ANDREA RUSSO
CURRICULUM VITAE ET STUDIORUM

CONTACT INFORMATION

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Erdös number : 5 Total Citation *27* - H Index *3*

PREVIOUS RESEARCH EXPERIENCE

Postdoctoral Researcher at Pavia/Milan University - Pavia   Oct. 2024 - Oct. 2025
The ALGOFEED project (lead by Milan University) aims at understanding and assessing the impact of recommender algorithms on cultural consumption (e.g., music, movies, etc.) within social media platforms (with a specific focus on YouTube and TikTok). Specifically, ALGOFEED overarching goal is to shed light on the socio-cultural effects of platform-based feedback loops. The main research question the project asks is: how does the automated recommendation of content and advertising on digital platforms affect users' individual and collective cultural consumption patterns over time?
Supervisor: Alessandro Caliandro & Massimo Airoldi

Postdoctoral Researcher at Sorbonne University & CNRS - Paris   Oct. 2023 - Oct. 2024
Working on social dynamics and social stratification to understand how spatial and physical mobility may influence social stratification between generation, department and economical factors.
Supervisor: Floriana Gargiulo and Cyril Jayet

PhD with *Doctor Europaeus* title in Physic of Complex System - Catania   Nov. 2019 - July 2023
Working on social complexity, NLP and security field, in particular, my thesis focus on using GPT-3.5 as AI, capable of deradicalising people in social networks, mitigating possible critical events (like Capitol hill event, Luca Traini and Shinzo Abe gunshot) by a radicalised group.
Supervisor: Giovanni Giuffrida

Visiting PhD Student at UCD Dublin   Jan. 2022 - July 2022
Working on collective intelligence of actors, complexity of the texts, resistance to a topic and influence dynamics.
Supervisor: Taha Yasseri

RESEARCH INTEREST

- Computational Social Science - Sociology - Marketing - Security study - Political study
- Complex systems - Collective intelligence - Self-Organized criticality - Stochastic resonance
- AI - Space industry - NLP - Network science

EDUCATION

PhD in Complex Systems for Physical, Socio-economic and Life Sciences   Sept 2023
University of Catania - Dpt. of Physic and Astronomy with *Doctor Europaeus* title.

II° Master Degree in Innovation Technology at IAE Grenoble (FR)   April 2016
Theses score 18/20 with the note "Assez bien/Very good" (30L/30L).

I° Master Degree in Innovation Technology at IAE Grenoble (FR)   April 2015
Working and studying on Innovation management and project management.

Bachelor degree in Sociology at Paul Valery III Montpellier (FR)   May 2014
Studying and focusing on social-technological dynamics and social-technological changes

Student of Sociology at Dept. of Sociology UniCT (ITA)   Sept 2010
Studying base sociology concept. Average score ∼28/30.

- **Programming Languages and Tools**: Proficient in Python (data analysis, machine learning, web scraping) and experienced in data cleaning, preprocessing and visualization, Gephi (network analysis), RStudio (basic data visualization and statistical analysis), and Latex/Overleaf.
- **AI and NLP Expertise**: Experience in implementing Natural Language Processing (NLP) workflows, including text classification, sentiment analysis, emotion detection, and linguistic data processing (BERT, BERTopic, RoBERTa, etc), and digital profiling. Experienced in working with AI-based APIs (OpenAI, Gemini) to enhance automation, perform text generation, and analyze large datasets. Familiar with managing AI interactions and deploying language models for downstream tasks. Developed and published the Italian Vader Sentiment Analysis tool available for free here.
- **Web Scraping and APIs**: Skilled in using various web scraping tools and integrating APIs (Tiktok, YouTube, Wikipedia, Telegram) for data collection and analysis.
- **Languages**: Italian (Mother Tongue), French (C2), English (C1).

TEACHING

Como Summer School for Digital Methods — September 2025
Data analysis - 6 days (15 hours)

Sorbonne University — February 2024
Data analysis on R - 13 days (20 hours)

University of Catania - Sociology class — November 2021
Introduction to Computational Social Science - 4 days (10 hours)

University of Catania - Sociology class — May 2021
Introduction to Hackathon dynamics and innovation process - 2 days (4 hours)

Istituto Statele Lombardo Radice (school) — September 2012
Introduction to Sociology - 30 days (60 hours)

Total hours of Teaching — May 2012 - September 2025
Sociology, Data Analysis, Complex systems - **109 hours**

RELEVANT EXPERIENCE & CONFERENCE SPEAKER

- 10th conferenza STS - The Italian Society of Science and Technology Studies - Milano - 5-14 Giugno 2025.
- Complex Network Annual Conference - Istanbul 9th-13th December 2024.
- Political Studies Association of Ireland (PSAI) Annual Conference 2024 at Trinity College Dublin. October 18th-20th, 2024.
- Conference on 11th Conference on Computer-Mediated Communication (CMC) and Social Media Corpora. CMC Conference. 5 & 6 September 2024, Nice.
- Conference on Bridging the theoretical and empirical approaches to social dynamics. French Complex system society. 6 & 7 Paris June 2024.
- Conference French Regional Conference on Complex Systems FRCCS 2024 Montpellier, France May 29-31, 2024
- Conference French Regional Conference on Complex Systems FRCCS 2023 Le Havre May 31 - June 02, 2023.
- Conference "Democrazia. Tra crisi e nuove sfide" - Messina 26-27-28 Oct 2022.
- Conference on Complex System (CCS) 2022 Palma de Mallorca - 17-22 Oct Palma de Mallorca 2022.
- Lipari school of DATA SCIENCE: Models, Algorithms, AI and Beyond - Lipari 17-23 July 2022.
- Conference on Complex System (CCS) 2021 Lyon Conference on Complex Systems - Lyon 25-29 Oct 2021.
- Vicenza città impresa festival dei territori industriali - Vicenza, 10-12 Sept 2021.
- Complexity Science Hub Winter Lecture Series 2021 - CSH. March 2021.
- Enrolment as Innovation Manager registers for the Italian Minister of Economic Development (MISE) as an innovation consultant, according to the national "Enterprise 4.0" Plan. November 2019.
- Sociotechnical Environments, 6° Conference of STS Italia. Trento dal 24 – 26 Novembre 2016.

- Collaboration with Italian National Council research - IBAM of Catania, for the development and design of the Fluid Li-Fi system. October 2016.
- Conference on IV Biennale dello spazio pubblico. Rome 21 - 23 May 2015.

Speaker, Panel and satellite organization

- Organizer and Speaker at Summer School: Digital methods for critical consumer studies – September 23-26, 2025
- Netplace Seminar about "AI device for deradicalization process" and discussion about "Ethics in social interactions on social networks". Youtube Link 2024/10/03 Rome.
- Workshop on *Bridging the theoretical and empirical approaches to social dynamics*. French Complex system society. 6 & 7 June 2024 Paris.
- Series of meetings *DÉBATS SUR LE DÉBAT*, AI and radicalism on social media. Rencontre avec Malvina NISSIM & Andrea RUSSO; fb.com/olindinum, 2024.
- Academic roundtable with OECD (Organisation for Economic Co-operation and Development) about "Artificial Inteligence for Good, or Not?". Maison de l'Italie (CiuP) - Paris April 9th 2024.
- Sociology Festival of Next Society. Nature, Culture, Politics - Narni 8-9 Oct 2021.

Publications

These listed are a few selected publications. Full publication list available at: Andrea's scholar profile

1. Analyzing Communication Broadcasting in the Digital Space - G. Giuffrida, F. Mazzeo Rinaldi, A. Russo (2022) - Springer Link. LOD Conference on Machine Learning, Optimization, and Data Science pp 518-530. DOI: 10.1007/978-3-030-95470-3 39

2. Evaluating Geopolitical Dynamics through Social Media and Space Missions: A Quantitative Perspective on Soft Power. - A. Russo, D. Coco, geopolitic.ro, ISBN 3044-8484-5-6

3. Data Donation from YouTube and TikTok Users: How We Implemented It - A. Russo, D. Pizzul, Italian Sociological Review, 2025.

4. Topics evolution through multilayer networks; Analysing 2M tweets from 2022 Qatar FIFA World Cup - A. Russo, V. Miracula, A. Picone. DOI: arXiv:2401.12228

5. Network analysis on political election; populist vs social emergent behaviour - A. Russo, V. Miracula, A. Picone (2022) - Conference on Complex Systems CCS2022 in Palma de Mallorca, Spain. DOI: arXiv:2301.05668

6. Information balance between newspapers and social networks - F. Mazzeo Rinaldi, A. Russo, G. Giuffrida (2020) - CARMA 2020 - 3rd International Conference on Advanced Research Methods and Analytics. ISBN: 9788490488324. DOI: 0.4995/CARMA2020.2020.11635

7. Entropy-rate as prediction method for newspapers and information diffusion. - Russo, A. Picone, A. Miracula, V. Giuffrida, G. & Rinaldi F. M. (2022). arXiv preprint arXiv:2212.01361.

8. (BOOK) Profilazione Sociale e Sicurezza Nazionale - G. Gambino, A. Russo (2021) - SOCINT – Società italiana d'intelligence. ISBN-13 (15) 979-12-80111-19-7. https://doi.org/10.36182/2021.05

Publications in progress

1. The structures of platformized consumption (with Massimo Airoldi, Alessandro Caliandro & Alessandro Gandini). Target Journal: *Journal of Consumer Research*

2. Do ads create consumers or do consumers create ads? Analysis of marketing dynamics in YouTube. (with Massimo Airoldi, Alessandro Caliandro & Janice Denegri-Knott).
Target Journal: *Consumption, Market and Culture - Special Issue The Social Life of Brands after Platforms*

3. Squeaky, dusty, and fragile: the ageist imaginary of Chatgpt (with Emma Garavaglia & Alessandro Caliandro). Target Journal: *Ageing & Society*

4. What Kind of Propaganda Reaches You? A Study on Radical Information dissemination in Europe (with Constantine Boussalis & Callum Craig), Target Journal: *PLOS One*

1. Emotion detection from Kursk regional Telegram group; Shaping emotion detection in Russian invasion from Ukraine forces. Target Journal: *International Journal of Information Security*

2. AI for Deradicalization: re-purposing AI to mitigate radicalism on Telegram (with Alessandro Caliandro). Target Journal: *Big Data & Society*

3. Algorithmic Influence on Conflict and Cooperation in Digital Communities: the Ukraine-Russia war, with Taha Yasseri. Target Journal: *PLOS Complex Systems*

Thesis

- AI-Influencer to mitigate radicalism and social-threats; A device for security and complex social dynamics sector application. May 2023.
  Supervisors: Giovanni Giuffrida & Francesco Mazzeo Rinaldi
  PhD thesis in complex system.
- The concepts of the Fluid Li-Fi. This Study tries to connect the Li-Fi Technology with the Smart-city (urban environment) and the Technology on Domotics services. June 2016.
  University tutor: Thierry Menissier
  Business tutor: Gaetano Di Stefano
  Vote: 18/20 (30/30L)
- The Smart-Perception, Perception et nouveaux besoins dans les smart-city. Cities are always in evolution like technology develops itself every day. The city and its citizens can see these effects and they can have different reactions and different perceptions. June 2015.
  University tutor: Olivier Zerbib
  Business tutor: Mauro Di Giamberardino
  Vote: 13/20 (26/30L)
- La Socio-technologie: Etude sur la technologie comme influence sociale par rapport aux comportements individuels et de masse. This thesis was devoted to the understanding of how and why in societies, the behaviours of the individuals and the masses are influenced by the relationships within the technologies. June 2014.
  University tutor: Vincenzo Valentino Susca
  Vote: 16/20 (28/30L)

Professional Experience

- May 2019 - Open Innovation Project with Alstom, A2A end ELIS.
  For Alstom's project, we have innovated inside the maintenance of the train, developed an AI Chatbot to improve and help the maintenance workers. We work with the help of Keethings. For the A2A's project, we innovate the IoT system inside the A2A store. We try to take information from the people who enter into A2A's store. After that, we will create the cluster target of the client. Grottini Lab has collaborated with us.
- January 2019 - Industry 4.0 project, for Confcommercio Catania. Report on 14 companies and their network, focusing on the E015 ecosystem and Big Data services.
- November 2018 - Employment with Etna Hitech. For two months, I worked on the MISE POR 1.1.5 - Life sciences and CFMT projects, focusing on DIA diagrams and macro-processes in innovation management. Start training course Industry 4.0 project MISE.
- May 2016 - Employment with Homatron SRL. Innovation of the products and planning's the new products for the public and private markets, using new technology as the Li-Fi.
- February 2016 - Contract of intercollegiate job with Gorgy Timing. Planning innovation for the services of the distribution hourly synchronization for the robotic and medical domain. Research about HRI service
- September 2015 - Contract of intercollegiate job with Suez Environnment. Innovation in the suit of the refusals waste, more precisely in comparison to the BPTs (construction of buildings and construction housing architectural). Development of a robot for HRI service for the waste cycle. Exploitation for refusals waste in the economic cycle.
- April 2015 - Stage R&D with SmartEye SRL. Research and development of the cameras Smart-Eye for the smart-city service. Focus on HRI interaction end new needed for smart-city.

REFERENCES

Taha Yasseri   Physicist
Full professor - Trinity College Dublin

Floriana Gargiullo   Physicist
Research fellow - CNRS

Alessandro Pluchino   Physicist
Associate professor - University of Catania

Giovanni Giuffrida   Computer Scientist
Research fellow - University of Catania

Francesco Mazzeo Rinaldi   Sociologist
Associate professor - University of Catania / KTH Royal Institute of Technology Stockholm

Guido Nicolosi   Sociologist
Associate professor - University of Catania

Thierry Ménissier   Philosopher
Full professor - Université Grenoble Alpes

Alessandro Caliandro   Sociologist
Associate professor - Università Statale di Milano

Massimo Airoldi   Sociologist
Associate professor - Università Statale di Milano

OTHER INFORMATION

- Badminton player for 9 years up to the National level with certification of referee and coach.
- Associate member of Italian's intelligence society (SOCINT)
- Associate member of Italian Sociology Association
- Associate member of Complex Systems Society
- Editorial member of *DeltaSocint* Journal
- Myers-Briggs indicator: **ISTJ**
- AGILE predisposition to work
- Wechsler IQ test: 144 (2012)

Last Update 2025/10/29 - Rome

I declare that I have not received any criminal sentences.