

Thomas Pasquier

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<https://tfjmp.org>

<https://scholar.google.co.uk/citations?user=TplQGj4AAAAJ>

Academic Experience

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| 2021–present | Assistant Professor at University of British Columbia |
| 2021–2022 | Honorary Senior Lecturer at University of Bristol |
| 2018–2021 | Lecturer (Assistant Professor) at University of Bristol |
| 2018–2019 | Visiting Scholar at University of Cambridge |
| 2017–2018 | Research Associate and Research Fellow at University of Cambridge |
| 2017–2019 | Associate at Harvard University |
| 2016–2017 | Postdoctoral Fellow at Harvard University CRCS |
| 2013–2016 | Graduate Research Assistant at University of Cambridge |

Leaves

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| 2022 | Paternity Leave at University of British Columbia |
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Education

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| 2012–2016 | PhD in Computer Science University of Cambridge, United Kingdom |
| 2011–2012 | MPhil in Computer Science University of Cambridge, United Kingdom. |
| 2008 – 2011 | Diplôme d'Ingénieur in Software R&D Institut Supérieur d'Électronique de Paris, France |
| 2006 – 2008 | Diplôme Universitaire de Technologie in EEE Conservatoire National des Arts et Métiers, France |

Industry Experience

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| 2012 | R&D Software Engineer at Public Health England, Cambridge |
| 2008–2011 | R&D Software Engineer at Gemalto, Paris |
| 2006–2008 | R&D Electronic Engineer at SRETT, Paris |

University Duties

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| 2023–2024 | Faculty Search Committee at University of British Columbia |
| 2023 | Head Search Committee at University of British Columbia |
| 2021–2022 | Graduate Admission Committee at University of British Columbia |
| 2020 | Workload Committee at University of Bristol |
| 2019–2021 | Study Abroad Academic Director at University of Bristol |
| 2019–2020 | Mentor for Postdocs (Bristol CLEAR) at University of Bristol |
| 2018–2021 | Academic Tutor at University of Bristol |
| 2018–2020 | Seminar Organiser at University of Bristol |

Teaching

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| 2023–2024 | CPSC 538S: Accountable Computer Systems Graduate – University of British Columbia |
| 2023–2024 | CPSC 436A: Operating Systems Design and Implementation Year 4 UG – University of British Columbia |
| 2022–2023 | CPSC 538P: Topic in Computer Systems: Systems Security Graduate – University of British Columbia |
| 2022–2023 | CPSC 436A: Operating Systems Design and Implementation Year 4 UG – University of British Columbia |
| 2020–2021 | Computer Systems B: Introduction to Operating Systems & Security Year 2 UG – University of Bristol |
| 2020–2021 | Systems & Software Security Year 4 UG – University of Bristol |
| 2019–2020 | Systems Security Year 4 UG – University of Bristol |
| 2018–2019 | Systems Security Year 4 UG – University of Bristol |
| 2013–2016 | Computer Science High School – Teacher – Cambridge Centre for Sixth Form Studies |

Program committees

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| 2023 | ACM Conference on Computer and Communications Security (CCS) |
| 2023 | ACM Symposium on Operating Systems Principles (SOSP) |
| 2023 | ACM European Conference on Computer Systems (EuroSys) |
| 2023 | ACM Symposium on Cloud Computing (SoCC) |
| 2022 | ACM Conference on Computer and Communications Security (CCS) |
| 2022 | IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing (CGRID) |
| 2022 | IEEE Conference on Dependable and Secure Computing (DSC) |
| 2022 | IEEE International Conference on Cloud Engineering (IC2E) |
| 2021 | ACM/IFIP Middleware Doctoral Workshop |
| 2021 | IEEE International Conference on Cloud Engineering (IC2E) |
| 2021 | ACM Workshop on Middleware and Applications for the Internet of Things (M4IoT) |
| 2020 | ACM European Conference on Computer Systems (EuroSys) |
| 2020 | ACM Workshop on Middleware and Applications for the Internet of Things (M4IoT) |
| 2020 | ACM/IFIP Middleware Doctoral Workshop |
| 2019 | IEEE International Conference on Cyber Security and Protection of Digital Services |

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| 2019 | ACM Workshop on Middleware and Applications for the Internet of Things (M4IoT) |
| 2019 | USENIX Workshop on Theory and Practices of Provenance (TaPP) |
| 2018 | ACM Workshop on Middleware and Applications for the Internet of Things (M4IoT) |
| 2018 | IEEE International Workshop on Legal and Technical Issues in Cloud Computing and the Internet of Things (CLAW) |
| 2017 | USENIX Workshop on Theory and Practices of Provenance (TaPP) |
| 2017 | IEEE International Workshop on Legal and Technical Issues in Cloud Computing and the Internet of Things (CLAW) |
| 2017 | ACM Workshop on Middleware and Applications for the Internet of Things (M4IoT) |
| 2016 | IEEE International Workshop on Legal and Technical Issues in Cloud Computing and the Internet of Things (CLAW) |
| 2016 | ACM International Workshop on Mashups of Things and APIs |

External Review Committees

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| 2021 | ACM International Conference on Architectural Support for Programming Languages and Operating Systems (ASPLOS) |
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Organizing Committees

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| 2021 | USENIX Workshop on Theory and Practice of Provenance Program co-chair |
| 2021 | IEEE International Conference on Cloud Engineering Workshop and Tutorial co-chair |
| 2020 | USENIX Workshop on Theory and Practice of Provenance Program chair |
| 2018 | Provenance-based Security Workshop Program chair |
| 2017 | IEEE International Conference on Cloud Engineering Publicity chair |

Steering Committees

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| 2020-present | USENIX Workshop on Theory and Practice of Provenance |
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Invited Talks & Keynotes

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| Nov 2022 | Invited Talk to Industry Huawei (virtually) |
| Dec 2021 | Invited Talk to Industry IBM (virtually) |
| Jan 2021 | Invited Talk to Industry Two Sigma (virtually) |
| Dec 2020 | Annual China-UK-Australia AI Frontier Symposium virtually |
| Nov 2020 | Invited Talk to Industry Toshiba (virtually) |
| Nov 2020 | UK-Israel Network and Data Infrastructure Security Online Workshops virtually |

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| Nov 2020 | Azure Data ML Talk Series Microsoft (virtually) |
| Jan 2020 | UK PhD Winter School on Cyber Security University of Newcastle |
| Nov 2019 | Workshop on Provenance, Security & Machine Learning The Alan Turing Institute, London |
| Jun 2019 | Invited Talk to Industry HP Labs, Bristol |
| Mar 2019 | Workshop on Machine Learning for Cyber Security Loughborough University |
| Jan 2019 | Computer Science Seminar Royal Holloway, University of London |
| Jun 2018 | Trusted System Design Group Seminar University of Cambridge |
| Jan 2018 | Institute for Computing Systems Architecture Colloquium University of Edinburgh |

Journal Reviews

IEEE Transactions on Information Forensics & Security
 IEEE Transactions on Dependable and Secure Computing
 Springer Personal and Ubiquitous Computing
 ACM Transactions on the Web
 IEEE Transactions on Cloud Computing
 IEEE Transactions on Parallel and Distributed Systems
 IEEE Access
 IEEE Computing in Science and Engineering
 Nature Springer Humanities & Social Sciences Communications

Grant Reviews

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| 2018–2023 | Luxembourg National Research Fund CORE |
| 2022 | Natural Sciences and Engineering Research Council of Canada |
| 2022 | UKRI ESRC Digital Security by Design Hub+ |
| 2020 | UK Royal Society Industrial Fellowship |
| 2018 | Cyprus Research Promotion Foundation |

Publications (citations \geq 1865, h-index 22)

- [1] CHENG, Z., LV, Q., LIANG, J., WANG, Y., SUN, D., PASQUIER, T., AND HAN, X. Kairos: Practical Intrusion Detection and Investigation using Whole-system Provenance. In *Symposium on Security and Privacy (S&P'24)* (2024), IEEE
- [2] LIM, S. Y., HAN, X., AND PASQUIER, T. Unleashing Unprivileged eBPF Potential with Dynamic Sandboxing. In *SIGCOMM Workshop on eBPF and Kernel Extensions* (2023), ACM
- [3] TRISOVIC, A., LAU, M. K., PASQUIER, T., AND CROSAS, M. A large-scale study on research code quality and execution. *Nature Scientific Data* (2022)
- [4] LERNER, B., BOOSE, E., BRAND, O., ELLISON, A. M., FONG, E., LAU, M. K., NGO, K., PASQUIER, T., PEREZ, L., SELTZER, M., ET AL. Making provenance work for you. *R Journal* 14, 4 (2022)
- [5] ABBAS, M., KHAN, S., MONUM, A., ZAFFAR, F., TAHIR, R., EYERS, D., IRSHAD, H., GEHANI, A., YEGNESWARAN, V., AND PASQUIER, T. Paced: Provenance-based automated container escape detection. In *International Conference on Cloud Engineering (IC2E)* (2022), IEEE
- [6] RAIMONDO, F., EROL, U., GUNNER, S., POPE, J., ZAKRZEWSKI, R., FAULKS, M., MCCONVILLE, R., PASQUIER, T., PIECHOCKI, R., AND OIKONOMOU, G. Iot key exchange performance analysis. In *International Conference on Embedded Wireless Systems and Netwroks* (2022), ACM, pp. 238–243

- [7] HAN, X., YU, X., PASQUIER, T., LI, D., RHEE, J., MICKENS, J., SELTZER, M., AND CHEN, H. SIGL: Securing Software Installations Through Deep Graph Learning. In *Security Symposium (USENIX Sec'21)* (2021), USENIX
- [8] LIM, S. Y., STELEA, B., HAN, X., AND PASQUIER, T. Secure Namespaced Kernel Audit for Containers. In *Symposium on Cloud Computing (SoCC'21)* (2021), ACM
- [9] HAN, X., PASQUIER, T., BATES, A., MICKENS, J., AND SELTZER, M. UNICORN: Runtime Provenance-Based Detector for Advanced Persistent Threats. In *Network and Distributed System Security Symposium (NDSS'20)* (2020), Internet Society
- [10] FEKRY, A., CARATA, L., PASQUIER, T., RICE, A., AND HOPPER, A. To Tune or Not to Tune? In Search of Optimal Configurations for Data Analytics. In *Conference on Knowledge Discovery and Data Mining (KDD'20)* (2020), ACM
- [11] FEKRY, A., CARATA, L., PASQUIER, T., AND RICE, A. Accelerating the Configuration Tuning of Big Data Analytics with Similarity-aware Multitask Bayesian Optimization. In *International Conference on Big Data (BigData'20)* (2020), IEEE
- [12] HAN, X., MICKENS, J., GEHANI, A., SELTZER, M., AND PASQUIER, T. Xanthus: Push-button Orchestration of Host Provenance Data Collection. In *International Workshop on Practical Reproducible Evaluation of Computer Systems (P-RECS'20)* (2020), ACM
- [13] LAU, M. K., PASQUIER, T., AND SELTZER, M. Rclean: A Tool for Writing Cleaner, More Transparent Code. In *The Journal of Open Source Software (JOSS)* (2020)
- [14] O'KEEFFE, D., ASMA, V., PASQUIER, T., AND EYERS, D. Facilitating plausible deniability for cloud providers regarding tenants' activities using trusted execution. In *International Conference on Cloud Engineering (IC2E'20)* (2020), IEEE
- [15] CHAN, S. C., CHENEY, J., BHATOTIA, P., GEHANI, A., IRSHAD, H., PASQUIER, T., CARATA, L., AND SELTZER, M. ProvMark: A Provenance Expressiveness Benchmarking System. In *International Middleware Conference* (2019), ACM/IFIP
- [16] PASQUIER, T., EYERS, D., AND BACON, J. Viewpoint — Personal Data and the Internet of Things: It is time to care about digital provenance. *Communications of the ACM* (2019)
- [17] PASQUIER, T., EYERS, D., AND SELTZER, M. From Here to Provtopia. In *VLDB Workshop on Towards Polystores that manage multiple Databases, Privacy, Security and/or Policy Issues for Heterogenous Data (Poly'19)* (2019), Springer
- [18] FEKRY, A., CARATA, L., PASQUIER, T., RICE, A., AND HOPPER, A. Towards Seamless Configuration Tuning of Big Data Analytics. In *International Conference on Distributed Computing Systems (ICDCS'19)* (2019), IEEE
- [19] PASQUIER, T., HAN, X., MOYER, T., BATES, A., HERMANT, O., EYERS, D., BACON, J., AND SELTZER, M. Runtime analysis of whole-system provenance. In *Conference on Computer and Communications Security (CCS'18)* (2018), ACM
- [20] PASQUIER, T., SINGH, J., POWLES, J., EYERS, D., SELTZER, M., AND BACON, J. Data provenance to audit compliance with privacy policy in the Internet of Things. *Springer Personal and Ubiquitous Computing* (2018)
- [21] PASQUIER, T., LAU, M., HAN, X., FONG, E., LERNER, B., BOOSE, E., CROSAS, M., ELLISON, A., AND SELTZER, M. Sharing and Preserving Computational Analyses for Posterity with encapsulator. *IEEE Computing in Science and Engineering (CiSE)* (2018)
- [22] HAN, X., PASQUIER, T., AND SELTZER, M. Provenance-based intrusion detection: Opportunities and challenges. In *Workshop on the Theory and Practice of Provenance (TaPP'18)* (2018), USENIX
- [23] PASQUIER, T., HAN, X., GOLDSTEIN, M., MOYER, T., EYERS, D., SELTZER, M., AND BACON, J. Practical whole-system provenance capture. In *Symposium on Cloud Computing (SoCC'17)* (2017), ACM
- [24] HAN, X., PASQUIER, T., RANJAN, T., GOLDSTEIN, M., AND SELTZER, M. FRAPpuccino: Fault-detection through Runtime Analysis of Provenance. In *Workshop on Hot Topics in Cloud Computing (HotCloud'17)* (2017), USENIX
- [25] PASQUIER, T., LAU, M., TRISOVIC, A., BOOSE, E., COUTURIER, B., ELLISON, A., GIBSON, V., JONES, C., AND SELTZER, M. If these data could talk. *Nature Scientific Data* (2017)
- [26] PASQUIER, T., EYERS, D., AND BACON, J. PHP2Uni: Building Unikernels using Scripting Language Transpilation. In *International Conference on Cloud Engineering (IC2E'17)* (2017), IEEE
- [27] SINGH, J., PASQUIER, T., BACON, J., DIACONU, R., POWLES, J., AND EYERS, D. Big Ideas paper:Policy-driven middleware for a legally-compliant Internet of Things. In *ACM/IFIP/Usenix Middleware* (2016), ACM
- University of Cambridge's Computer Laboratory "The Ring" **Hall of Fame publication of the year award.**
- [28] PASQUIER, T., BACON, J., SINGH, J., AND EYERS, D. Data-centric access control for cloud computing. In *Symposium on Access Control Models and Technologies* (2016), ACM

- [29] PASQUIER, T., SINGH, J., , BACON, J., AND EYERS, D. Information Flow Audit for PaaS clouds. In *International Conference on Cloud Computing Engineering (IC2E)* (2016), IEEE
- [30] SINGH, J., PASQUIER, T., BACON, J., KO, H., AND EYERS, D. Twenty Cloud Security Considerations for Supporting the Internet of Things. *IEEE Internet of Things Journal* (2016)
- [31] SINGH, J., POWLES, J., PASQUIER, T., AND BACON, J. Data Flow Management and Compliance in Cloud Computing. *IEEE Cloud Computing Magazine* (2015)
- [32] BACON, J., EYERS, D., PASQUIER, T., SINGH, J., PAPAGIANNIS, I., AND PIETZUCH, P. Information Flow Control for Secure Cloud Computing. *IEEE Transactions on Network and System Management, SI Cloud Service Management* 11, 1 (2014), 76–89
- [33] PASQUIER, T., SINGH, J., AND BACON, J. Clouds of Things need Information Flow Control with Hardware Roots of Trust. In *International Conference on Cloud Computing Technology and Science (CloudCom'15)* (2015), IEEE
- [34] PASQUIER, T., SINGH, J., BACON, J., AND HERMANT, O. Managing Big Data with Information Flow Control. In *International Conference on Cloud Computing (CLOUD)* (2015), IEEE
- [35] SINGH, J., PASQUIER, T., AND BACON, J. Securing Tags to Control Information Flows within the Internet of Things. In *International Conference on Recent Advances in Internet of Things (RIoT'15)* (2015), IEEE
- [36] PASQUIER, T., SINGH, J., AND BACON, J. Information Flow Control for Strong Protection with Flexible Sharing in PaaS. In *IC2E, International Workshop on Future of PaaS* (2015), IEEE
- [37] PASQUIER, T., AND POWLES, J. Expressing and Enforcing Location Requirements in the Cloud using Information Flow Control. In *IC2E International Workshop on Legal and Technical Issues in Cloud Computing (Claw'15)* (2015), IEEE
- [38] PASQUIER, T., SINGH, J., EYERS, D., AND BACON, J. CamFlow: Managed Data-Sharing for Cloud Services. *IEEE Transactions on Cloud Computing* (2015)
- [39] SINGH, J., PASQUIER, T., BACON, J., AND EYERS, D. Integrating Middleware with Information Flow Control. In *International Conference on Cloud Computing Engineering (IC2E)* (2015), IEEE
- [40] PASQUIER, T., BACON, J., AND EYERS, D. FlowK: Information Flow Control for the Cloud. In *International Conference on Cloud Computing Technology and Science (CloudCom'14)* (2014), IEEE
- [41] PASQUIER, T., BACON, J., AND SHAND, B. FlowR: Aspect Oriented Programming for Information Flow Control in Ruby. In *International Conference on Aspect-Oriented Software Development (Modularity'14)* (2014), ACM