

# Thomas Pasquier

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<https://tfjmp.org>

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

## Academic Experience

2018–present	<b>Lecturer (Assistant Professor)</b> at University of Bristol
2018–2019	<b>Visiting Scholar</b> at University of Cambridge
2017–2018	<b>Research Associate</b> at University of Cambridge
2017–2019	<b>Associate</b> at Harvard University CRCS
2016–2017	<b>Postdoctoral Fellow</b> at Harvard University
2013–2016	<b>Graduate Research Assistant</b> at University of Cambridge

## Fellowships & Grants

2020–present	<b>SYNERGIA - Secure by design end to end platform for large scale resource constrained IoT applications</b> Innovate UK
2018	<b>Research Fellow</b> St Edmund's College, University of Cambridge
2016–2017	<b>Postdoctoral Fellow</b> Center for Research on Computation and Society, Harvard University

## Education

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

## Industry Experience

2012	<b>R&amp;D Software Engineer</b> at Public Health England, Cambridge
2008–2011	<b>R&amp;D Software Engineer</b> at Gemalto, Paris
2006–2008	<b>R&amp;D Electronic Engineer</b> at SRETT, Paris

## Teaching

2020–present	<b>Unit Director</b> (Computer Systems B Y2) at University of Bristol
2020–present	<b>Lecturer</b> (Systems & Software Security Y4) at University of Bristol
2018–present	<b>Projects Supervision</b> at University of Bristol
2018–2020	<b>Unit Director</b> (Systems Security Y4) at University of Bristol
2017–2018	<b>Projects Supervision</b> at University of Cambridge
2016–2017	<b>Projects Supervision</b> at Harvard University
2013–2016	<b>High School Teacher</b> at Cambridge Centre for Sixth Form Studies
2012–2016	<b>Supervision</b> at University of Cambridge Operating Systems, Concurrent & Distributed Systems

## University Duties

2019–present	<b>Study Abroad Academic Director</b> at University of Bristol
2019–present	<b>Postdoc Mentor</b> at University of Bristol
2018–present	<b>Academic Tutor</b> at University of Bristol
2018–2020	<b>Seminar Organiser</b> at University of Bristol

## Program committees

2020	EuroSys
2020	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
2016-2019	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
2021	IEEE International Conference on Cloud Engineering
2020	USENIX Workshop on Theory and Practice of Provenance
2018	Provenance-based Security Workshop
2017	IEEE International Conference on Cloud Engineering

## Invited Talks & Keynotes

Jan 2020	<b>UK PhD Winter School on Cyber Security</b> University of Newcastle
Nov 2019	<b>Workshop on Provenance, Security &amp; Machine Learning</b> The Alan Turing Institute, London
Jun 2019	<b>Invited Talk to Industry</b> HP Labs, Bristol
Mar 2019	<b>Workshop on Machine Learning for Cyber Security</b> Loughborough University
Jan 2019	<b>Computer Science Seminar</b> Royal Holloway, University of London
Jun 2018	<b>Trusted System Design Group Seminar</b> University of Cambridge
Jan 2018	<b>Institute for Computing Systems Architecture Colloquium</b> University of Edinburgh

## Journal Reviews

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

## Grant Reviews

UK Royal Society  
Luxembourg National Research Fund  
Cyprus Research Promotion Foundation

## Publications (citations $\geq$ 900, h-index 17)

- [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] 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
- [5] 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)
- [6] 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
- [7] 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
- [8] 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)

- [9] 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
- [10] 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
- [11] 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
- [12] 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)
- [13] 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 (C&SE)* (2018)
- [14] 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
- [15] 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
- [16] 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
- [17] 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)
- [18] PASQUIER, T., EYERS, D., AND BACON, J. PHP2Uni: Building Unikernels using Scripting Language Transpilation. In *International Conference on Cloud Engineering (IC2E'17)* (2017), IEEE
- [19] 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.**
- [20] 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
- [21] 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
- [22] 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)
- [23] SINGH, J., POWLES, J., PASQUIER, T., AND BACON, J. Data Flow Management and Compliance in Cloud Computing. *IEEE Cloud Computing Magazine* (2015)
- [24] 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
- [25] 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
- [26] 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
- [27] 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
- [28] 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
- [29] 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
- [30] PASQUIER, T., SINGH, J., EYERS, D., AND BACON, J. CamFlow: Managed Data-Sharing for Cloud Services. *IEEE Transactions on Cloud Computing* (2015)
- [31] 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
- [32] 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

[33] 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