

CITUS

Centro Singular de Investigación
en **Tecnologías Inteligentes**



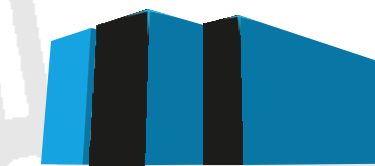
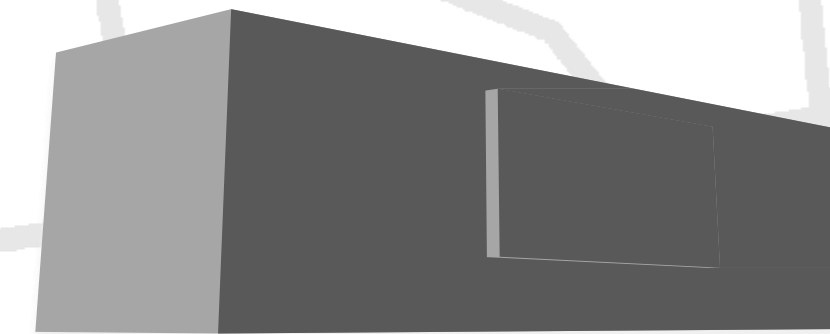
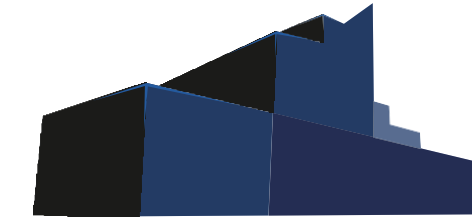
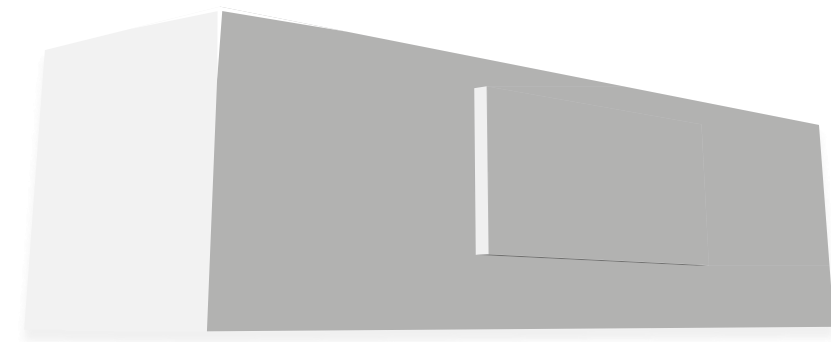
**Intelligent
Technologies at
every step**



Singular Research Centers Network



2



Governance



GOVERNING COMMITTEE

SCIENTIFIC ADVISORY BOARD



RAMÓN LÓPEZ DE MÁNTARAS

INSTITUT D'INVESTIGACIÓ EN INTELIGÈNCIA ARTIFICIAL DEL CENTRO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS - IIIA-CSIC



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Canadá



GUSTAVO ALONSO

EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH – ETHZ
Suiza



FRANCISCO TIRADO

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PEDRO LARRAÑAGA

UNIVERSIDAD POLITÉCNICA DE MADRID - UPM



DAVID ATIENZA

ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE - EPFL
Suiza



ANA PAIVA

INSTITUTO SUPERIOR TÉCNICO, UNIVERSIDADE DE LISBOA - IST
Portugal

BUSINESS AND SOCIAL COUNCIL



SCIENTIFIC DIRECTOR

Support Committee



DEPUTY DIRECTOR

3

STRATEGIC AREA

TECHNICAL AREA

COMMUNICATION AREA

PLANNING AREA

Scientific areas

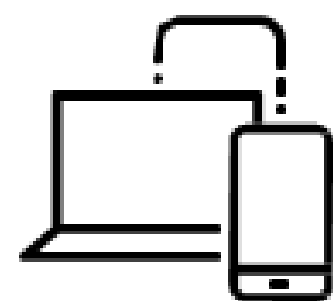


4

GREEN AND SMART COMPUTING AND DEVICES

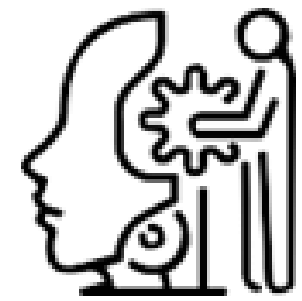


High Performance Computing



Electronic design of intelligent devices

SUPPORT FOR MACHINE INTELLIGENCE

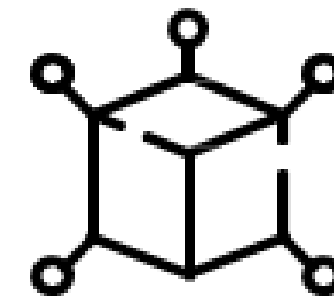


Automatic learning and reasoning



Data and process science and engineering

INTELLIGENT TECHNOLOGIES



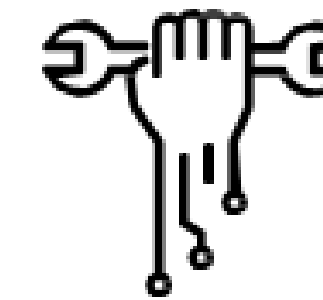
Virtual and augmented reality



Computer vision

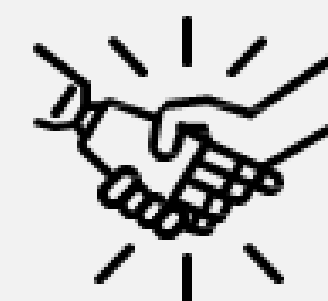


Language technologies



Robotics

SOCIAL, ECONOMIC, ETHICAL AND POLITICAL FRAMEWORK



Trustworthy AI

Team



ERC – CoG

1

Ramón y Cajal

2

31
Senior
researchers

Distinguished
researchers

1

13
Support
technicians

37% international

37%

157
people

73
PhD Students

27% HR Fellowships

27%

Ramón y Cajal

1

13
Postdoctoral
researchers

6 ESRs from MSCA-DNs

6

Beatriz Galindo

1

1

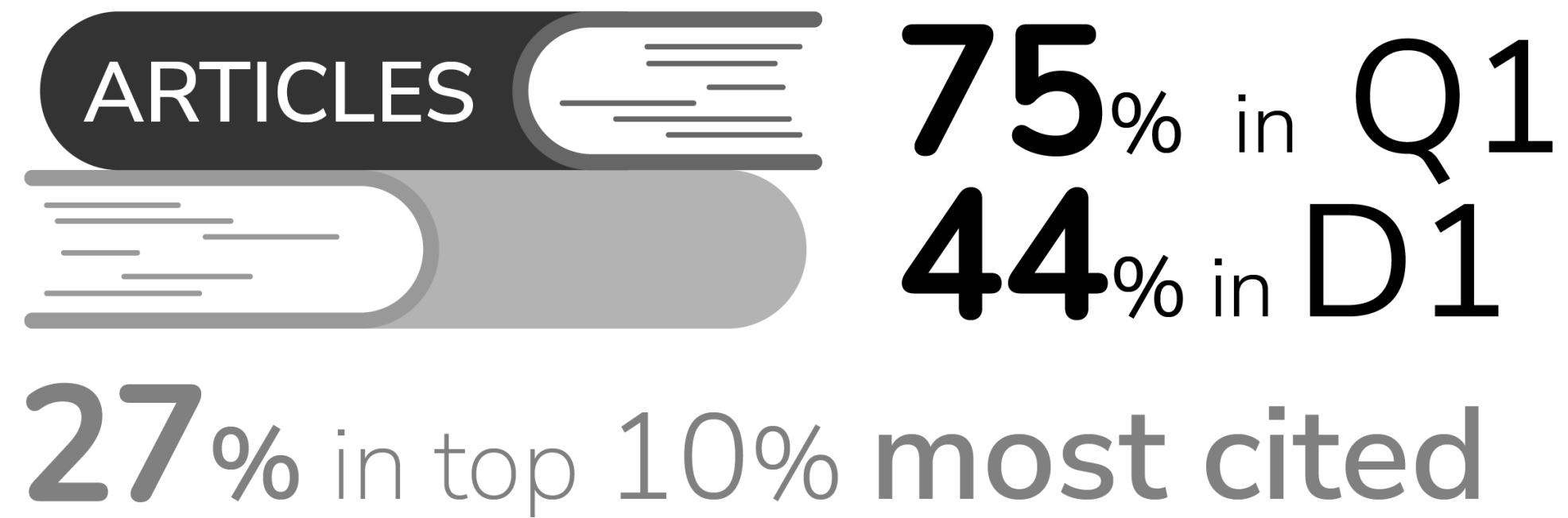
María Zambrano

12
Collaborators

15
Research
technicians

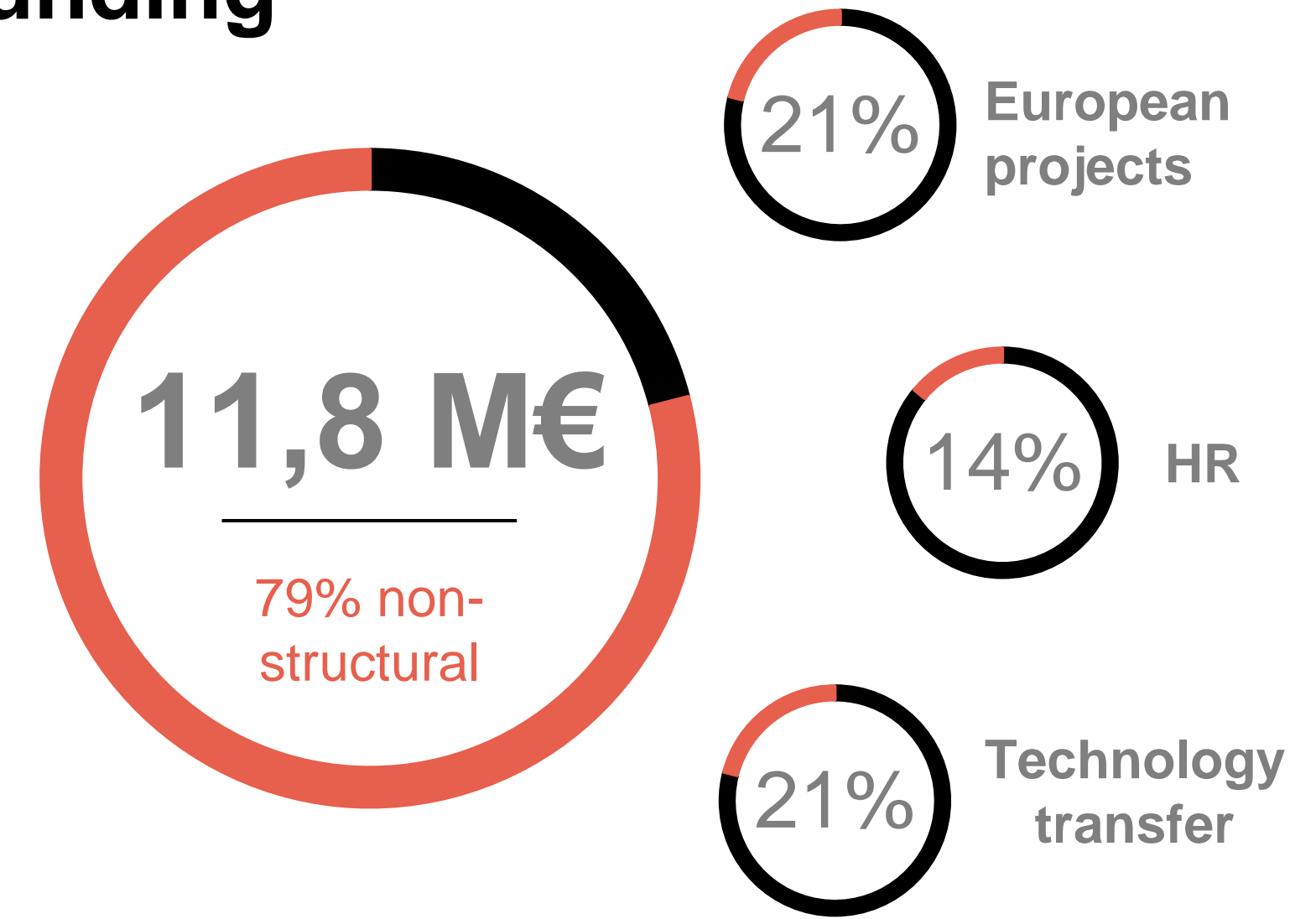


Scientific activity



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Funding



Transfer



Outstanding European Projects



Interactive Natural Language Technology for Explainable Artificial Intelligence

COORDINATION

H2020 – MSCA - ETN 2019-23

2,8M€ (666,3k€)



Multispectral Intelligent Vision System with Embedded Low-power Neural Computing

WP LEADER

H2020 – FET PROACTIVE 2021-24

4,9M€ (653,3k€)

Multimodal Environmental Exploration Systems – Novel Technologies

SCIENTIFIC COORDINATION

H2020 – MSCA - ETN 2020-23

3,6M€ (419,7k€)



MENELAOS NT



Intelligent Reading Improvement System for Fundamental and Transversal Skills Development

HORIZON – TRANSFORMATIONS 2023-25

2,7M€ (299,5k€)

Hybrid intelligence to monitor, promote and analyse transformations in good democracy practices

COORDINATION

HORIZON-MSCA-DN 2023-26

2,89M€ (500,4k€)



hybrids



NANOVR: Nanoscale design using Virtual Reality

H2020-ERC-CoG

2022-27

1,98M€



Sustainability Optimization for Secure Food Systems

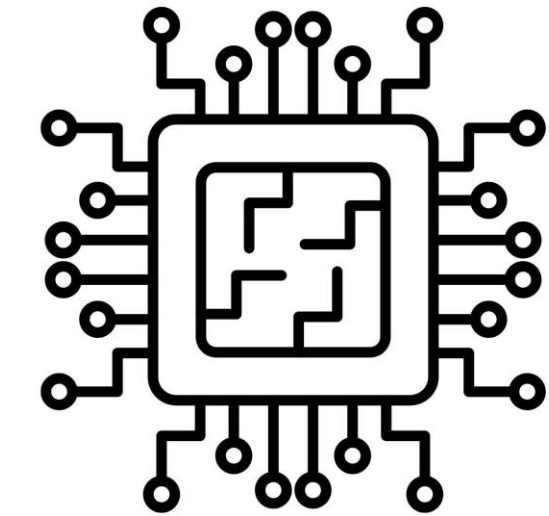
WP LEADER

HORIZON-RIA 2024-26

3,95M€ (449,6 k€)



National strategic projects



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LANGUAGE TECHNOLOGIES

Nós: Artificial Intelligence
at the service of the
Galician Language

COORDINATION - Xunta de Galicia &
NEXT-GEN, 2021-2025

500,4k€

ILENIA: Galician language in society and
the digital economy

COORDINATION – PERTE Nueva
Economía de la Lengua, 2023-2025

2M€ (1,2M€)

PERSONALISED MEDICINE

Plexus Tech - USC Chair in
AI applied to personalised
precision medicine

COORDINATION
ENIA - NEXT-GEN

2024-2026

1,2 M€

MICROELECTRONIC DESIGN

Televés - USC Chip Chair
in microelectronic design

COORDINATION

PERTE Chip
2024-2027

1,8 M€

International conferences 2024



16th International Conference on Computational Processing of Portuguese

14-15 March 2024

Santiago de Compostela



6th International Workshop on the Theory of Computational Sensing and its applications to Radar, Multimodal Sensing, and Imaging

18-20 September 2024

Santiago de Compostela



27th European Conference on Artificial Intelligence

19-24 October 2024

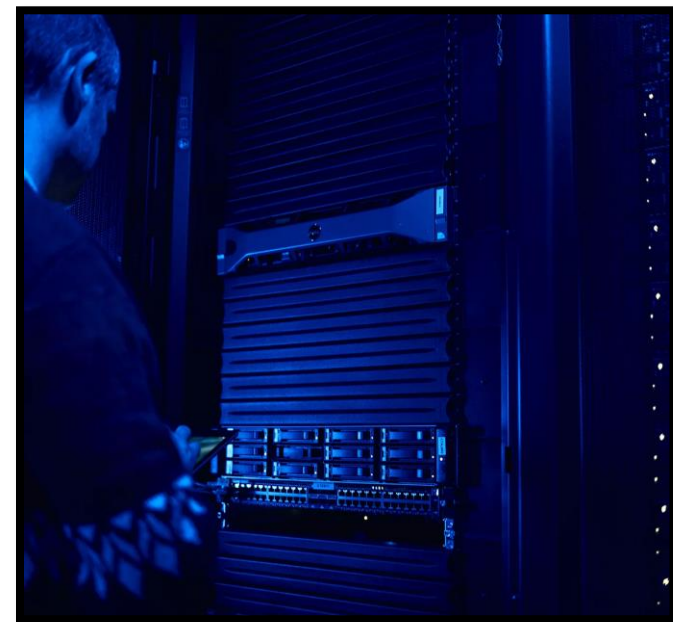
Santiago de Compostela



Electronic Design of Intelligent Devices

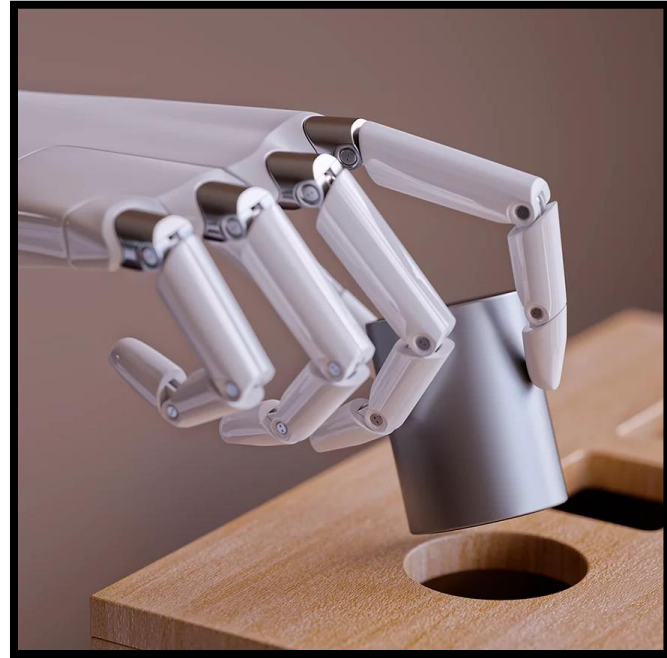
- On-chip Artificial Vision Algorithm implementation
- Edge computing: data processing and decision making on chip

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High Performance Computing

- Efficient processing of social network data
- High performance architectures for LiDAR processing
- Quantum Machine Learning



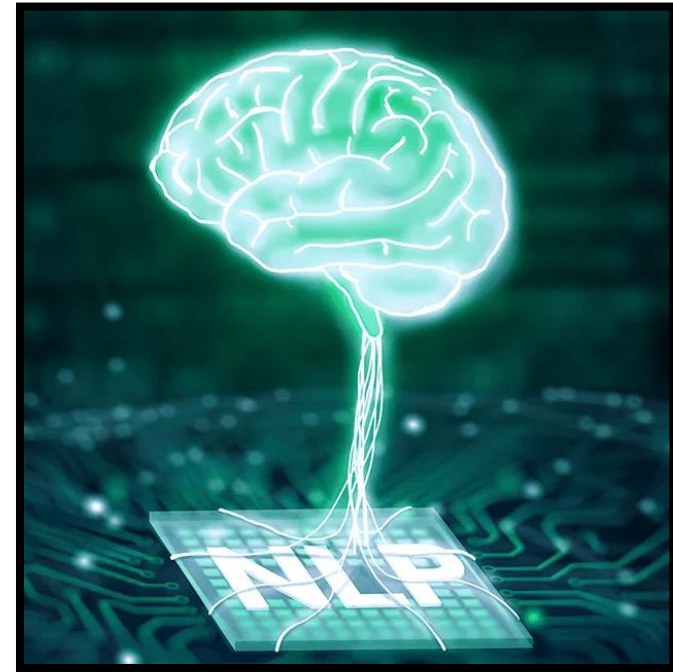
Automatic Learning and Reasoning

- Fundamentals of Machine Learning
- Signal Processing
- Process Mining

Artificial Vision

- Detection, classification and tracking
- LiDAR and Hyperspectral image
- Medical Image





Language Technologies

- Large Language models: open-source neural and automatic Translator for Galician-Spanish and Galician-English
- First foundational model for Galician
- Early Prediction of Personal Risks from Big Data

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Robotics

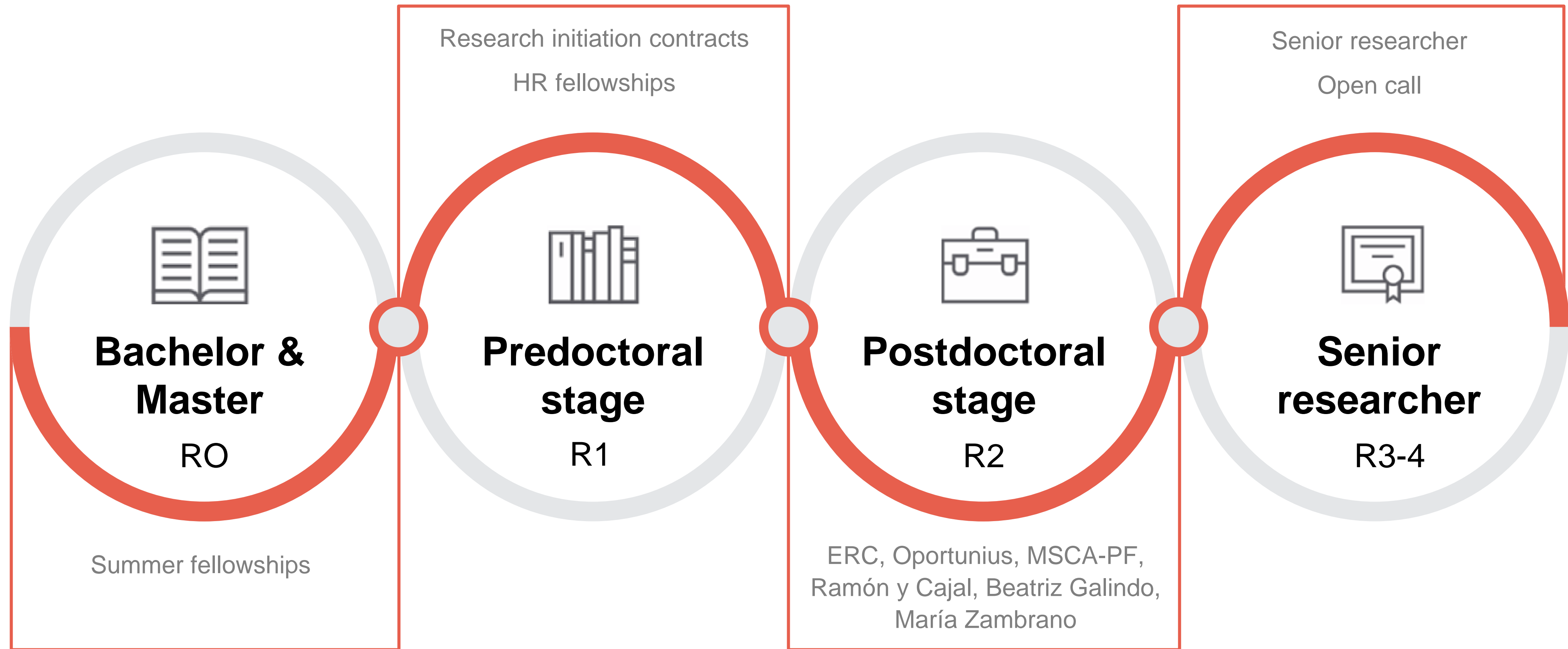
- Robotics manipulation of flexible and deformable objects
- Motion coordination and tactile manipulation
- Human Computer Interaction



Trustworthy AI

- Develop of Explainable AI models
- Data to Text systems

Talent



14

HIGHLIGHTED ACTIONS



Training and Professional
Development Committee



Training
programme



Team
building



Recruitment and
retention of talent



Welcome
package



Alumni
network



Incentive
programme