
Panagiotis Andriotis, PhD

*Senior Lecturer
in Computer Forensics and Security*

Affiliation: Cyber Security Research Unit,
University of the West of England.
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and Creative Technologies, University of the
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Education

- 01/2016 **PhD in Computer Science**, *University of Bristol, U.K.*
Dissertation title: “Towards Task Automation for Mobile Device Forensics”
- 11/2011 **MSc (Distinction) in Computer Science**, *University of Bristol, U.K.*
Thesis Title: “Steganography Detection with Benford”
- 06/2006 **BSc in Mathematics**, *University of Athens, Greece.*

Professional Memberships

IEEE, IEEE Computer Society, IEEE Young Professionals Group, Internet Society, Member

Academic Experience

- 09/2017 – Present **Module Leader**, UFCFP4-30-1 “Computer crime and digital evidence”, (UG). *University of the West of England, U.K.*
- 09/2016 – 03/2017 **Instructor**, UFCFB3-30-1 “Web programming”, UFCFC5-15-3 “Forensic computing practice”, UFCFJ6-30-2 “Security and forensic tools”, UFCFP4-30-1 “Computer crime and digital evidence”, (UG). *University of the West of England, U.K.*
Tutor, Espresso Programming, (UG, PG). *University of the West of England, U.K.*
Tutor, UFCFE6-15-3 “Professional experience”, (UG). *University of the West of England, U.K.*
- 10/2012 – 01/2015 **Teaching Associate**, COMSM1500 “Systems Security”, (UG, PG), *University of Bristol, U.K.*
Teaching Associate, COMSM1201 – COMSM1211 “Programming in C”, (PG, PG Advanced Courses), *University of Bristol, U.K.*
- 09/2013 – 12/2013 **Teaching Associate**, COMS10002 “Programming and Algorithms I”, (UG), *University of Bristol, U.K.*
- 01/2013 – 04/2013 **Teaching Associate**, COMS20700 “Databases”, (UG and PG), *University of Bristol, U.K.*

Funding - Awards – Scholarships – Internships

- 08/2017 – 08/2018 **University of the West of England**, *Vice-Chancellor’s Early Career Researcher Development Awards*, 2017/18, Funding: £12,640.
- 03/2017 – 08/2017 **Japan Society for the Promotion of Science-日本学術振興会**, *Short Term Post-doctoral Fellowship for EU Researchers*, Funding: ¥2,45M (approx. £19K).
- 08/2015 **University of Bristol, Alumni Foundation**, *Conference Travel Grant*, HCI International 2015, Los Angeles, U.S.A.
- 02/2015 – 04/2015 **National Institute of Informatics**, *NII International Internship Program 2014 – 2015*, LDEAR Laboratory of Data Engineering and Archiving, Tokyo, Japan.
- 08/2014 – 09/2014 **Chinese University of Hong Kong**, *Global Scholarship Programme for Research Excellence 2014-15*, WISC Web Intelligence and Social Computing Lab, Hong Kong, China.
- 05/2014 **2014 HoneyNet Project Workshop**, *Student Scholarship*, Warsaw, Poland.
- 01/2014 **Systems Centre**, University of Bristol, *Best PhD Poster Award*, 1st Inaugural PhD in Systems Research Conference, Bristol, U.K.
- 07/2013 – 09/2013 **National Institute of Informatics**, *NII International Internship Program 2013 – 2014*, LDEAR Laboratory of Data Engineering and Archiving, Tokyo, Japan.
- 06/2013 **Systems Centre**, University of Bristol, *Best PhD Poster Award*, 4th Annual IDC in Systems Research Conference, Bristol, U.K.

Academic Activities and Service

- Currently **Member**, IFIP WG 11.9, (Working Group on Digital Forensics).
Member, IEEE, Cybersecurity Community.
- 07/2017 **Board Member**, 5th International Conference on Human Aspects of Information Security, Privacy and Trust, HCI International 2017, July 2017, Vancouver, Canada.
- 07/2016 **Board Member**, 4th International Conference on Human Aspects of Information Security, Privacy and Trust, HCI International 2016, July 2016, Toronto, Canada.
- 07/2017 **Conference Session Chair**, “Advances in Human Aspects of Cyber Security”, 5th International Conference on Human Aspects of Information Security, Privacy and Trust, HCI International 2017, Vancouver, Canada, July 2017.
- 01/2016 **Conference Session Chair**, Poster Session Chair, 12th Annual IFIP WG 11.9 International Conference on Digital Forensics, New Delhi, India, Jan. 2016.
- 01/2015 **Conference Session Chair**, Database Forensics, 11th Annual IFIP WG 11.9 International Conference on Digital Forensics, Orlando, Florida, USA, Jan. 2015.
- 05/2017 **Program Committee Member**, 10th International Conference on Security, Privacy and Anonymity in Computation, Communication and Storage (SpaCCS 2017), Guangzhou, China, Dec. 2017.

- 03/2017 **Program Committee Member**, 7th International Conference on e-Democracy, Athens, Greece, Dec. 2017.
- 01/2017 **Program Committee Member**, 13th EAI International Conference on Collaborative Computing: Networking, Applications and Workshar-ing, Guangzhou, China, Nov. 2017.
- 01/2017 **Program Committee Member**, Workshop on Security and Privacy in Cyber-Physical Systems 2017, will be held as part of the 3rd IEEE International Conference on Cybernetics (CYBCONF 2017), University of Exeter, UK, June 2017.
- 10/2016 **Shadow Program Committee Member**, ACM – Usenix Eurosys’17, Belgrade, Serbia, April 2017.
- 09/2016 **Program Committee Member**, 13th Annual IFIP WG 11.9 Inter-national Conference on Digital Forensics, Orlando, Florida, USA, Jan. 2017.
- 09/2015 **Program Committee Member**, 12th Annual IFIP WG 11.9 Inter-national Conference on Digital Forensics, New Delhi, India, Jan. 2016.
- 09/2014 **Program Committee Member**, 11th Annual IFIP WG 11.9 Inter-national Conference on Digital Forensics, Orlando, Florida, USA, Jan. 2015.

Editorial Work – Journal Reviews

- 05/2016 **Reviewer**, Transactions on Dependable and Secure Computing, IEEE.
- 02/2016 **Reviewer**, Future Generation Computer Systems, Elsevier.
- 05/2015 **Reviewer**, ESORICS 2015.
- 03/2015 **Reviewer**, TELKOMNIKA (Telecommunication Computing Electron-ics and Control).
- 05/2014 **Reviewer**, International Journal of Information Security, Springer.
- 02/2014 **Reviewer**, Journal of Information Security and Applications, Elsevier.
- 10/2013 **Reviewer**, Transactions on Image Processing, IEEE.

Invited Talks

- 19/05/2016 **Digital Forensics: Retrieving Evidence from Mobile Devices**, University College London, Information Security Group (InfoSec) Sem-inar, London, U.K.
- 15/07/2015 **Mobile Authentication mechanisms and attacks I & II**, Inten-sive Programme on Information and Communication Security (IPICS) Summer School 2015, Mytilene, Greece, July 2015.
- 18/07/2014 **Mobile Authentication mechanisms and attacks**, Intensive Pro-gramme on Information and Communication Security (IPICS) Summer School 2014, Mytilene, Greece, July 2014.
- 18/07/2014 **Steganography and forensic Steganalysis in JPEG using Ben-ford’s Law**, Intensive Programme on Information and Communication Security (IPICS) Summer School 2014, Mytilene, Greece, July 2014.
- 11/12/2013 **Physical acquisition on Android and mobile data analysis and visualisation**, Forensics Workshop, University of Bristol, UoB InfoSec.

Conference Presentations

- 13/07/2017 **A Comparative Study of Android Users' Privacy Preferences under the Runtime Permission Model**, 5th International Conference on Human Aspects of Information Security, Privacy and Trust, Vancouver, Canada, July 2017.
- 13/07/2017 **Privacy Decision-Making in the Digital Era: A Game Theoretic Review**, 5th International Conference on Human Aspects of Information Security, Privacy and Trust, Vancouver, Canada, July 2017.
- 05/12/2016 **Permissions Snapshots: Assessing Users' Adaptation to the Android Runtime Permission Model**, 8th IEEE International Workshop on Information Forensics and Security (WIFS) 2016, Abu Dhabi, December 2016.
- 06/01/2016 **The Effects of Power Users' Data Privacy Measures on Mobile Device Investigations**, 12th IFIP WG11.9 International Conference on Digital Forensics, New Delhi, India, January 2016.
- 04/01/2016 **Optimizing Short Text Sentiment Analysis for Mobile Device Forensics**, 12th IFIP WG11.9 International Conference on Digital Forensics, New Delhi, India, January 2016.
- 05/08/2015 **Messaging Activity Reconstruction with Sentiment Polarity Identification**, HCI International 2015, Los Angeles, U.S.A., July 2015.
- 27/01/2015 **A framework to describe multimedia circulation in the smartphone ecosystem**, 11th IFIP WG11.9 International Conference on Digital Forensics, Orlando, U.S.A., January 2015.
- 26/06/2014 **Complexity metrics and user strength perceptions of the pattern-lock graphical authentication method**, HCI International 2014, Crete, Greece, June 2014.
- 10/01/2014 **Smartphone Message Sentiment Analysis**, 10th IFIP WG11.9 International Conference on Digital Forensics, Vienna, Austria, January 2014.
- 17/04/2013 **A pilot study on the security of pattern screen-lock methods and soft side channel attacks**, ACM WiSec13, Budapest, Hungary, April 2013.
- 03/12/2012 **Forensic analysis of wireless networking evidence of Android smartphones**, IEEE WIFS12, Tenerife, Spain, December 2012.

Professional Experience

- 09/2016 – Present **Senior Lecturer in Computer Forensics and Security**, University of the West of England (UWE Bristol). Teaching and Research on Digital Forensics and Security.
- 03/2017 – 08/2017 **Visiting Researcher**, Japan Society for the Promotion of Science, Postdoctoral Fellowship for Overseas Researchers, National Institute of Informatics, Tokyo, Japan.
- 08/2016 – 03/2016 **Research Associate**, University College London (UCL), "Inferring the Purpose of Network Activities", EPSRC grant EP/N008448/1.

- 11/2015 – 02/2016 **Cyber Security Research Expert**, De Montfort University (DMU). A research position embedded within Airbus Group research division seeking to develop digital security and forensic capabilities for Critical Infrastructure Supervisory Control and Data Acquisition (SCADA) and Smart Grid Systems.
- 10/2014 – 06/2015 **Researcher**, University of Bristol, “NIFTy: Novel Image/photo Forensic Tools for fighting against child pornography”, EU DG Home Affairs - ISEC (Prevention of and Fight against Crime) / INT (Illegal Use of Internet) programme.
- 01/2012 – 09/2014 **Researcher**, University of Bristol, “ForToo: Forensic Tools”, EU Prevention of and Fight against Crime Programme “Illegal Use of Internet” - ISEC 2010 Action Grants, grant ref. HOME/2010/ISEC/AG/INT-002.
- 06/2006 – 07/2009 **Tutor – Teacher, Mathematics**, Private and Public sector (High School level and UG level), Athens, Greece.
- 12/2007 – 09/2008 **Teller**, Citibank plc. Zografou branch, Athens, Greece.
- 05/2015 – 05/2006 **Conscript Sergeant**, Hellenic Army, Compulsory Service, Lesvos, Greece.
- 09/2000 – 05/2005 **Customer Support**, Vivartia, Athens, Greece.

Certifications – Seminars – Summer Schools

- 01/2017 – Present **Postgraduate Certificate in Teaching and Learning in Higher Education**, University of the West of Bristol, U.K.(ongoing)
- 08/2014 **STFC Hartree Centre Summer School on Big Data 2014**, Daresbury, Warrington, U.K.
- 09/2012 **IPICS2012 Summer School**, Vienna, Austria.
- 05/2012 **ECRYPT II Summer School on Tools**, Mykonos, Greece.
- 08/2010 **Educational Psychology**, University of Athens, e-school.

Publications

- [1] O. Aboluwarin, P. Andriotis, A. Takasu, and T. Tryfonas. *Optimizing Short Message Text Sentiment Analysis for Mobile Device Forensics*, pages 69–87. Springer International Publishing, 2016. ISBN 978-3-319-46279-0. doi: 10.1007/978-3-319-46279-0_4.
- [2] K. Anastasopoulou, S. Kokolakis, and P. Andriotis. Privacy decision-making in the digital era: A game theoretic review. In *Proceedings of the 5th International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2017), Held as Part of HCI International 2017, Vancouver, Canada, July 12-14, 2017*. Springer International Publishing, 2017.
- [3] P. Andriotis and G. Oikonomou. Messaging activity reconstruction with sentiment polarity identification. In T. Tryfonas and I. Askoxylakis, editors, *Proceedings of the 3rd International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2015), Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015*, pages 475–486. Springer International Publishing, 2015. ISBN 978-3-319-20376-8. doi: 10.1007/978-3-319-20376-8_42.

- [4] P. Andriotis and T. Tryfonas. *Impact of User Data Privacy Management Controls on Mobile Device Investigations*, pages 89–105. Springer International Publishing, 2016. ISBN 978-3-319-46279-0. doi: 10.1007/978-3-319-46279-0_5.
- [5] P. Andriotis, T. Tryfonas, and Z. Yu. Poster: Breaking the android pattern lock screen with neural networks and smudge attacks.
- [6] P. Andriotis, G. Oikonomou, and T. Tryfonas. Forensic analysis of wireless networking evidence of android smartphones. In *2012 IEEE International Workshop on Information Forensics and Security (WIFS)*, pages 109–114, Dec 2012. doi: 10.1109/WIFS.2012.6412634.
- [7] P. Andriotis, G. Oikonomou, and T. Tryfonas. Jpeg steganography detection with benford’s law. *Digital Investigation*, 9(3–4):246–257, 2013. ISSN 1742-2876. doi: <http://dx.doi.org/10.1016/j.diin.2013.01.005>.
- [8] P. Andriotis, T. Tryfonas, G. Oikonomou, T. Spyridopoulos, A. Zaharis, A. Martini, and I. Askoxylakis. On two different methods for steganography detection in jpeg images with benford’s law. In *Proceedings of the 7th Scientific NATO Conference in Security and Protection of Information (SPI 2013)*, 2013.
- [9] P. Andriotis, T. Tryfonas, G. Oikonomou, and C. Yildiz. A pilot study on the security of pattern screen-lock methods and soft side channel attacks. In *Proceedings of the Sixth ACM Conference on Security and Privacy in Wireless and Mobile Networks, WiSec ’13*, pages 1–6, New York, NY, USA, 2013. ACM. ISBN 978-1-4503-1998-0. doi: 10.1145/2462096.2462098.
- [10] P. Andriotis, Z. Tzermias, A. Mparmpaki, S. Ioannidis, and G. Oikonomou. Multilevel visualization using enhanced social network analysis with smartphone data. *International Journal of Digital Crime and Forensics (IJDCF)*, 5(4):34–54, 2013.
- [11] P. Andriotis, A. Takasu, and T. Tryfonas. *Smartphone Message Sentiment Analysis*, pages 253–265. Springer Berlin Heidelberg, Berlin, Heidelberg, 2014. ISBN 978-3-662-44952-3. doi: 10.1007/978-3-662-44952-3_17.
- [12] P. Andriotis, T. Tryfonas, and G. Oikonomou. Complexity metrics and user strength perceptions of the pattern-lock graphical authentication method. In T. Tryfonas and I. Askoxylakis, editors, *Proceedings of the 2nd International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2014), Held as Part of HCI International 2014, Crete, Greece, June 22-27, 2014*, pages 115–126. Springer International Publishing, 2014. ISBN 978-3-319-07620-1. doi: 10.1007/978-3-319-07620-1_11.
- [13] P. Andriotis, T. Tryfonas, G. Oikonomou, S. Li, Z. Tzermias, K. Xynos, H. Read, and V. Prevelakis. On the development of automated forensic analysis methods for mobile devices. In T. Holz and S. Ioannidis, editors, *Proceedings of the 7th International Conference on Trust and Trustworthy Computing (TRUST 2014), Heraklion, Crete, June 30 – July 2, 2014*, pages 212–213. Springer International Publishing, 2014. ISBN 978-3-319-08593-7. doi: 10.1007/978-3-319-08593-7_17.
- [14] P. Andriotis, T. Tryfonas, G. Oikonomou, and I. King. *A Framework for Describing Multimedia Circulation in a Smartphone Ecosystem*, pages 251–267. Springer International Publishing, 2015. ISBN 978-3-319-24123-4. doi: 10.1007/978-3-319-24123-4_15.

- [15] P. Andriotis, G. Oikonomou, A. Mylonas, and T. Tryfonas. A study on usability and security features of the android pattern lock screen. *Information and Computer Security*, 24(1):53–72, 2016. doi: 10.1108/ICS-01-2015-0001.
- [16] P. Andriotis, G. Oikonomou, T. Tryfonas, and S. Li. Highlighting relationships of a smartphone’s social ecosystem in potentially large investigations. *IEEE Transactions on Cybernetics*, 46(9):1974–1985, Sept 2016. ISSN 2168-2267. doi: 10.1109/TCYB.2015.2454733.
- [17] P. Andriotis, M. A. Sasse, and G. Stringhini. Permissions snapshots: Assessing users’ adaptation to the android runtime permission model. In *2016 IEEE International Workshop on Information Forensics and Security (WIFS)*, pages 1–6, Dec 2016. doi: 10.1109/WIFS.2016.7823922.
- [18] P. Andriotis, L. Shancang, T. Spyridopoulos, and G. Stringhini. A comparative study of android users’ privacy preferences under the runtime permission model. In T. Tryfonas, editor, *Proceedings of the 5th International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2017), Held as Part of HCI International 2017, Vancouver, Canada, July 12-14, 2017*. Springer International Publishing, 2017.
- [19] S. Li, J. Chen, T. Spyridopoulos, P. Andriotis, R. Ludwiniak, and G. Russell. Real-time monitoring of privacy abuses and intrusion detection in android system. In T. Tryfonas and I. Askoxylakis, editors, *Proceedings of the 3rd International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2015), Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015*, pages 379–390. Springer International Publishing, 2015. ISBN 978-3-319-20376-8. doi: 10.1007/978-3-319-20376-8_34.
- [20] S. Li, T. Tryfonas, G. Russell, and P. Andriotis. Risk assessment for mobile systems through a multilayered hierarchical bayesian network. *IEEE Transactions on Cybernetics*, 46(8):1749–1759, Aug 2016. ISSN 2168-2267. doi: 10.1109/TCYB.2016.2537649.
- [21] E. Mariconti, L. Onwuzurike, P. Andriotis, E. D. Cristofaro, G. J. Ross, and G. Stringhini. Mamadroid: Detecting android malware by building markov chains of behavioral models. In *24th Network and Distributed System Security Symposium (NDSS 2017)*, pages 1–15, 2017.
- [22] H. Read, K. Xynos, I. Sutherland, F. Roarson, P. Andriotis, and G. Oikonomou. An extensible platform for the forensic analysis of social media data. In T. Tryfonas and I. Askoxylakis, editors, *Proceedings of the 3rd International Conference on Human Aspects of Information Security, Privacy, and Trust (HAS 2015), Held as Part of HCI International 2015, Los Angeles, CA, USA, August 2-7, 2015*, pages 404–414. Springer International Publishing, 2015. ISBN 978-3-319-20376-8. doi: 10.1007/978-3-319-20376-8_36.
- [23] T. Tryfonas, M. Carter, T. Crick, and P. Andriotis. Mass surveillance in cyberspace and the lost art of keeping a secret. In T. Tryfonas, editor, *Proceedings of the 4th International Conference Human Aspects of Information Security, Privacy, and Trust (HAS 2016), Held as Part of HCI International 2016, Toronto, ON, Canada, July 17-22, 2016*, pages 174–185. Springer International Publishing, 2016. ISBN 978-3-319-39381-0. doi: 10.1007/978-3-319-39381-0_16.

Volunteering Roles and Other Activities

- 09/2012 – 08/2015 **Senior Resident**, Postgraduate Warden at University of Bristol Accommodation Residences, U.K.
- 08/2015 **Student Volunteer**, HCI International 2015, Los Angeles, CA, USA.
- 06/2014 **Student Volunteer**, HCI International 2014, Crete, Greece.
- 09/2012 – 05/2014 **Undergraduate Mentor**, Disability Services, University of Bristol, U.K.
- 09/2012 – 05/2014 **Scribe and Exam Scribe**, Disability Services, University of Bristol, U.K.
- 07/2012 **Group Leader**, “HeadStart 2012” Summer School, University of Bristol, U.K.

Previous Students (MSc)

- 01/2014 – 09/2014 Mr. Oluwapelumi Aboluwarin, Mr. Constantinos Constantinou, Mrs. Julia Metochi, Mr. Zhaoqian Yu.

Interests - Hobbies

I love photography, travelling and running.
I tweet @PanosAndriotis and I like reading.
I admire the Japanese culture and Japan’s beauty.
I am a member of the UWE Cyber Security Research Unit.
<http://www.andrio.eu>
<https://www.flickr.com/photos/andriot/>