

Mirko Casu

AI Researcher and Licensed Psychologist.
I study the *human-AI relationship* and its *clinical* and *forensic* applications.



PROFILE

PhD in Computer Science at the **University of Catania** (IPLab, 2023–2026), recently a visiting researcher at **EPFL**, and a **licensed clinical psychologist**. I introduced the concept of **impostor bias**, a systematic suspicion that what we see online is AI-generated, fuelled by our awareness of what generative AI can do. My work now centres on language models and AI agents, with a focus on mental health and AI safety.

RESEARCH THREADS

Humans vs. synthetic media

Impostor and automation bias; deepfake detection and attribution benchmarks.

AI for mental health

Chatbots, VR, wearables and mHealth apps for addiction, eating disorders and trauma.

LLMs & AI safety

Evaluation bias in diffusion vs. autoregressive LLMs; human-AI conversational trajectories; psychological profiling of open models.

EXPERIENCE

Aug 2023 –
Jul 2026

PhD Researcher, Computer Science

IPLab, University of Catania · Catania, IT

- Designed and ran a **746-participant** mixed-methods study showing human accuracy at spotting AI images sits at chance (47–55.5%), with measurable impostor and automation bias.
- Co-built **WILD** (20,000 images, 20 generators) and **SynthForensics** (6,815 videos, 5 text-to-video models), benchmarks where state-of-the-art detectors lose up to 29 AUC points.
- Led a scoping review of **49 studies** on wearables, apps and ML for smoking detection and cessation (*IEEE JBHI*).
- SAMOTHRACE project: AI for wearables and cognitive bias in forensics.

Oct 2025 –
Mar 2026

Visiting Doctoral Researcher

MINTS Lab, EPFL · Lausanne, CH · supervisor Prof. Andrea Cavallaro

- Analysed conversational trajectories between humans and AI systems.
- Studied evaluation bias in **diffusion LLMs** vs. autoregressive LLMs; paper under submission to **EACL 2027**.

2021 –
2023

Before the PhD

- Specialist assistant** for pupils with disabilities (I Girasoli coop.); **clinical trainee** in applied psychoanalysis (APA Catania); **videomaker** (UniCT, ECLAT & CoEHAR).

EDUCATION

Aug 2023 –
Jul 2026

PhD, Computer Science · University of Catania · defence pending · advisor Prof. S. Battiato · thesis: *Human Behaviour as Target and Medium of Artificial Intelligence in Clinical and Forensic Contexts*

2020 – 2023

MSc, Clinical Psychology · University of Catania · 110/110 cum laude · thesis on a smoking-cessation app (published in *BMC Psychology*)

2015 – 2019

BSc, Psychological Sciences · University of Sassari · 105/110 · thesis on video games, violence, rehabilitation and addiction

CONTACT

EMAIL
mirko.casu@live.it
mirko.casu@phd.unict.it

WEB
mirkocasu.github.io

SCHOLAR
scholar.google.com · zpZZ3X4AAAAJ

ORCID
0000-0001-6975-2241

GITHUB · HF · LINKEDIN
mirkocasu · m1rkocasu ·
in/m1rkocasu

AT A GLANCE

28

papers, preprints & proceedings

11

as first author

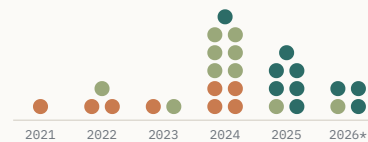
739

citations · h-index
10 (Google Scholar)

2

policy mentions:
INTERPOL, UK
Parliament

TRAJECTORY



- Clinical & health psychology
- Digital health technology
- AI & media forensics

One dot per paper. *2026 to date.

TOOLKIT

Machine learning

Python · MLX · Hugging Face · GGUF · hydra-zen · PyTorch · scikit-learn · LLM quantization & evaluation · XAI

Human-centred research

Experimental design · mixed methods · questionnaire design · inferential statistics (Jamovi) · PRISMA reviews · LLM-assisted screening

Devices, clinical & more

VR · wearables · mHealth · clinical assessment · web development · data visualisation

SELECTED PUBLICATIONS

FSI: DI
2024

GenAI mirage: The impostor bias and the deepfake detection challenge in the era of artificial illusions

M. Casu, L. Guarnera, P. Caponnetto, S. Battiato · *Forensic Science International: Digital Investigation*

INTERPOL Introduces impostor bias; cited in INTERPOL guidelines.

Appl. Sci.
2024

AI Chatbots for Mental Health: A Scoping Review of Effectiveness, Feasibility, and Applications

M. Casu, S. Triscari, S. Battiato, L. Guarnera, P. Caponnetto · *Applied Sciences*

UK PARLIAMENT Most-cited paper (280+ citations); in POSTnote 737.

HBET
2025

A (Mid)journey Through Reality: Assessing Accuracy, Impostor Bias, and Automation Bias in Human Detection of AI-Generated Images

M. Casu, L. Guarnera, I. Zangara, P. Caponnetto, S. Battiato · *Human Behavior and Emerging Technologies*

746 participants, 5 variants, Grad-CAM vs. humans. Open code.

Psych. Int.
2024

Exploring the Therapeutic Potential of Virtual Reality: A Review on the Simulation of Psychedelic Effects for Treating Psychological Disorders

M. Casu, C. Farrauto, G. Farruggio, S. Bellissima, S. Battiato, P. Caponnetto · *Psychology International*

VR-simulated psychedelic states as therapy; basis of my DigiTales talk.

IEEE JBHI
2025

Smoking Detection and Cessation: An Updated Scoping Review of Digital and Mobile Health Technologies

M. Casu, F. Guarnera, G. R. M. La Rosa, S. Battiato, P. Caponnetto, R. Polosa, R. Emma · *IEEE J. Biomedical and Health Informatics*

CHBR
2026

Digital technologies and artificial intelligence in eating disorders: A scoping review

M. Casu, L. Marletta, C. V. Ragaglia, P. Caponnetto, S. Battiato · *Computers in Human Behavior Reports*

7,545 records ranked by an LLM (Nemotron) for human screening.

Book ch.
2026

Sistemi di IA ad alto rischio di cui all'Articolo 6, Paragrafo 2

M. Casu, A. Di Pierno, O. Pontorno, I. Zangara, L. Guarnera, S. Battiato, D. Curtotti · in *AI Act e Legge nazionale sull'Intelligenza Artificiale* (Giuffrè)

Full list of 28 works, with PDFs and code: mirkocasu.github.io/publications

OPEN MODELS & DATA

2026

Apertus 1.5 8B for Apple silicon: 9 MLX quantizations (text & vision) of the Swiss open LLM, benchmarked for perplexity and psychological profile (PsychoBench, ICLR 2024) · 2,100+ downloads last month

2026

A (Mid)journey dataset: 75 stimuli and 11,170 human judgments, with Grad-CAM maps · Hugging Face & GitHub

COMMUNITY & SERVICE

2026

Session Chair, Technical Session 6 · IEEE ICAISF 2026, Catania

2025

Track Co-Chair, DFF-2025 Deepfake Forensics Workshop · ACM MM 2025

2025

Dataset Committee, AADD-2025 challenge (13 teams) · ACM MM 2025

2025

Lead Organizer, FHDA challenge · IEEE MetroXRaine 2025

2023 – 25

Guest Editor (2023–25) & **Academic Editor** (2024–25), special issue (4 articles) · *Exploration of Digital Health Technologies*

2023 – now

Peer reviewer for MDPI (*Healthcare, IJERPH, Psychiatry Int.*)

2024 – 26

Speaker & staff, IFOSS Forensics Summer School (3 editions)

TALKS

Psychedelic Simulation

DigiTales webinar, host Prof. S. Moritz · 2025

WILD dataset

VERIMEDIA Workshop @ IJCNN · 2025

Digital & mobile health for smoking detection

Global Forum on Nicotine, Warsaw · 2024

Smartwatch-based dual-diagnosis project

AIP Clinical & Dynamic Psychology Congress · 2024

Impostor bias (poster)

Psicologia in Cantiere, Palermo · 2024

AI for smoke-free living through wearables

European Conference of Digital Psychology · 2024

PUBLIC ENGAGEMENT

We Make Future, Bologna

Demonstrator for UniCT & CoEHAR · 2025

SHARPER Night, Catania

VR + wearable phobia-response demo · 2024

Didacta Italia, Catania

For the Sicilian Order of Psychologists · 2023

Essays in Italian on AI sycophancy and the Frankenstein complex

mirkocasu.github.io/blog

CREDENTIALS

Licensed Psychologist, Reg. no. 12260

Order of Psychologists of Sicily, Section A · since Sep 2024

IELTS Academic 7.0 (C1)

2023

Group Relationship Management

30-hour course · Gestalt Empowerment Italia · 2018

LANGUAGES

Italian: native

English: full professional (C1)

French: basic

OFF THE CLOCK

Photography (500px; official photographer of IFOSS 2026) and video games.