

Horizon Europe MSCA Event

26 June 2024

MSCA Networks Driving Innovation in Researcher Training Prof Dr Carsten P Welsch



Overview

- **Fellow R&D** – a driver for cutting-edge science and innovation
- **Training** – boosting skills and maximizing employability
- **Events** – reaching out to the wider scientific community (and beyond)

MSCA Networks



- Beam Diagnostics 2008 - 2012
 - **21 Fellows, 32 partners** www.liv.ac.uk/ditanet



- Laser Applications 2011 - 2015
 - **19 Fellows, 38 Partners** www.la3net.nu



- Accelerator Optimization 2011 - 2015
 - **23 Fellows, 35 Partners** www.opac-project.eu



- Medical Applications 2016 - 2020
 - **15 Fellows, 33 Partners** www.oma-project.eu



- Antimatter R&D 2017 - 2021
 - **16 Fellows, 35 Partners** www.ava-project.eu



- EuPRAXIA Doctoral Network 2023 -
 - **12 Fellows, 23 Partners**

“Classic” PhD training

- Focus on **academic** career path
- **Scientific papers** as key quality indicator
- Training through (often blue sky) research
- Very little training in **complementary skills**



We live in one of most dynamic times

- Early-stage Researchers (**ESRs**) inadequately informed about career path outside academia
- Insufficient experience in industry and other sectors
- Many new skills required, e.g. digital literacy, remote collaboration, AI/ML

Evolution in Postgraduate training

- Build awareness of **various career pathways** and their high value
- Offer **International** experience and collaboration



- Expose to **different sectors**
- Train in **transferable skills**
- Provide **structured training**
- Engage all partners and *go beyond!*

Complementary skills training

- PhD project-specific part
 - Presentation skills
 - Scientific writing
 - Project management



- Generic skills through outreach project
 - Team working
 - Working under (time) pressure
 - Proposal writing
 - Peer review



"I hadn't really thought of myself as a project manager until today!"



Researcher training

Cross-sector training is key

GANIL Laser
LABNET
School 2012



Researcher training

Joining different communities



Exploring new opportunities

Spin-out company – international success



Scientific events

Accelerating innovation



International project representation

Network outcomes presented around the world



Public engagement

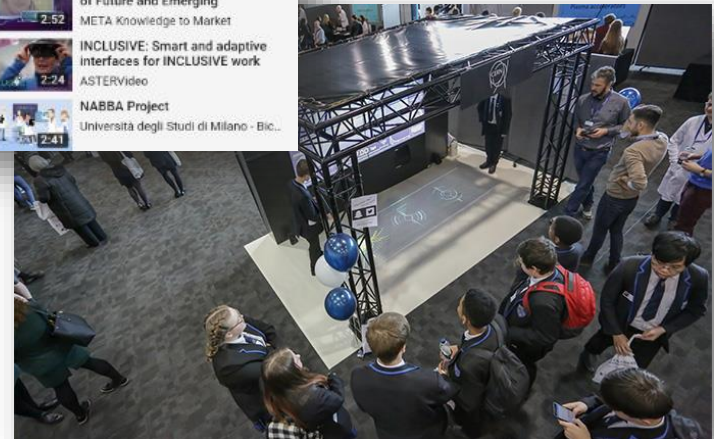
Fascinating the next generation

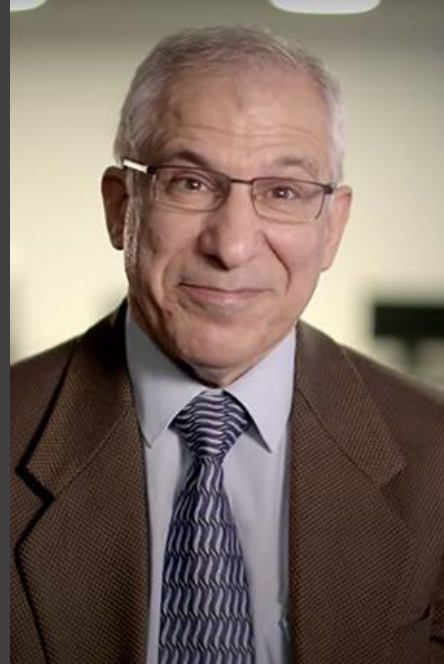
Outreach



EU-funded R&I projects
EU Science & Innovation - 1 / 301

- 1 AVA - Nature (anti)matters
QUASAR Group
2:45
- 2 FET2RIN - Supporting the take up of Future and Emerging
META Knowledge to Market
2:52
- 3 INCLUSIVE: Smart and adaptive interfaces for INCLUSIVE work
ASTERVideo
2:24
- 4 NABBA Project
Università degli Studi di Milano - Bic...
2:41





Project T.E.A.M.

- Expert team working closely with PI, Fellows and network partners
- Crucial support for best science + training

Summary

- MSCA Doctoral Networks offer fantastic opportunities for **collaborative research** and for driving innovation;
- **Fellows** from all around the world can be developed into future research leaders;
- Fantastic **research successes**, including *EJMP Galileo Galilei award*, several *Physicsworld Top 10s*, etc.
- **Training** allows to go significantly beyond established practice – be creative! Always put Fellows in the focus!
- MSCA **projects** have huge visibility and significant impact on wider scientific community and general public.

Get involved!



U N I V E R S I T Y O F

L I V E R P O O L