

Curriculum Vitae - Marinella Petrocchi

Research group and thematic macro areas

I belong to the Security Privacy and Trust Research Unit @IIT-CNR, Pisa, Italy. Macro themes of my research:

- Models and methods for evaluating the quality and credibility of information available online: Online data quality and trustworthiness (from 2012 to current day)
- Models and methods for characterizing and analyzing online behaviors: Online behavioral models and analyses (from 2012 to current day)
- Technical and legal aspects of data privacy (from 2008 to current day)

Permanent and temporary contracts, as researcher

- 1 June 2020 - Current day. Senior Researcher at Institute of Informatics and Telematics (IIT) - CNR, Pisa.
- 1 February 2010 - 30 May 2020. Researcher at Institute of Informatics and Telematics (IIT) - CNR, Pisa.
- 30 December 2005 - 31 January 2010. Researcher with temporary position (Ricercatore a tempo determinato - chiamata diretta ai sensi dell'Art.23 del D.P.R. 171/91. Delega del Presidente del CNR, Prot.n.7035, del 29 Dicembre 2005.) at IIT-CNR. 30 December 2005 - 29 December 2010.

Guest Scholarship From November 2013, I am a guest scholar at IMT (Institutes, Markets, and Technologies) Scuola Alti Studi, Lucca, Italy. I collaborate with the System Modeling and Analysis group (SysMA) directed by Rocco De Nicola, for the analysis of data from social networks, the detection of fake news and fake social accounts.

Scientific Boards

- December 2020-Current day: member of the Advisory Committee of Institute of Informatics and Telematics, CNR, Pisa, Italy. <https://www.iit.cnr.it/en/about-us/advisory-committee/>
- May 2019-November 2020: member of the scientific board for PhD Program in Cognitive and Cultural Systems @ IMT Scuola Alti Studi Lucca.

Eligibility as Associate Professor

- **Eligibility as Associate Professor**, achieved in August, 2018, validity: till August, 2024. Scientific Area: "Computer Science".
- **Eligibility as Associate Professor**, achieved in July, 2018, validity: till July, 2024. Scientific Area: "Information Engineering".

Participation in research projects. Below, a list of the research projects that I participate at current day).

- Start date November. 2020. Duration 36 months: H2020 MEDINA (*Security framework to achieve a continuous audit-based certification in compliance with the EU-wide cloud security certification scheme*)
 - Topics: Deploying a high assurance, evidence-based and continuous certification for Cloud Service Providers.
 - Website: <https://medina-project.eu/>
 - My role: **WP Leader** WP2: Certification Metrics and Specification Languages
- April 2019 - March 2022: TOFFEE: TOOLS FOR FIGHTING FAKES, "Progetto di Attività Integrata" (PAI), funded by IMT Scuola Alti Studi Lucca
 - Topics: The TOFFEE project will design and implement tools for the detection of fakes online, including fake news and fake accounts
 - Website: <https://toffee.imtlucca.it/>
 - My role: **Representative** for the area of defining and implementing automatic classifiers for fake news detection.

(Recent) Editorial activity

- Journal special issues:
 1. Christian Grimme, Marinella Petrocchi, Angelo Spognardi (editors): Topic Editor of the Special Issue on Resilience of Machine Learning Techniques against Adversarial Attacks in Bot and Fake News Detection at Frontiers in Big Data – Machine Learning and Artificial Intelligence, 2021.

2. Yelena Mejova, Marinella Petrocchi, Carolina Scarton (editors): Special Issue on Disinformation, Hoaxes and Propaganda within Online Social Networks and Media at Elsevier OSNEM, 2020.

List of recent publications (2019-current day)

Journals:

1. Guido Caldarelli, Rocco De Nicola, Marinella Petrocchi, Manuel Pratelli, Fabio Saracco: Flow of online misinformation during the peak of the COVID-19 pandemic in Italy. EPJ Data Science (accepted, 2021)
2. Alessandro Balestrucci, Rocco De Nicola, Marinella Petrocchi, Catia Trubiani: A Behavioral Analysis of Credulous Twitter Users. Online Soc. Networks and Media, Volume 23, May 2021
3. Stefano Cresci, Marinella Petrocchi, Angelo Spognardi, Stefano Tognazzi: The Coming Age of Adversarial Social Bot Detection. First Monday (to appear, June 2021)
4. Michela Fazzolari, Francesco Buccafurri, Gianluca Lax, Marinella Petrocchi: Improving Opinion Spam Detection by Cumulative Relative Frequency Distribution. ACM J. Data Inf. Qual. 13(1): 4:1-4:16 (2021)
5. Yesim Tonga Uriarte, Marinella Petrocchi, Maria Luisa Catoni, Stefano Cresci, Rocco De Nicola, Maurizio Tesconi, Rafael Brundo Uriarte: Exploring the relation between festivals and host cities on Twitter: a study on the impacts of Lucca Comics Games. Information Technology and Tourism 22(4): 625-648 (2020)
6. Guido Caldarelli, Rocco De Nicola, Fabio Del Vigna, Marinella Petrocchi and Fabio Saracco: The role of bot squads in the political propaganda on Twitter. Communications Physics, 3(81) (2020)
7. Stefano Cresci, Roberto Di Pietro, Marinella Petrocchi, Angelo Spognardi, Maurizio Tesconi: Emergent properties, models, and laws of behavioral similarities within groups of Twitter users. Comput. Commun. 150: 47-61 (2020)
8. Pietro Ducange, Michela Fazzolari, Marinella Petrocchi, Massimo Vecchio: An effective Decision Support System for social media listening based on cross-source sentiment analysis models. Eng. Appl. Artif. Intell. 78: 71-85 (2019)
9. Stefano Cresci, Marinella Petrocchi, Angelo Spognardi, Stefano Tognazzi: On the capability of evolved spambots to evade detection via genetic engineering. Online Soc. Networks Media 9: 1-16 (2019)

Conferences:

1. Michela Fazzolari, Stefania Fabbri, Ilaria Matteucci, Marinella Petrocchi, Anna Vaccarelli: Presente Digitale: an Online Education System for Teachers. HELMeTO 2020, Springer CCIS book series, 2020
2. Angelo Spognardi and Marinella Petrocchi: On the Robustness of Rating Aggregators Against Injection Attacks. Lecture Notes in Computer Science 12259, MISDOOM 2020
3. Michela Fazzolari, Manuel Pratelli, Fabio Martinelli and Marinella Petrocchi: Emotions and Interests of Evolving Twitter Bots. IEEE Conference on Evolving and Adaptive Intelligent Systems (EAIS 2020)
4. Alessandro Balestrucci, Rocco De Nicola, Marinella Petrocchi, Catia Trubiani: Do You Really Follow Them? Automatic Detection of Credulous Twitter Users. IDEAL (1) 2019: 402-410
5. Stefano Cresci, Marinella Petrocchi, Angelo Spognardi, Stefano Tognazzi: Better Safe Than Sorry: An Adversarial Approach to Improve Social Bot Detection. WebSci 2019: 47-56

Book chapters:

1. Guido Caldarelli, Rocco De Nicola, Marinella Petrocchi, Fabio Saracco: Part III, Chapter 12: Information Spreading and the Role of Automated Accounts on Twitter: Two Case Studies. In 'Democracy and Fake News Information Manipulation and Post-Truth Politics'. Serena Giusti, Elisa Piras Editors. ISBN 9780367479541. December 30, 2020, Routledge.
2. Stefano Cresci, Roberto Di Pietro, Marinella Petrocchi, Angelo Spognardi, Maurizio Tesconi: Chapter 12: DNA-inspired characterization and detection of novel social Twitter spambots. In "Nature-inspired Cyber Security and Resilience: Fundamentals, Technology and Applications", IET publisher, 2019.

Under submission:

1. Stefano Cresci, Marinella Petrocchi, Angelo Spognardi, Stefano Tognazzi: Adversarial machine learning for protecting against online manipulation. IEEE Internet Computing (under submission)
2. Rocco De Nicola, Marinella Petrocchi, Manuel Pratelli: On the efficacy of old features for the detection of new bots. Information Processing and Management (2nd round of review)

Declaration (in Italian): La sottoscritta è a conoscenza che, ai sensi dell'art.26 della legge 15/68, le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali. Ai sensi dell'art. 13 del Regolamento UE 2016/679, la sottoscritta autorizza al trattamento dei dati personali presenti nel documento.

Lucca, June 29, 2021

Marinella Petrocchi

