# CV of Michael Sirivianos

CONTACT
INFORMATION

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SUMMARY

I am an Associate Professor of Computer Engineering and Informatics and the Dean of the School of Engineering and Technology at the Cyprus University of Technology (CUT). I research ways to help social media users tell lies apart.

I hold a PhD from Duke University since 2010. Prior to joining CUT in 2012, I was an Associate Researcher at Telefonica Research in Barcelona. In addition, I served as Executive Director and I am currently a Board Member at the CYENS Centre of Excellence.

My research interests include trust-aware design of distributed systems, device-centric authentication, federated identity management, discrimination based on personal data, cybersafety (cyberbullying detection, cybergrooming detection, characterization and detection of hate speech, detection of inappropriate videos targeting young children, and characterization and suppression of false information), transactional workload scalability, and measurement of blockchain systems.

I have published articles in the most influential conferences and journals of Networked Systems, including ACM SIGCOMM, USENIX NSDI, ACM IMC, USENIX ATC, ACM CSCW, AAAI ICWSM, IEEE INFOCOM, IEEE ICDCS, IEEE/ACM Transactions on Networking, and ACM Transactions on the Web.

I have extensive experience leading EU-funded projects. Specifically, I was the technical manager of the ReCRED project (Horizon 2020 Innovation Action - 2014) and the coordinator of the ENCASE project (Horizon 2020 Marie Curie RISE - 2015).

Our work on fringe web communities, hate speech, disinformation and disturbing content on YouTube had extensive coverage in major news outlets, including The New York Times, Washington Post, The Atlantic, New Scientist, Business Insider, Quartz, Wired and El Pais.

EDUCATION

**Sept 2008 - May 2010, Duke University**, North Carolina, USA

> PhD in Computer Science

**Sept 2004 - Sept 2008, University of California, Irvine**, California, USA

> PhD Candidate in Networked Systems

**Sept 2002 - July 2004, University of California, San Diego**, California, USA

> MSc in Computer Science (Computer Communication Networks)

**Sept 1997 - June 2002, National Technical University of Athens**, Greece

> Diploma (BSc), Electrical and Computer Engineering, July, 2002

WORK EXPERIENCE **CYENS Centre of Excellence**, Nicosia, Cyprus

*Executive Director* **February 2022 - February 2023**

**Department of Electrical Engineering, Computer Engineering and Informatics, Cyprus University of Technology**, Limassol, Cyprus

*Dean of the School of Engineering and Technology*      **March 2023 - October 2026**

*Associate Professor*      **December 2022 - present**

*Assistant Professor*      **January 2012 - December 2022**

*Lecturer*      **January 2012 - September 2016**

**Telefonica Research, Scientific Group**, Barcelona, Spain

*Associate Researcher*      **June 2010 - January 2012**

*Student Intern Researcher*      **May 2009 - August 2009**

**Department of Computer Science, Duke University**, Durham, North Carolina, USA

*Graduate Student Researcher*      **Sept 2008 - May 2010**

**NEC Network Laboratories**, Heidelberg, Germany

*Student Intern Researcher*      **June 2006 - December 2008**

**Bren School of Information and Computer Sciences, U.C. Irvine**, Orange County, California, USA

*Graduate Student Researcher*      **June 2005 - August 2008**

**San Diego Supercomputer Center**, La Jolla, California, USA

*Programmer in Data and Knowledge Systems.*      **June 2004 - September 2004**

**Systems and Networking Laboratory, U.C. San Diego**, La Jolla, California, USA

*Graduate Student Researcher*      **Sept. 2003 - Aug. 2004**

PUBLICATIONS

**HyperGraphDis: Leveraging Hypergraphs for Contextual and Social-Based Disinformation Detection**, N. Salamanos, P. Leonidou, N. Laoutaris, M. Sirivianos, M. Aspri, M. Paraschiv, under submission (ArXiv), 2023

**Privacy-Preserving Online Content Moderation: A Federated Learning Use Case**, P. Leonidou, N. Kourtellis, N. Salamanos, M. Sirivianos, Cyber Social Threads (CySoc) workshop co-located with the ACM Web Conference (WWW), 2023

**Enabling Qualified Anonymity for Enhanced User Privacy**, V. Bolgouras, K. Papadamou, I. Stroinea, M. Papadakis, G. Gugulea, M. Sirivianos, C. Xenakis, 18th International Conference on Availability, Reliability and Security (ARES), 2023

**A Qualitative Analysis of Illicit Arms Trafficking on Darknet Marketplaces**, P. Leonidou, N. Salamanos, A. Farao, M. Aspri, M. Sirivianos, 3rd International Workshop on Advances on Privacy

Preserving Technologies and Solutions (IWAPS) co-located with the 18th International Conference on Availability, Reliability and Security (ARES), 2023

**Resilience of Blockchain Overlay Networks**, A. Paphitis, N. Kourtellis, M. Sirivianos, 17th International Conference on Network and System Security (NSS), 2023

**Graph Analysis of Blockchain P2P Overlays and their Security Implications**, A. Paphitis, N. Kourtellis, Michael Sirivianos, 9th International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec), 2023

**Did State-sponsored Trolls Shape the 2016 US Presidential Election Discourse? Quantifying Influence on Twitter**, N. Salamanos, M. J. Jensen, C. Iordanou, M. Sirivianos, 9th International Symposium on Security and Privacy in Social Networks and Big Data (SocialSec), 2023

**A Unified Graph-Based Approach to Disinformation Detection using Contextual and Semantic Relations**, M. Paraschiv, N. Salamanos, C. Iordanou, N. Laoutaris, M. Sirivianos, International AAAI Conference on Web and Social Media (ICWSM), 2022

**"It is just a flu": Assessing the Effect of Watch History on YouTube's Pseudoscientific Video Recommendations**, K. Papadamou, S. Zannettou, J. Blackburn, E. De Cristofaro, G. Stringhini, M. Sirivianos, International AAAI Conference on Web and Social Media (ICWSM), 2022

**"How over is it?" Understanding the Incel Community on YouTube**, K. Papadamou, S. Zannettou, J. Blackburn, E. De Cristofaro, G. Stringhini, M. Sirivianos, ACM Conference on Computer-Supported Cooperative Work (CSCW), 2021

**Hihooi: A Database Replication Middleware for Scaling Transactional Databases Consistently**, M. A. Georgiou, A. Paphitis, M. Sirivianos, H. Herodotou, IEEE Transactions on Knowledge and Data Engineering, 2020

**SECONDO: A Platform for Cybersecurity Investments and Cyber Insurance Decisions**, A. Farao, S. Panda, S.A. Menesidou, E. Veliou, N. Episkopos, G. Kalatzantonakis, F. Mohammadi, N. Georgopoulos, M. Sirivianos, N. Salamanos, S. Loizou, M. Pingos, J. Polley, A. Fielder, E. Panaousis, C. Xenakis, International Conference on Trust and Privacy in Digital Business (TrustBus), 2020

**Killing the Password and Preserving Privacy with Device-Centric and Attribute-based Authentication**, K. Papadamou, S. Zannettou, B.-C. Chifor, S. Teican, G. Gugulea, A. Recupero, A. Caponi, C. Pisa, G. Bianchi, S. Gevers, C. Xenakis and M. Sirivianos, IEEE Transactions on Information Forensics and Security, 2020

**Disturbed YouTube For Kids: Characterizing And Detecting Inappropriate Videos Targeting Young Children**, K. Papadamou, A. Papasavva, S. Zannettou and J. Blackburn, International AAAI Conference on Web and Social Media (ICWSM), 2020

**The Web of False Information: Rumors, Fake News, Hoaxes, Clickbait, and Various Other Shenanigans**, S. Zannettou, M. Sirivianos, J. Blackburn and N. Kourtellis, ACM Journal of Data and Information Quality, 2019

**Disinformation Warfare: Understanding State-Sponsored Trolls on Twitter and Their Influence on the Web**, S. Zannettou, T. Caulfield, E. D. Cristofaro, M. Sirivianos, G. Stringhini and J. Blackburn, Online Harassment and Misinformation, co-located with The Web Conference, 2019

**Who let the trolls out? Towards Understanding State-Sponsored Trolls**, S. Zannettou, T.

Caulfield, W. Setzer, M. Sirivianos, G. Stringhini and J. Blackburn, ACM International Web Science Conference (WebSci), 2019

**Towards Auto-Scaling Existing Transactional Databases with Strong Consistency**, M. Georgiou, A. Paphitis, M. Sirivianos and H. Herodotou, International Workshop on Self-Managed Databases, co-located with IEEE ICDE, 2019

**Russian Information Operations: Strategies And Tactics Of Influence**, M. J. Jensen, N. Salamanos, X. He, Y. Chen and M. Sirivianos, Annual Meeting of the American Political Science Association, 2019

**On the Influence of Twitter Trolls during the 2016 US Presidential Election**, N. Salamanos, M. J. Jensen, X. He, Y. Chen and M. Sirivianos, ArXiv, 2019

**On the Origins of Memes by Means of Fringe Web Communities**, S. Zannettou, T. Caulfield, J. Blackburn, E. D. Cristofaro, M. Sirivianos, G. Stringhini and G. Suarez-Tangil, ACM Internet Measurement Conference (IMC), 2018

**Understanding Web Archiving Services and Their (Mis)Use on Social Media**, S. Zannettou, J. Blackburn, E. D. Cristofaro, M. Sirivianos, G. Stringhini, International AAAI Conference on the Web and Social Media (ICWSM), 2018

**Large Scale Crowdsourcing and Characterization of Twitter Abusive Behavior**, A. Founta, C. Djouvas, D. Chatzakou, I. Leontiadis, J. Blackburn, G. Stringhini, A. Vakali, M. Sirivianos and N. Kourtellis. International AAAI Conference on Web and Social Media (ICWSM), 2018

**The Good, the Bad and the Bait: Detecting and Characterizing Clickbait on YouTube**, S. Zannettou, S. Chatzis, K. Papadamou and M. Sirivianos. 1st Deep Learning and Security Workshop (DLS), co-located with IEEE S&P, 2018

**What is Gab? A Bastion of Free Speech or an Alt-Right Echo Chamber?**, S. Zannettou, B. Bradlyn, E. D. Cristofaro, M. Sirivianos, G. Stringhini, H. Kwak, J. Blackburn. Workshop on Computational Methods in CyberSafety, Online Harassment and Misinformation, co-located with AAAI ICWSM, 2018.

**From Risk Factors to Detection and Intervention: A Practical Proposal for Future Work on Cyberbullying**, A. Ioannou, J. Blackburn, G. Stringhini, E. D. Cristofaro, N. Kourtellis, M. Sirivianos, Behaviour & Information Technology (TBIT), 2018

**Cybersafety in Modern Online Social Networks (Dagstuhl Reports 17372)**, J. Blackburn, E. D. Cristofaro, M. Sirivianos and T. Strufe, Dagstuhl Reports, Schloss Dagstuhl-Leibniz-Zentrum fuer Informatik, 2018

**The Web Centipede: Understanding How Web Communities Influence Each Other Through the Lens of Mainstream and Alternative News Sources**, S. Zannettou, T. Caulfield, E. D. Cristofaro, N. Kourtellis, I. Leontiadis, M. Sirivianos, G. Stringhini, J. Blackburn. ACM Internet Measurement Conference (IMC), 2017

**Who is Fiddling with Prices? Building and Deploying a Watchdog Service for E-commerce**, C. Iordanou, C. Soriente, M. Sirivianos and N. Laoutaris. ACM SIGCOMM, 2017

**E-safety in Web 2.0 learning environments: a research synthesis and implications for researchers and practitioners**, A. Parmaxi, K. Papadamou, M. Sirivianos and M. Stamatellatos, HCI International, 2017

**Exploiting Path Diversity in Datacenters using MPTCP-aware SDN**, S. Zannettou, M. Sirivianos, and F. Papadopoulos. IEEE Symposium on Computers and Communications (ISCC), 2016.

**Cyber Security Risks for Minors: A Taxonomy and a Software Architecture**, A. Tsirtsis, N. Tsapatsoulis, M. Stamatelatos, K. Papadamou, M. Sirivianos, 11th International Workshop on Semantic and Social Media Adaptation and Personalization (SMAP), 2016

**Ensuring Authenticity and Fidelity of Captured Photos using Trusted Execution and Mobile Application Licensing Capabilities**, K. Papadamou, R. Samaras, and M. Sirivianos 11th International Conference on Availability, Reliability and Security (ARES), 2016

**Combating Friend Spam Using Social Rejections**, Q. Cao, M. Sirivianos, Xiaowei Yang and K. Munagala. IEEE International Conference in Distributed Computing Systems (ICDCS), 2015

**Exploiting Path Diversity with Multipath TCP**, S. Zannettou, F. Papadopoulos, and M. Sirivianos, Poster in USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2015

**Leveraging Social Feedback to Verify Online Identity Claims**, M. Sirivianos, K. Kim, J.W. Gan and Xiaowei Yang, ACM Transactions on the Web, 2014

**Sharing the Cost of Backbone Networks: Cui Bono?**, L. Gyarmati, R. Stanojevic, M. Sirivianos and N. Laoutaris, ACM Internet Measurement Conference (IMC), 2012

**Aiding the Detection of Fake Accounts in Large Scale Social Online Services**, Q. Cao, M. Sirivianos, Xiaowei Yang and T. Pregueiro, USENIX Symposium on Networked Systems Design and Implementation (NSDI), 2012

**Assessing the Veracity of Identity Assertions via OSNs**, M. Sirivianos, K. Kim, J.W. Gan and Xiaowei Yang, Fourth International Conference on Communication Systems and Networks (COMSNETS), 2012

**Quantifying the Cost of Backbone Networks**, L. Gyarmati, R. Stanojevic, M. Sirivianos and N. Laoutaris, IEEE conference on computer communications workshops (INFOCOM WKSHPS), 2012

**Inter-Datacenter Bulk Transfers with NetStitcher**, N. Laoutaris, M. Sirivianos, Xiaoyuan Yang and P. Rodriguez, ACM Conference on Applications Technologies Architectures and Protocols for Computer Communication (SIGCOMM), 2011

**SocialFilter: Introducing Social Trust to Collaborative Spam Mitigation**, M. Sirivianos, Xiaowei Yang and K. Kim, International Conference on Computer Communications (INFOCOM), 2011

**Toward Attack-Resistant Distributed Information Systems by Means of Social Trust**, M. Sirivianos, Duke PhD Thesis, 2011

**SocialFilter: Introducing Social Trust to Collaborative Spam Mitigation**, M. Sirivianos, K. Kim and Xiaowei Yang, Usenix Workshop on Collaborative Methods for Security and Privacy (CollSec), 2010

**Robust and Efficient Incentives for Cooperative Content Distribution**, M. Sirivianos, Xiaowei Yang and S. Jarecki, IEEE/ACM Transactions on Networking, 2009

**FaceTrust: Assessing the Credibility of Online Personas via Social Networks**, M. Sirivianos, K. Kim and Xiaowei Yang, USENIX Workshop on Hot topics in security (HotSec), 2009

**Using Audio for Secure Device Pairing**, M. Goodrich, M. Sirivianos, J. Solis, C. Soriente, G. Tsudik and E. Uzun, International Journal of Security and Networks", 2009

**Poking Facebook: A Characterization of OSN Applications**, M. Gjoka, M. Sirivianos, A. Markopoulou and Xiaowei Yang, SIGCOMM Workshop on Online Social Network (WOSN), 2008

**Dandelion: Cooperative Content Distribution with Robust Incentives**, M. Sirivianos, J. H. Park, Xiaowei Yang and S. Jarecki, USENIX Annual Technical Conference, 2007

**Free-riding in BitTorrent Networks with the Large View Exploit**, M. Sirivianos, J. H. Park, R. Chen and Xiaowei Yang, International Workshop on Peer-to-peer Systems (IPTPS), 2007

**Non-Manipulable Aggregator Node Election Protocols for Wireless Sensor Networks**, M. Sirivianos, D. Westhoff, F. Armknecht and J. Girao, Fifth International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks and Workshops, 2007

**Loud and Clear: Human Verifiable Authentication Based On Audio**, M. Goodrich, M. Sirivianos, J. Solis, G. Tsudik and E. Uzun, International Conference on Distributed Computing Systems (ICDCS), 2006

**Dandelion: Cooperative Content Distribution with Robust Incentives**, M. Sirivianos, Xiaowei Yang and S. Jarecki, Workshop on Economics of Networked Systems (NetEcon), 2006

FUNDING

**MedDMO: Mediterranean Digital Media Observatory**, DIGITAL-2021-TRUST-01; Total project funding: 1,500K Euro. **Funding for the CUT PI: 158K Euro;** Principal Investigator, 2022-2025.

**CyberSafety IV: Cypriot Safer Internet Center - CYberSafety**, DIGITAL-2021-TRUST-01; Total project funding: 1,119K Euro. **Funding for the CUT PI: 50K Euro;** Principal Investigator, 2022-2024.

**CyberSafety III: CEF CYBERSAFETY III Telecom Safer Internet**, Total project funding: 382,453K Euro. **Funding for the CUT PI: 31,468K Euro;**, Principal Investigator, 2021-2022.

**AERAS: A CybEr range tRaining platform for medicAl organisations and systems Security**, H2020 Marie Curie RISE; Total project funding: 1435,2K Euro. **Funding for the CUT PI: 220,8K Euro;** Principal Investigator, 2020-2024.

**CONCORDIA: Cyber security cOmpeteNCe fOr Research anD InnovAtion**, H2020 CYBERSECURITY; Total project funding: 15998K Euro. **Funding for the CUT PI: 256K Euro;** Principal Investigator, 2019-2023

**SECONDO: a Security ECONomics service platform for smart security investments and cyber insurance pricing in the beyonD 2020 netwOrking era** , H2020 Marie Curie RISE; Total project funding: 1173K Euro. **Funding for the CUT PI: 289K Euro. RPF complementary funding: 12K;** Principal Investigator, 2019-2023

**INCOGNITO: IdeNtity verifiCatiOn with privacy-preservinG credeNtIals for anonymous access To Online services**, H2020 Marie Curie RISE; Total project funding: 1601K Euro. **Funding for the CUT PI: 372K Euro. RPF complementary funding: 14K;** Scientific Coordinator of the consortium, 2019-2023

**CyberSafety II: CEF CYBERSAFETY II Telecom Safer Internet**; Total project funding: 494,86K Euro. **Funding for the CUT PI: 49,94K Euro;** Principal Investigator, 2018-2020.

**ENCASE: ENhancing seCurity and privAcy in the Social wEb: a user-centered approach for the protection of minors**, H2020 Marie Curie RISE; Total project funding: 2160K Euro. **Funding for the CUT PI: 589K Euro;** Coordinator of the consortium, 2016-2020

**NOTRE: Network for sOcial compuTing ResEarch**, H2020 Twinning; Total project funding: 1000K Euro. **Funding for EECEI/CUT: 100K Euro;** 2016-2019

**ReCRED: From Real-world Identities to Privacy-Preserving and Attribute-based CRE-Dentials for Device-centric Access Control**, H2020 - Digital Security - Access Control; Total project funding: 4997K Euro. **Funding for the CUT PI: 517K Euro;** Principal Investigator and Technical Manager of the consortium, 2015-2018

PATENTS
**Method and System for Detecting Fake Accounts in Online Social Networks**, Q. Cao, M. Sirivianos and Xiaowei Yang, US Patent 20140317736, 2014

**A Multi-Hop and Multi-Path Store and Forward System, Method and Product for Bulk Transfers**, N. Laoutaris, M. Sirivianos, P. Rodriguez, and Xiaoyuan Yang, WO Patent WO/2012/034,607, 2012

BIBLIOMETRICS
**Google Scholar as of February $1^{st}$, 2023**

*Number of citations:* **4389**, *h-index:* **26**

**Semantic Scholar as of February $1^{st}$, 2023**

*Number of influential citations:* **336**

PROFESSIONAL SERVICE
**Conference and Workshop Organizer :** Program Committee co-chair of EIPP 2024; Program Committee co-chair of SocialSec 2023; Publicity co-chair for Cybersafety 2019, co-located with The Web Conference 2019; Co-organizer of the Dagstuhl Seminar on "Cybersafety in Modern Online Social Networks" 2017; TPC co-chair, HotPost 2016, co-located with MobiHoc 2016

**Program Committee Member:** ACM/USENIX IMC 2022, 2023; AsiaCCS 2023; ESORICS 2023; IEEE ICNP Area Chair 2021, 2022; ACM SIGMETRICS 2020; AAAI ICWSM 2019, 2020, 2021; ACM CONEXT 2019; Cybersafety 2019, 2020; IEEE INFOCOM 2014, 2015, 2016, 2017; WWW 2013; NetEcon 2012; Global Internet 2012, 2015

**Reviewer:**, ACM Transactions on the Web 2014, 2015; IEEE/ACM Transactions on Networking 2011, 2012, 2015; Performance Evaluation Journal, Elsevier 2008; Computer Networks Journal, Elsevier 2009, 2010, 2011; IEEE Transactions on Parallel and Distributed Systems 2011; IEEE Transactions on Mobile Computing 2011; ACM PODC 2014

HONORS AND AWARDS
**2019 Workshop on Computational Methods in CyberSafety, Online Harassment and Misinformation, co-located with the Web Conference**

Distinguished Paper "Disinformation Warfare: Understanding State-Sponsored Trolls on Twitter and Their Influence on the Web"

**2018 ACM Internet Measurement Conference (IMC)**

Distinguished Paper "On the Origins of Memes by Means of Fringe Web Communities"

**2015/2016 IEEE International Conference on Computer Communications (INFOCOM)**

Distinguished Member of the 2015/16 INFOCOM Technical Program Committee. This distinction is awarded based upon peer ratings among the TPC members.

**April 2008 UC Irvine**

1st place winner of the 2008 hiTEC product development competition at the Bren School of Computer Science, and 3rd place winner in the 2008 SYCR business plan competition at the Merage School of Business for adball.com; a web site for crowdsourcing advertising campaigns.

**June 2006 UCI ICS**

Outstanding TA award

**Sept. 2002 - June 2004 Cyprus Fulbright Commission**

Full graduate (MS) grant

**Sept. 1997 - June 2002 State Scholarship Foundation of Greece**

Scholarship for excellence in highly competitive university entrance examinations