

Thomas Pasquier

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<https://tfjmp.org>

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

Academic Experience

2021–present	Assistant Professor at University of British Columbia
2018–2021	Lecturer (Assistant Professor) at University of Bristol
2018–2019	Visiting Scholar at University of Cambridge
2017–2018	Research Associate 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

Fellowships, Research Involvement & Grants

2020–present	SYNERGIA - Secure by design end to end platform for large scale resource constrained IoT applications Innovate UK – Toshiba led consortium
2018	Research Fellow St Edmund's College, University of Cambridge
2016–2017	Postdoctoral Fellow Center for Research on Computation and Society, Harvard University
2014–present	Microsoft Cloud Computing Research Centre Centre exploring questions at the intersection of Law and Computer Science

Education

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

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

Teaching

2020–2021	Unit Director (Computer Systems B Y2) at University of Bristol
2020–2021	Lecturer (Systems & Software Security Y4) at University of Bristol
2018–2020	Unit Director (Systems Security Y4) at University of Bristol
2013–2016	High School Teacher at Cambridge Centre for Sixth Form Studies

University Duties

2020	Workload Committee at University of Bristol
2019–present	Study Abroad Academic Director at University of Bristol
2019–2020	Mentor for Postdocs (Bristol Clear) at University of Bristol
2018–present	Academic Tutor at University of Bristol
2018–2020	Seminar Organiser at University of Bristol

Program committees

2021	IEEE International Conference on Cloud Engineering
2020	EuroSys
2020–2021	ACM/IFIP Middleware Doctoral Workshop
2019	IEEE International Conference on Cyber Security and Protection of Digital Services
2017, 2019	USENIX Workshop on Theory and Practices of Provenance
2017	ACM Workshop on Middleware and Applications for the Internet of Things
2016–2020	ACM International Workshop on Mashups of Things and APIs
2016–2018	IEEE International Workshop on Legal and Technical Issues in Cloud Computing and the Internet of Things

External Review Committees

2021	ACM ASPLOS
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Organizing Committees

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

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

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
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

UK Royal Society
Luxembourg National Research Fund
Cyprus Research Promotion Foundation

Publications (citations \geq 1000, h-index 19)

- [1] 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
- [2] 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

- [3] 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
- [4] 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
- [5] 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
- [6] 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)
- [7] 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
- [8] 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
- [9] 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)
- [10] 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
- [11] 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
- [12] 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
- [13] 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)
- [14] 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)
- [15] 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
- [16] 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
- [17] 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
- [18] 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)
- [19] PASQUIER, T., EYERS, D., AND BACON, J. PHP2Uni: Building Unikernels using Scripting Language Transpilation. In *International Conference on Cloud Engineering (IC2E'17)* (2017), IEEE
- [20] 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.**
- [21] 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
- [22] 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
- [23] 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)
- [24] SINGH, J., POWLES, J., PASQUIER, T., AND BACON, J. Data Flow Management and Compliance in Cloud Computing. *IEEE Cloud Computing Magazine* (2015)
- [25] 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

- [26] 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
- [27] 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
- [28] 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
- [29] 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
- [30] 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
- [31] PASQUIER, T., SINGH, J., EYERS, D., AND BACON, J. CamFlow: Managed Data-Sharing for Cloud Services. *IEEE Transactions on Cloud Computing* (2015)
- [32] 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
- [33] 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
- [34] 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