

Dr Emiliano De Cristofaro

Associate Professor (Reader) in Security and Privacy Enhancing Technologies
Head of Information Security Research
Computer Science Dept, University College London
Gower Street, London WC1E 6BT

Home: <https://emilianodc.com>
Email: e.decristofaro@ucl.ac.uk
Twitter: @emilianoucl

[CV Last Updated: November 23, 2018]

Research Interests

- Privacy and Applied Cryptography
- Systems and Network Security
- Web and Mobile Measurements

Education

- **PhD in Networked Systems**, University of California, Irvine (Advisor: Gene Tsudik)
Fall 2007 – Summer 2011
- **BSc Honors** (5-year program) in Computer Science, *summa cum laude*, University of Salerno, Italy
Fall 2000 – Summer 2005

Positions

- **October 2013 – ongoing: University College London (UCL)**; Reader (Associate Professor) in Security and Privacy Enhancing Technologies (October 2017 – ongoing), Senior Lecturer (October 2013 – September 2017), Head of Information Security Research Group (September 2018 – ongoing);
Grants and Funding:
 - Alan Turing Institute & GCHQ, “Evaluating Privacy-Preserving Generative Models In The Wild” (PI, total funding £70,000)
 - Nokia Bell Labs Faculty Donation, “Privacy in Generative Models” (PI, total funding EUR 40,000)
 - EU H2020 MSCA-ITN, Privacy & Usability Innovative Training Network, “Privacy & Us” (PI, total funding EUR 3,376,517, UCL funding: EUR 546,575)
 - EU H2020 MSCA-RISE, Enhancing Security and Privacy in the Social Web, “ENCASE” (PI, total funding: EUR 2,160,000, UCL funding: EUR 310,500)
 - Xerox University Affairs Committee Award and Research Councils UK IMPACT Award, “Secure Collaborative Analytics” (PI, total funding: £120,000)
 - EPSRC iSense Exploratory Grant, “A technical framework for enabling and supporting data donors for medical research” (co-PI, £120,000)
 - Google Faculty Research Award, “Enabling Progress in Genomic Research via Privacy-Preserving Data Sharing” (PI, \$70,000)
 - Royal Society Netwon Fund Grant, “Usable Cryptographic Authentication” (co-PI, total funding: £30,000)
- **September 2011 – September 2013: PARC (a Xerox company)**; Member of Research Staff
 - Internal and commercial projects: secure and privacy-preserving analytics; security and privacy in healthcare and genomics; security and privacy in future Internet architectures; usable enterprise security
 - US Government projects: PI on DoE-funded National Electric Sector Cybersecurity Organization Resource program (2011–2013); co-PI on several NSF and IARPA funded projects
- **September 2007 – August 2011: University of California, Irvine**; Graduate Student Research Assistant
 - IARPA’s Automatic Privacy Protection (APP) program; co-designed and implemented the [fastest](#) protocols among the four teams participating in the program
 - Co-authored several academic publications on secure information sharing and co-designed the first protocol for privacy-preserving testing on whole human genomes
 - Teaching assistant for undergraduate and graduate security classes
- **June – September 2010: Nokia Research Center, Lausanne**; PhD Intern
 - Worked with Dr. Imad Aad and Dr. Valtteri Niemi; designed, implemented, and evaluated several protocols for security and privacy protection in smartphone applications.
 - Co-authored one US patent and one paper published in the top pervasive computing conference (PERCOM)
- **September – December 2009: INRIA Rhone Alpes, Grenoble, France**; PhD Intern
 - Worked with Dr. Claude Castelluccia, discovered and demonstrated an inference attack to reconstruct search history of Google users (published at PETS)

- Designed and implemented a system for protecting long-term privacy of published data (published at ICNP)
- **June – September 2008: NEC Europe Research Lab, Heidelberg, Germany; PhD Intern**
 - Worked with Dr. Westhoff, designed and implemented a framework for resilient data aggregation in sensor networks
 - Co-authored one paper published in the top wireless security conference (WiSec)
- **January 2006 – August 2007: University of Salerno, Italy; Research Assistant**
 - Worked with Prof. C. Blundo, Prof. G. Persiano, and Prof. V. Auletta, co-authored several academic papers
 - Research assistant on EU-funded Ecrypt and Aeolus projects

Awards

- **IMC 2018 Distinguished Paper Award.** For the paper “On the Origins of Memes by Means of Fringe Web Communities” with Savvas Zannettou, Tristan Caulfield, Jeremy Blackburn, Michael Sirivianos, Gianluca Stringhini, and Guillermo Suarez-Tangil, October 2018.
- **NDSS 2018 Distinguished Paper Award.** For the paper “Knock Knock, Who’s There? Membership Inference on Aggregate Location Data” with Apostolos Pyrgelis and Carmela Troncoso, February 2018.
- **5th Data Protection by Design Award.** Award issued by the Catalan Data Protection authority and the Parliament of Catalonia, for work with Luca Melis and George Danezis, June 2017
- **PARC Excellence Award.** Outstanding research performance in 2012, only 1 awarded per group
- **UC Irvine’s Dissertation Fellowship,** Fall 2010 (\$10,000), only 1 awarded per department
- **UC Irvine’s Dean’s Fellowship.** 4-year PhD financial support (2007–2011), only 5 awarded per department
- **Summa Cum Laude Honors,** University of Salerno, Italy, top 1% in graduating class

Publications

[Tier-1 venues marked with *]

- Luca Melis, Congzheng Song, Emiliano De Cristofaro, and Vitaly Shmatikov
Exploiting Unintended Feature Leakage in Collaborative Learning
40th IEEE Symposium on Security & Privacy (S&P 2019)*
- Savvas Zannettou, Tristan Caulfield, Jeremy Blackburn, Emiliano De Cristofaro, Michael Sirivianos, Gianluca Stringhini, and Guillermo Suarez-Tangil
On the Origins of Memes by Means of Fringe Web Communities
18th ACM Internet Measurement Conference (IMC 2018)*
Distinguished Paper award
- Luca Melis, Apostolos Pyrgelis, Emiliano De Cristofaro
On Collaborative Predictive Blacklisting
ACM SIGCOMM’s Computer Communication Review (CCR)
- Juan Echeverría, Emiliano De Cristofaro, Nicolas Kourtellis, Ilias Leontiadis, Gianluca Stringhini, Shi Zhou
LOBO — Evaluation of Generalization Deficiencies in Twitter Bot Classifiers
2018 Annual Computer Security Applications Conference (ACSAC 2018)
- Jamie Hayes, Luca Melis, George Danezis, Emiliano De Cristofaro
LOGAN: Membership Inference Attacks Against Generative Models
Proceedings on Privacy Enhancing Technologies, Vol. 2019, Issue 1 (PoPETS 2019)
- Alexandros Mittos, Bradley Malin, and Emiliano De Cristofaro
Systematizing Genome Privacy Research: A Privacy-Enhancing Technologies Perspective
Proceedings on Privacy Enhancing Technologies, Vol. 2019, Issue 1 (PoPETS 2019)
- Gergely Acs, Luca Melis, Claude Castelluccia, Emiliano De Cristofaro (Extended Version)
Differentially Private Mixture of Generative Neural Networks
IEEE Transactions on Knowledge and Data Engineering (TKDE 2018)
- Apostolos Pyrgelis, Carmela Troncoso, Emiliano De Cristofaro
Knock Knock, Who’s There? Membership Inference on Aggregate Location Data
25th Network and Distributed System Security Symposium (NDSS 2018)*
Distinguished Paper award
- Neema Kotonya, Paolo De Cristofaro, Emiliano De Cristofaro
Of Wines and Reviews: Measuring and Modeling the Vivino Wine Social Network
IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2018)

- Lucky Onwuzurike, Mario Almeida, Enrico Mariconti, Jeremy Blackburn, Gianluca Stringhini, Emiliano De Cristofaro
A Family of Droids–Android Malware Detection via Behavioral Modeling: Static vs Dynamic Analysis
16th Annual Conference on Privacy, Security and Trust 16th Annual Conference on Privacy, Security and Trust (PST 2018)
- Andrea Cerulli, Emiliano De Cristofaro, Claudio Soriente
Nothing Refreshes Like a RePSI: Reactive Private Set Intersection
To appear at the 16th International Conference on Applied Cryptography and Network Security (ACNS 2018)
- Savvas Zannettou, Jeremy Blackburn, Emiliano De Cristofaro, Michael Sirivianos, Gianluca Stringhini
Understanding Web Archiving Services and Their (Mis)Use on Social Media
To appear at 12th International AAAI Conference on Web and Social Media (ICWSM 2018)*
- Bristena Oprisanu and Emiliano De Cristofaro
AnoniMME: Bringing Anonymity to the Matchmaker Exchange Platform for Rare Disease Gene Discovery
To appear in the 26th ISCB Conference on Intelligent Systems for Molecular Biology (ISMB 2018)*
- G. Acs, L. Melis, C. Castelluccia, E. De Cristofaro
Differentially Private Mixture of Generative Neural Networks
17th IEEE International Conference on Data Mining series (ICDM 2017)*
- S. Zannettou, T. Caulfield, E. De Cristofaro, N. Kourtellis, I. Leontiadis, M. Sirivianos, G. Stringhini, J. Blackburn
The Web Centipede: Understanding How Web Communities Influence Each Other Through the Lens of Mainstream and Alternative News Sources
17th ACM Internet Measurement Conference (IMC 2017)*
- Apostolos Pyrgelis, Carmela Troncoso, Emiliano De Cristofaro
What Does The Crowd Say About You? Evaluating Aggregation-based Location Privacy
17th Privacy Enhancing Technologies Symposium (PETS 2017)
- M. Ikram, L. Onwuzurike, S. Farooqi, E. De Cristofaro, A. Friedman, G. Jourjon, D. Kaafar, M.Z. Shafiq
Measuring, Characterizing, and Detecting Facebook Like Farms
To appear in ACM Transactions on Privacy and Security (ACM TOPS 2017)
- D. Chatzakou, N. Kourtellis, J. Blackburn, E. De Cristofaro, G. Stringhini, A. Vakali
Hate is not binary: Studying abusive behavior of #GamerGate on Twitter
28th ACM Conference on Hypertext and Social Media (ACM HyperText 2017)
- D. Chatzakou, N. Kourtellis, J. Blackburn, E. De Cristofaro, G. Stringhini, A. Vakali
Mean Birds: Detecting Aggression and Bullying on Twitter
9th International ACM Web Science Conference (ACM WebSci 2017)
- G. Hine, J. Onaolapo, E. De Cristofaro, N. Kourtellis, I. Leontiadis, R. Samaras, G. Stringhini, J. Blackburn
Kek, Cucks, and God Emperor Trump: A Measurement Study of 4chan's Politically Incorrect Forum and Its Effects on the Web
11th International AAAI Conference on Web and Social Media (ICWSM 2017)*
Best Paper Runner-Up
- S. Farooqi, M. Ikram, E. De Cristofaro, A. Friedman, G. Jourjon, M.A. Kaafar, M.Z. Shafiq
Characterizing Key Stakeholders in an Online Black-Hat Marketplace
12th IEEE/APWG Symposium on Electronic Crime Research (eCrime 2017)
- D. Chatzakou, N. Kourtellis, J. Blackburn, E. De Cristofaro, G. Stringhini, A. Vakali
Measuring #GamerGate: A Tale of Hate, Sexism, and Bullying
2nd WWW Workshop on Computational Methods for CyberSafety (CyberSafety 2017)
- S. Sajadmanesh, S. Jafarzadeh, S.A. Ossia, H.R. Rabiee, H. Haddadi, Y. Mejova, M. Musolesi, E. De Cristofaro, G. Stringhini
Kissing Cuisines: Exploring Worldwide Culinary Habits on the Web
26th International World Wide Web Conference Web Science Track (WWW 2017)
- E. Mariconti, L. Onwuzurike, P. Andriotis, E. De Cristofaro, G. Ross, G. Stringhini
MaMaDroid: Detecting Android Malware by Building Markov Chains of Behavioral Models
24th Network and Distributed System Security Symposium (NDSS 2017)*
- H. Haddadi, R. Nithyanand, S. Khattak, M. Javed, N. Vallina-Rodriguez, M. Falahrastegar, J.E. Powles, E. De Cristofaro, S.J. Murdoch
The Adblocking Tug-of-War
USENIX ;login: Magazine, Winter 2016, Vol. 41, No. 4 (;login: 2016)

- Apostolos Pyrgelis, E. De Cristofaro, G. Ross
Privacy-Friendly Mobility Analytics using Aggregate Location Data
 24th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACM SIGSPATIAL 2016)
- E. De Cristofaro, K. Liang, Y. Zhang
Privacy-Preserving Genetic Relatedness Test
 To appear in 3rd International Workshop on Genome Privacy and Security (GenoPri 2016)
- R. Nithyanand, S. Khattak, M. Javed, N. Vallina-Rodriguez, M. Falahraestegar, J. E. Powles, E. De Cristofaro, H. Haddadi, S.J. Murdoch
Ad-Blocking and Counter Blocking: A Slice of the Arms Races
 6th USENIX Workshop on Free and Open Communications on the Internet (FOCI 2016)
- H. Asghar, L. Melis, C. Soldani, E. De Cristofaro, M.A. Kaafar, L. Mathy
SplitBox: Toward Efficient Private Network Function Virtualization
 3rd ACM SIGCOMM Workshop on Hot Topics in Middleboxes and Network Function Virtualization (HotMiddleBox 2016)
- L. Melis, G. Danezis, E. De Cristofaro
Efficient Private Statistics with Succinct Sketches
 23rd Network and Distributed System Security Symposium (NDSS 2016)*
- L. Melis, H. Asghar, E. De Cristofaro, D. Kaafar
Private Processing of Outsourced Network Functions: Feasibility and Constructions
 1st ACM Workshop on Security in Software Defined Networks & Network Function Virtualization (SDNNFVSEC 2016)
- L. Onwuzurike and E. De Cristofaro
Experimental Analysis of Popular Smartphone Apps Offering Anonymity, Ephemerality, and End-to-End Encryption
 1st NDSS Workshop on Understanding and Enhancing Online Privacy (UEOP 2016)
- K. Krol, M.S. Rahman, S. Parkin, E. De Cristofaro, E. Vasserman
An Exploratory Study of User Perceptions of Payment Methods in the UK and the US
 10th NDSS Workshop on Usable Security (USEC 2016)
- J. Freudiger, E. De Cristofaro, A. Brito
Controlled Data Sharing for Collaborative Predictive Blacklisting
 12th Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA 2015)
- M. Nagy, T. Bui, E. De Cristofaro, N. Asokan, J. Ott, A.R. Sadeghi
How Far Removed Are You? Scalable Privacy-Preserving Estimation of Social Path Length with Social PaL
 8th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec 2015)
- L. Onwuzurike and E. De Cristofaro
Danger is my middle name: Experimenting with SSL Vulnerabilities in Android Apps
 8th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec 2015)
- E. Ayday, E. De Cristofaro, J.P. Hubaux, G. Tsudik
Whole Genome Sequencing: Revolutionary Medicine or Privacy Nightmare
 IEEE Computer Magazine, Vol. 48, No. 2, February 2015
 Presented as a poster at Usenix Security 2013 and available on ArXiv under the title “The Chills and Thrills of Whole Genome Sequencing”
- K. Krol, E. Philippou, E. De Cristofaro, M.A. Sasse
“They brought in the horrible key ring thing” – Analysing the Usability of Two-Factor Authentication in UK Online Banking
 9th NDSS Workshop on Usable Security (USEC 2015)
- A. Chaabane, T. Chen, M. Cunche, E. De Cristofaro, A. Friedman, M.A. Kaafar
Censorship in the Wild: Analyzing Web Filtering in Syria
 14th ACM Internet Measurement Conference (IMC 2014)*
Best Paper runner-up
- E. De Cristofaro, A. Friedman, G. Jourjon, M.A. Kaafar, M.Z. Shafiq
Paying for Likes? Understanding Facebook Like Fraud Using Honeypots
 14th ACM Internet Measurement Conference (IMC 2014)*
- G. Danezis and E. De Cristofaro
Fast and Private Genomic Testing for Disease Susceptibility
 12th ACM CCS Workshop on Privacy in the Electronic Society (WPES 2014)

- I. Bilogrevic, J. Freudiger, E. De Cristofaro, E. Uzun
What's the Gist? Privacy-Preserving Aggregation of User Profiles
 19th European Symposium on Research in Computer Security (ESORICS 2014)
- F. Beato, E. De Cristofaro, K.B. Rasmussen
Undetectable Communication: The Online Social Networks Case
 12th IEEE Annual Conference on Privacy, Security and Trust (PST 2014)
- C. Blundo, E. De Cristofaro, P. Gasti
EsPRESSo: Efficient Privacy-Preserving Evaluation of Sample Set Similarity
 Journal of Computer Security, Vol. 22, No. 3, May 2014 (Submitted Oct 2012, Accepted Sep 2013)
 Extended Abstract appeared in 7h ESORICS Workshop on Data Privacy Management (DPM 2012).
- E. De Cristofaro
Genomic Privacy and the Rise of a New Research Community
 IEEE Magazine on Security and Privacy, March/April 2014 Issue, Vol. 13, No. 1, 2014
- E. De Cristofaro
An Exploratory Ethnographic Study of Issues and Concerns with Whole Genome Sequencing
 8th NDSS Workshop on Usable Security (USEC 2014)
- E. De Cristofaro, H. Du, J. Freudiger, G. Norcie
Two-Factor or not Two-Factor? A Comparative Usability Study of Two-Factor Authentication
 8th NDSS Workshop on Usable Security (USEC 2014)
- M. Nagy, E. De Cristofaro, A. Dmitrienko, N. Asokan, A.R. Sadeghi
Do I Know You? - Efficient and Privacy-Preserving Common Friend-Finder Protocols and Applications
 29th Annual Computer Security Applications Conference (ACSAC 2013)
- E. De Cristofaro, C. Soriente
Extended Capabilities for a Privacy-Enhanced Participatory Sensing Infrastructure (PEPSI)
 IEEE Transactions on Information Forensics & Security. Vol.8, No. 12, 2013
- E. De Cristofaro, S. Faber, G. Tsudik
Secure Genomic Testing with Size- and Position-Hiding Private Substring Matching
 12th ACM CCS Workshop on Privacy in the Electronic Society (WPES 2013)
- A. Chaabane, E. De Cristofaro, M.A. Kaafar, E. Uzun
Privacy in Content-Oriented Networking: Threats and Countermeasures
 ACM SIGCOMM Computer Communication Review (CCR), 2013
 Invited at ACM SIGCOMM 2013 as one of the two "Best CCR Papers."
- G. Norcie, E. De Cristofaro, V. Bellotti
Bootstrapping Trust in Online Dating: Social Verification of Online Dating Profiles
 Financial Cryptography and Data Security (FC) Workshop on Usable Security (USEC 2013)
- A. Cardenas, R. Chow, E. De Cristofaro
Data Handling in the Smart Grid: Do We Know Enough?
 IFIP International Conference on Critical Infrastructure Protection (CIP 2013)
- E. De Cristofaro, C. Soriente
Participatory Privacy: Enabling Privacy in Participatory Sensing
 IEEE Network. Vol. 27, No. 1. January 2013 (Submitted March 2011, Accepted January 2012.)
- E. De Cristofaro, M. Manulis, B. Poettering
Private Discovery of Common Social Contacts
 International Journal of Information Security (IJIS). Vol. 12, No. 1, 2013.
 Extended abstract appeared in ACNS 2011
- E. De Cristofaro, C. Soriente, G. Tsudik, A. Williams
Tweeting with Hummingbird: Privacy in Large-Scale Micro-Blogging OSNs
 IEEE Data Engineering Bulletin. Vol. 35, Number 4, December 2012
- E. De Cristofaro, P. Gasti, G. Tsudik
Fast and Private Computation of Set Intersection Cardinality
 11th International Conference on Cryptology and Network Security (CANS 2012)

- E. De Cristofaro, S. Faber, P. Gasti, Gene Tsudik
GenoDroid: Are Privacy-Preserving Genomic Tests Ready for Prime Times?
 International Workshop on Privacy in Electronic Society (WPES 2012)
- C. Blundo, E. De Cristofaro, P. Gasti
EsPRESSo: Efficient Privacy-Preserving Evaluation of Sample Set Similarity
 International Workshop on Data Privacy Management (DPM 2012).
- E. De Cristofaro and R. Di Pietro
Adversaries and Countermeasures in Privacy-Enhanced Urban Sensing Systems
 IEEE Systems Journal, Special Issue on Security and Privacy of Complex Systems, 2012.
- E. De Cristofaro, C. Soriente, G. Tsudik, A. Williams
Hummingbird: Privacy at the time of Twitter
 IEEE Symposium on Security and Privacy (S&P 2012)*
- E. De Cristofaro and G. Tsudik
Experimenting with Fast Private Set Intersection
 International Conference on Trust and Trustworthy Computing (TRUST 2012)
- E. De Cristofaro, R. Di Pietro
Preserving Query Privacy in Urban Sensing Systems
 International Conference on Distributed Computing and Networking (ICDCN 2012)
- M. Almishari, E. De Cristofaro, K. El Defrawy, G. Tsudik
Harvesting SSL Certificate Data to Identify Web-Fraud
 International Journal of Network Security. Vol. 14, No. 6, 2012
- E. De Cristofaro
Sharing Sensitive Information with Privacy
 University of California, PhD Dissertation, 2011
- C. Castelluccia, E. De Cristofaro, A. Francillon, M.A. Kaafar
EphPub: Toward Robust Ephemeral Publishing
 IEEE Conference on Network Protocols (ICNP 2011)
- P. Baldi, R. Baronio, E. De Cristofaro, P. Gasti, G. Tsudik
Countering GATTACA: Efficient and Secure Testing of Fully Sequenced Human Genomes
 ACM Conference on Computer and Communications Security (CCS 2011)*
- E. De Cristofaro, Y. Lu, G. Tsudik
Efficient Techniques for Privacy-Preserving Sharing of Sensitive Information
 International Conference on Trust and Trustworthy Computing (TRUST 2011)
- E. De Cristofaro, C. Soriente
PEPSI: Privacy Enhancing Participatory Sensing Infrastructure
 ACM Conference on Wireless Security (WiSec 2011)
- E. De Cristofaro, A. Durussel, I. Aad
Reclaiming Privacy for Smartphone Applications
 IEEE International Conference on Pervasive Computing and Communications (PerCom 2011)
- G. Ateniese, E. De Cristofaro, G. Tsudik
(If) Size Matters: Size-Hiding Private Set Intersection
 IACR International Conference on Practice and Theory of Public Key Cryptography (PKC 2011)
- E. De Cristofaro, J. Kim, and G. Tsudik
Linear-Complexity Private Set Intersection Protocols Secure in Malicious Model
 IACR Conference on the Theory and Application of Cryptology and Information Security (Asiacrypt 2010)*
- C. Castelluccia, E. De Cristofaro, and D. Perito
Private Information Disclosure from Web Searches
 Privacy Enhancing Technologies Symposium (PETS 2010)
 Also appeared as a poster at IEEE Symposium on Security and Privacy (S&P 2010)
- E. De Cristofaro and J. Kim
Some like it private: Sharing Confidential Information based on Oblivious Authorization
 IEEE Security and Privacy, July-August, 2010

- E. De Cristofaro and G. Tsudik
Practical Private Set Intersection Protocols with Linear Complexity
Financial Cryptography and Data Security (FC 2010)
- V. Auletta, C. Blundo, A. De Caro, E. De Cristofaro, G. Persiano, and I. Visconti
Increasing Privacy Threats in the Cyberspace: the Case of Italian e-Passports
Workshop on Lightweight Cryptography for Resource-Constrained Devices (WLC 2010)
- E. De Cristofaro, S. Jarecki, J. Kim, and G. Tsudik
Privacy-preserving Policy-based Information Transfer
Privacy Enhancing Technologies Symposium (PETS 2009)
- E. De Cristofaro, X. Ding, and G. Tsudik
Privacy-preserving Querying in Sensor Networks
IEEE International Conference on Computer Communications and Networks (ICCCN 2009)
- E. De Cristofaro, J. M. Bohli, and D. Westhoff
FAIR: Fuzzy-based Aggregation providing In-network Resilience for real-time WSNs
ACM Conference on Wireless Network Security (WiSec 2009)
- C. Blundo, E. De Cristofaro, A. Del Sorbo, C. Galdi, and G. Persiano
A Distributed Implementation of the Certified Information Access Service
European Symposium on Research in Computer Security (ESORICS 2008)
- C. Blundo, E. De Cristofaro, C. Galdi, and G. Persiano
Validating Orchestration of Web Services with BPEL and Aggregate Signatures
IEEE European Conference on Web Services (ECOWS 2008)
- E. De Cristofaro
A Secure and Privacy-Protecting Aggregation Scheme for Sensor Networks
IEEE International Symposium on a World of Wireless Mobile and Multimedia Networks (WoWMoM 2007)
- V. Auletta, C. Blundo, E. De Cristofaro, S. Cimoto, and G. Raimato
Authenticated Web Services: A WS-Security Based Implementation
IFIP International Conference on New Technologies, Mobility, and Security (NTMS 2007)
- C. Blundo and E. De Cristofaro
A Bluetooth-based JXME infrastructure
International Symposium on Distributed Objects, Middleware, and Applications (DOA 2007)
- V. Auletta, C. Blundo, and E. De Cristofaro
A J2ME transparent middleware to support HTTP connections over Bluetooth
International Conference on Systems and Network Communications (ICSNC 2007)
- V. Auletta, C. Blundo, E. De Cristofaro, and G. Raimato
A lightweight framework for Web Services invocation over Bluetooth
IEEE International Conference on Web Services (ICWS 2006)
- V. Auletta, C. Blundo, E. De Cristofaro, and G. Raimato
Performance Evaluation for Web Services invocation over Bluetooth
ACM Conference on Modeling and Simulation of Wireless and Mobile Systems (MSWiM 2006)

Patents

- Method and Apparatus for Preserving Privacy for Appointment Scheduling.
US Patent 8,667,062. Co-inventors: Imad Aad, Valtteri Niemi, Anthony Durussel, Igor Bilogrevic, Jean-Pierre Hubaux
- Computer-Implemented System And Method For Verifying Online Dating Profiles.
US Patent Application 20140156750. Co-inventors: Victoria Bellotti and Gregory Norcie
- Method and apparatus for performing distributed privacy-preserving computations on user locations.
US Patent Application 20140372753. Co-inventors: Joan Melia Segui, Rui Zhang, Oliver Brdiczka, Ersin Uzun
- Method and Apparatus for Privacy and Trust Enhancing Sharing of Data for Collaborative Analytics.
US Patent Application 20150161398. Co-inventors: Julien Freudiger, Ersin Uzun, Alejandro Brito, Marshall Bern
- Methods for Selection of Collaborators for Online Threat Mitigation.
US Patent Application 20150286824. Co-inventors: Julien Freudiger, Ersin Uzun, Alejandro Brito, Marshall Bern

- **Methods for Centralized Privacy-Preserving Collaborative Threat Mitigation.**
US Patent Application 20150286825. Co-inventors: Julien Freudiger, Ersin Uzun, Alejandro Brito, Marshall Bern
- **Portable Proxy For Security Management And Privacy Protection And Method Of Use.**
US Patent Application 20150288719. Co-inventors: Julien Freudiger, Ersin Uzun, Golam Sarwar
- **Privacy-Sensitive Ranking of User Data.**
US Patent Application 20150371059. Co-inventors: Igor Bilogrevic, Julien Freudiger, Ersin Uzun

Service

- **PC Co-Chair:** GenoPri 2018, GenoPri 2015, PETS 2014, PETS 2013, HotPETs 2012
- **Track Chair:** ACM CCS 2018 (Privacy), WWW 2018 (Security & Privacy)
- **PC Member:** NDSS 2019, ICWSM 2018, PETS 2018, ACM HT 2018, ICDCS 2018, IEEE EuroSP 2018, ACM CCS 2017, WWW 2017, NDSS 2017, PETS 2017, AsiaCCS 2017, PMPML16, GenoPri 2016, EuroUSEC 2016, DTL 2016, WiSec 2016, IEEE S&P 2016, NDSS 2016, PKC 2016, PETS 2016, WPES 2015, IEEE S&P 2015, USEC 2015, Financial Crypto 2015, WPES 2014, WiSec 2014, GenoPri 2014, WWW 2014, ICCCN 2014, SESOC 2014, CANS 2013, WISEC 2013, Financial Crypto 2013, SESOC 2013, CANS 2012, WPES 2012, CCSW 2012, PETS 2012, WISEC 2012, DPM 2012, ICCCN 2012, CANS 2011, ISC 2010
- **Journals:** Associated Editor for the Journal of Cybersecurity (Cryptography and Associated Topics). Reviewer: Journal of Computer Security, ACM Transactions on Information and System Security, IEEE Transactions on Parallel and Distributed Systems, IEEE Transactions on Knowledge and Data Engineering, IEEE Transactions on Mobile Computing, IEEE S&P Magazine, Journal of Systems and Software, Ad Hoc Networks, Computer Communications Journal, VLDB Journal, Data Mining and Knowledge Discovery
- **Funding:** NSERC (Canada), NSF SaTC (USA), PRIN (Italy), FWO (Belgium), EPSRC (UK)

Keynotes

- *Microsoft Faculty Summit.* The Genomics Revolution: The Good, The Bad, and The Ugly (A Privacy Researcher's Perspective). Annual Microsoft Faculty Summit, Redmond, WA, July 2016
- *3TU Cyber Security Workshop Keynote.* Privacy-preserving Information Sharing: Tools and Applications, The Hague, Netherlands, November 2015
- *PrivaGen Keynote Speech.* The Genomics Revolution: The Good, The Bad, and The Ugly (A Privacy Researcher's Perspective). Tokyo, September 2015
- *ETAPS Keynote Speech.* The Genomics Revolution: Innovation Dream or Privacy Nightmare? London, April 2015
- *EPFL Summer Research Institute.* Countering GATTACA: Privacy-Preserving Genomic Testing. Lausanne, June 2013

Invited Talks, Lectures, and Panels

- *ECRYPT-NET School on Integrating Advanced Cryptography with Applications.* Kos, Greece, September 2018
- *Summer School on Real-World Crypto & Privacy.* Sibenik, Croatia, June 2018
- *Workshop on Secure, Privacy-Conscious Data Sharing.* Cryptographic Protocols for Privacy-Preserving Genomic Testing. EPFL, Lausanne, Switzerland, February 2018
- *Cambridge Computer Lab Departmental Seminar.* Private Statistics and Their Applications to Distributed Learning: Tools and Challenges, Cambridge, UK, February 2018
- *CISPA Seminar.* The Genomics Revolution: The Good, The Bad, and The Ugly (The Privacy Edition). Saarland University, Saarbruecken, Germany, September 2017
- *Corpore Sano Workshop on Personal Data Systems.* Building and Measuring Privacy-Preserving Analytics. Sommarøy, Norway, August 2017
- *Great Ormond Street Hospital.* The Genomics Revolution: The Good, The Bad, and The Ugly – A Privacy Researcher's Perspective. London, UK, June 2017
- *Royal Statistical Society.* Meeting on Privacy and Security in Statistics – From Private Statistics to Privacy in Mobility Analytics. London, UK, May 2017
- *ETH Zurich.* From Private Statistics to Privacy in Mobility Analytics. Switzerland, April 2017
- *Trinity College Dublin.* MaMaDroid: Detecting Android Malware by Building Markov Chains of Behavioral Models. Dublin, Ireland, January 2017
- *FOSAD Summer School (6 hours).* Privacy-preserving Information Sharing: Tools and Applications. 16th International School on Foundations of Security Analysis and Design (FOSAD). Bertinoro, Italy, August/September 2016.
- *Microsoft Research.* Understanding, Characterizing, and Detecting Facebook Like Farms. Redmond, WA, July 2016
- *Sharif University.* Understanding, Characterizing, and Detecting Facebook Like Farms. Tehran, Iran, May 2016
- *University of Cambridge.* Understanding, Characterizing, and Detecting Facebook Like Farms. Cambridge, March 2016

- *UEOP Keynote Speech*. The Genomics Revolution: The Good, The Bad, and The Ugly (A Privacy Researcher's Perspective). NDSS Workshop on Understanding and Enhancing Online Privacy (UEOP 2016), San Diego, February 2016
- *Warwick University*. The Genomics Revolution: The Good, The Bad, and The Ugly (A Privacy Researcher's Perspective). February 2016
- *Dagstuhl Seminar: Genomic Privacy II*. Invited Speaker and Panelist. Dagstuhl, Germany, October 2015
- *Microsoft Research Cambridge*. Controlled Data Sharing for Collaborative Predictive Blacklisting. Cambridge, UK, August 2015
- *KU Leuven*. What's wrong with the Interwebs? Measuring Web Censorship and Fraud in Online Social Networks: Two Case Studies. Leuven, Belgium, May 2015
- *CPDP 2015*. Invited panelist: Privacy of the Genome: Challenges beyond traditional medical records. Computers, Privacy and Data Protection Conference (CPDP). Brussels, Belgium, January 2015
- *Oxford University*. Whole Genome Sequencing: Innovation Dream or Privacy Nightmare? Oxford, July 2014
- *CITI Lab*. Whole Genome Sequencing: Innovation Dream or Privacy Nightmare? Lyon, France, May 2014
- *Banbury Center*. Invited Panelist at the "Protecting Genomic Data Privacy while Accelerating Scientific Progress" meeting, Cold Spring Harbor Laboratory. Long Island, NY, December 2013
- *2nd Translational Medicine Meeting Keynote Speech*. Biomedical Neuroscience Institute, Faculty of Medicine, University of Chile, Santiago, Chile, November 2013
- *Dagstuhl Seminar: Genomic Privacy*. Invited Speaker and Panelist. Dagstuhl, Germany, October 2013
- *Purdue University*. Whole Genome Sequencing: Innovation Dream or Privacy Nightmare? March 2013
- *EPFL*. Efficient and Secure Testing on Fully Sequenced Human Genomes, Lausanne, December 2012
- *University of Salerno*. Sharing Sensitive Information with Privacy: Theory, Practice, and Applications, Salerno, Italy, December 2012
- *Northeastern University*. Colloquium Talk, Sharing Sensitive Information with Privacy: From Theory to Practice (And Applications). Boston, November 2012
- *Dagstuhl Seminar: Privacy-Oriented Cryptography*. Invited Speaker and Panelist. Dagstuhl, Germany, September 2012
- *Berkeley Center for Law & Technology's Conference on Web Privacy*. Invited Panelist, May 2012
- *UC Berkeley*. Hummingbird: #Privacy at the Time of @Twitter, March 2012
- *University of Aarhus*. Sharing Sensitive Information with Privacy, Aarhus, Denmark, June 2011
- *Microsoft Research Redmond*. Sharing Sensitive Information with Privacy, Redmond, UK, March 2011
- *Singapore Management University*. Sharing Sensitive Information with Privacy. Singapore, December 2010
- *UCLA*. Linear-Complexity Private Set Intersection Protocols Secure in Malicious Model. November 2010
- *Nokia Research Center*. Sharing Sensitive Information with Privacy. Palo Alto, CA, November 2010
- *INRIA Rhone Alpes*. Reclaiming Privacy for Smartphone Applications. Grenoble, France, October 2010
- *ETH*. Sharing Sensitive Information with Privacy. Zurich, Switzerland, September 2010
- *EPFL*. Protecting Privacy in Wireless Sensor Networks. Lausanne, October 2010, December 2009
- *KU Leuven*. Privacy-preserving Policy-based Information Transfer. Leuven, Belgium, October 2009

Mentoring

- **Graduated PhD Students** (Main PhD Advisor): Luca Melis (2018, now Research Scientist at Amazon New York), Lucky Onwuzurike (2018); Apostolos Pyrgelis (2018, now Post-Doctoral Researcher at EPFL);
- **Current Supervision at UCL**: Alexandros Mittos, Bristena Oprisanu, Matthew Wixey (PhD Advisor); Vincent Primault (Post-doc Advisor); Andrea Cerulli, Vasilios Mavroudis, Jeremiah Onaolapo, Raphael Toledo, Jonathan Spring, Andreas Gutmann (Second Supervisor)
- **PhD Committee**: Marc Roeschlin (Oxford, 2018), Ingolf Becker (UCL, 2018), Manu Drijvers (IBM/ETH), Jean-Louis Raisaro (EPFL, 2018), Sharad Kumar (University of Cambridge, 2016), Iacovos Kirlappos (UCL, 2016), Iraklis Leontiadis (EURECOM, 2015), Filipe Beato (KU Leuven, 2015), Lukasz Olejnik (INRIA, 2015), Gines Dolera Tormo (University of Murcia, 2014), Abdelberi Chaabane (INRIA, 2014), Miguel Malheiros (UCL, 2013)
- **Mentoring at PARC**: Gregory Norcie (PhD internship, Summers 2012 and 2013), Igor Bilogrevic (PhD internship, Summer 2013), Abdelberi Chaabane (PhD internship, Summer 2012), Joan Melia-Segui (Visiting Researcher, Summer 2012)

Teaching

- **Teaching at UCL**: Introduction to Cryptography (Fall 2014, Fall 2015, Fall 2016, Fall 2017), Computer Security II (Winter 2014, Winter 2015, Winter 2016, Winter 2017, Winter 2018, Winter 2019), Privacy Enhancing Technologies (Winter 2019), Director of UCL's MSc in Information Security (2015–2018)
- **Teaching Assistant**: Network Security (UC Irvine, 2011), Crypto Protocols (University of Salerno, Italy, 2006)
- **Coordinator**: Academic Centre of Excellence in Cyber Security Research (ACE-CSR) Distinguished Seminars Series (UCL, 2014–2015), PARC Privacy Lunch (2012–2013), PARC Security Reading Group (2011–2012)