

ANIS ROJBI, PhD

Associate Professor (Maître de conférences) in Computer Science and Engineering

Artificial intelligence - assistive technology - digital accessibility - signal & image processing - human-computer interaction

Contact via website | Université Paris 8 | CHArt research unit - THIM team | CNU 61

PROFILE

Associate Professor (Maître de conférences) in Computer Science and Engineering at Université Paris 8, and a member of the CHArt research unit (THIM team) and France's CNU Section 61. His work combines assistive technologies, digital accessibility, artificial intelligence, signal and image processing, and human-computer interaction. Since 2021, he has headed the Ingénierie - Cognition - Handicap department and directed the MIASHS master's program, including its Technology and Disability track, while coordinating international academic partnerships.

CORE EXPERTISE

Assistive technology | AI / deep learning | Signal & image processing | Digital accessibility | HCI / computer vision | Brain-computer interfaces (BCI)

CURRENT ACADEMIC LEADERSHIP

SINCE 2021 Head, Ingénierie - Cognition - Handicap (ICH) Department | Université Paris 8

- Coordinates a department comprising 5 permanent faculty members, 1 research engineer and approximately 40 adjunct lecturers.
- Oversees the academic offer, external lecturer recruitment and departmental operations.

SINCE 2021 Director, MIASHS Master's Program and Technology & Disability track | Université Paris 8

- Directs a program enrolling approximately 50 students per cohort, with responsibility for curriculum coordination, admissions, program review and student support.
- Led the LMD5 curriculum redesign around competency blocks and prepared the HCERES evaluation report, contributing to a very favorable assessment of the program.

SINCE 2023 International Relations Coordinator, UFR | Université Paris 8

- Develops academic partnerships, supports mobility schemes and contributes to the international visibility of the academic offer.

SINCE 2018 Member, Conseil national des universités (CNU), Section 61 | Computer Engineering, Control and Signal Processing

ACADEMIC AND R&D APPOINTMENTS

SINCE 2007 Associate Professor (Maître de conférences) in Computer Science and Engineering | Université Paris 8 - CHArt research unit, THIM team

2006-2007 ATER - fixed-term teaching and research appointment | Université Paris 8

2005-2006 Postdoctoral Researcher / Research Engineer | CNRS - Marie Curie Fellowship

2004-2005 ATER - fixed-term teaching and research appointment | Université Paris 12 (Créteil)

2001-2004 Research Engineer | France Telecom R&D

Research on multimodal data processing, image segmentation and human-computer interaction.

2000-2001 Research Engineer | Philips France

RESEARCH FOCUS

Research focuses on adaptive systems and assistive technologies designed to improve autonomy, digital content accessibility and human activity analysis in disability and healthcare contexts.

THEME 1 Accessible images and multi-level content adaptation

- Multi-granular image representations and transformation of visual content into information layers that can be explored visually or through tactile interfaces.
- Applications to web and digital-document access for people with visual impairments.

THEME 2 Multimodal fatigue detection

- Combines visual indicators such as facial expressions and eye movements with physiological measurements to study fatigue in older adults.
- Uses computer vision and machine-learning methods.

THEME 3 Brain-computer interfaces and physical-action classification

- Natural and synthetic EEG data augmentation to improve the robustness of deep-learning models in data-scarce settings.
- Potential applications to human-activity analysis and autonomy for people with severe mobility limitations.

SELECTED INTERNATIONAL PROJECTS AND PARTNERSHIPS

2022-2025 / 2024-2027 Erasmus+ International Credit Mobility - École Polytechnique de Kiev (Ukraine)

- Scientific and operational coordinator for student and staff mobility and academic cooperation.
- Funding allocated to Université Paris 8: EUR 424,430 for 2022-2025, followed by EUR 626,292 for the 2024-2027 period.

2025-2027 Erasmus+ International Credit Mobility - Université de Sfax (Tunisia)

- Coordinates mobility, teaching and research cooperation; contributes to the development of a double-degree arrangement with the engineering school in Sfax.

COMPLETED 2024 PHC UTIQUE France-Tunisia - E-Tactile

- French-side project lead; development of an innovative approach for adapting digital documents into tactile content for people with specific needs.

2024 Invited lecture | New Bulgarian University

Digital accessibility and assistive technologies for people with disabilities.

TEACHING, INTERDISCIPLINARY PRACTICE AND IMPACT

- Accessible web-development projects through which approximately 20 non-profit organizations each year, in France and internationally, receive a website designed by students.
- Interdisciplinary work bridging computer science with psychology, medicine, ergonomics, occupational therapy and neuroscience.

SELECTED RECENT PUBLICATIONS

- Y. Gordienko, N. Gordienko, V. Taran, A. Rojbi, S. Telenyk & S. Stirenko, "Effect of Natural and Synthetic Noise Data Augmentation on Physical Action Classification by Brain-Computer Interface and Deep Learning," *Frontiers in Neuroinformatics*, 2025.
- S. Rojbi, M. Gouider & A. Rojbi, "Enhancing the Accessibility of Images on the Web: A Holistic View and New Perspectives," 49th PATTAYA International Conference on Science, Engineering, Technology & Healthcare (PSETH-23), 2023.
- C. Bahar, A. Rojbi & C. Baccouch, "28GHz Antenna for Satellite-Routed Sensor System (SRSS) in 5G Applications," *IEEE International Workshop on Mechatronic Systems Supervision*, 2023.

DOCTORAL AND RESEARCH SUPERVISION

2019-2022 Sami Rojbi - PhD defended in Tunis on 3 December 2022

- 50% co-supervision in an international co-supervision arrangement. Topic: adapting digital documents into tactile elements for people with specific needs.

SINCE 2024 Wiem Ben Ghazzi - ongoing international joint PhD

- 25% co-supervision. Topic: healthcare monitoring and prediction using machine-learning techniques.

TEACHING AND PEDAGOGICAL DEVELOPMENT

Annual teaching load: 194 equivalent tutorial hours (HTD). Teaching is primarily delivered within the MIASHS master's program to a multidisciplinary cohort spanning computing, health and the social sciences.

- Accessible Front-End Development - 50 HTD/year.
- Electronics and Internet of Things - 39 HTD/year.
- Network and Cloud Infrastructures - 39 HTD/year.
- Technical project with a non-profit organization - 50 HTD/year; internship supervision - 16 HTD/year.
- Active learning, prototyping, hybrid teaching formats and differentiated materials for students with diverse academic backgrounds.
- Apprenticeship coordinator: supports 10-15 students per year, liaises with employers, validates assignments and coordinates with the university apprenticeship office.

INSTITUTIONAL SERVICE

- Staff representation and social-dialogue responsibilities since 2015, including service on the Technical Committee (CT) and Health, Safety and Working Conditions Committee (CHSCT).
- Member of the CHArt laboratory council (2022-2025) and permanent invited member of the UFR council since 2021.
- Member of academic selection committees in CNU Sections 61, 62 and 63 since 2021.
- Member of scientific committees for international conferences.

EDUCATION

2001-2004 PhD in Computer Science, Telecommunications and Electronics | Université Pierre et Marie Curie (Paris 6)

- Specialization: signal and image processing. Dissertation: Adaptive segmentation system for videoconferencing applications. Supervisor: Georges Alquié.

2000-2001 MSc in Electronics | Université Paris 6