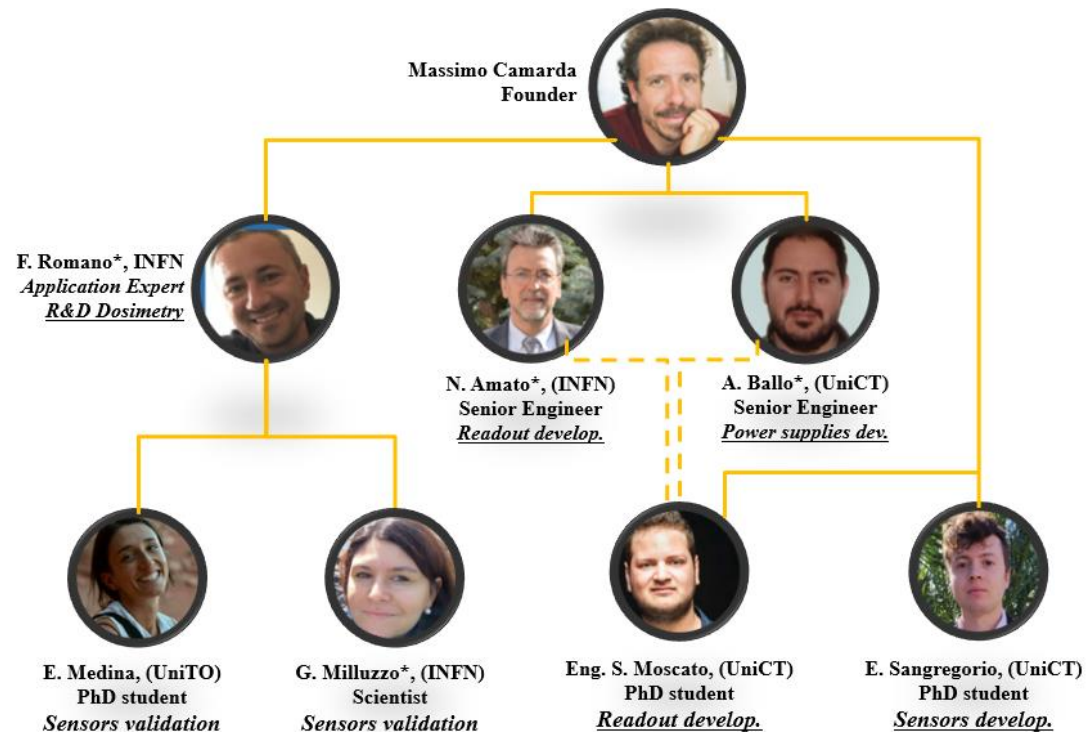


WHAT DO WE DO

X-ray beams position monitors for synchrotron facilities



- Student interested on Technology Transfer / Impact society
- Students interested on Processes Controls (through knowledge...)
- Students interested on (applied) Academic Careers...*



SUGGESTED Master FINAL PROJECTS

TOPICS

Dielectrophoresis

- Tumor Cells Characterization
- Control of electrofluidic systems

Radiation monitoring/Control

- X-ray beam stabilization

METHODOLOGIES

- Data Analysis: DPIV, Model Identification, Machine Learning...
- Optimization Problems
- Control Methodology : PID, MPC, LQR...
- PCB design and realization
- Circuit design and simulation

SEND YOUR CV BY MAIL TO: rndteam@stlab.eu