

List of publications

All publications refereed (peer-reviewed), unless otherwise stated.

Journals and magazines

- T. Pasquier, **J. Singh**, J. Powles, D. Eyers, M. Seltzer, J. Bacon, “**Data provenance to audit compliance with privacy policy in the Internet of Things**,” *Personal and Ubiquitous Computing*, 2017.
- D. Kamarinou, C. Millard, **J. Singh**, “**Machine Learning with Personal Data: Profiling, Decisions and the EU General Data Protection Regulation**,” *Journal of Machine Learning Research*, To appear, 2017.
- W. K. Hon, C. Millard, **J. Singh**, I. Walden, and J. Crowcroft, “**Policy, legal and regulatory implications of a Europe-only cloud**,” *International Journal of Law and Information Technology*, vol. 24, no. 3, pp. 251–278, 2016.
- **J. Singh**, T. Pasquier, J. Bacon, H. Ko, and D. Eyers, “**Twenty security considerations for cloud-supported Internet of Things**,” *IEEE Internet of Things Journal*, vol. 3, no. 3, pp. 269–284, 2015.
- T. Pasquier, **J. Singh**, D. Eyers, and J. Bacon, “**CamFlow: Managed data-sharing for cloud services**,” *IEEE Transactions on Cloud Computing*, vol. 5, no. 3, pp. 472–484, 2015.
- **J. Singh**, J. Powles, T. Pasquier, and J. Bacon, “**Data flow management and compliance in cloud computing**,” *IEEE Cloud Computing, SI on Legal Clouds*, vol. 2, no. 4, pp. 24–32, July 2015.
- **J. Singh**, “**The role of reconfigurable, policy-based middleware in supporting the Internet of Things**,” *Tiny Transactions on Computer Science*, vol. 3, 2015.
- **J. Singh** and J. Bacon, “**On middleware for emerging health services**,” *Journal of Internet Services and Applications*, vol. 5, no. 6, pp. 1–34, Springer, 2014.
- J. Bacon, D. Eyers, T. Pasquier, **J. Singh**, I. Papagiannis, and P. Pietzuch, “**Information flow control for secure cloud computing**,” *IEEE Transactions on Network and System Management SI Cloud Service Management*, vol. 11, no. 1, pp. 76–89, 2014.
- J. Bacon, D. Eyers, **J. Singh**, B. Shand, M. Migliavacca, and P. Pietzuch, “**Security in multi-domain event-based systems**,” *it - Information Technology*, vol. 51, no. 5, pp. 277–284, 2009.

Book chapters

- D. Kamarinou, C. Millard, **J. Singh**, “**Machine Learning with Personal Data**,” in *Data Protection and Privacy: The Age of Intelligent Machines (CPDP 2017)*, R. Leenes, R. van Brakel, S. Gutwirth, and P. De Hert (eds), Hart, To appear, 2017.
- J. Bacon, D. Eyers, and **J. Singh**, “**Securing event-based systems**,” in *Principles and Applications of Distributed Event-based Systems*, A. Hinze and A. Buchmann, Eds. IGI Global, 2010.
- **J. Singh** and J. Bacon, “**Event-based data dissemination control in healthcare**,” in *Electronic Healthcare*, D. Weerasinghe, Ed. Springer, 2009.

Conferences and workshops

- R. Diaconu, J. Deng, J. Bacon, and **J. Singh**, “**ComFlux: A Dynamic External Management Regime for Pervasive Applications**,” in *Pervasive Computing (PerCom)*. IEEE, 2018, To Appear.
- E. Lagerspetz, H. Flores, N. Makitalo, P. Hui, P. Nurmi, S. Tarkoma, A. Passarella, J. Ott, P. Reichl, M. Conti, M. Fiedler, **J. Singh**, T. Strufe, T. Hossfeld, A. Lindgren, and D. Quercia, “**Pervasive Communities in the Internet of People**,” in *Context-Awareness for Multi-Device Pervasive Computing (PerCrowd)*. IEEE, 2018, To Appear.
- C. Millard, W. K. Hon, and **J. Singh**, “**Internet of Things Ecosystems: Unpacking Legal Relationships and Liabilities**,” in *Cloud Engineering (IC2E), CLaw*. IEEE, 2017, pp. 286–291.
- C. Millard, W. K. Hon, and **J. Singh**, “**Internet of Things Ecosystems: Unpacking Legal Relationships and Liabilities**,” in *Cloud Engineering (IC2E), CLaw*. IEEE, 2017, pp. 286–291.
- **J. Singh**, T. Pasquier, J. Bacon, J. Powles, R. Diaconu, and D. Evers, “**Big ideas paper: Policy-driven middleware for a legally-compliant Internet of Things**,” in *Middleware*. ACM/IFIP/USENIX, 2016, pp 13:1–13:15.
*** Publication of the Year 2017 - University of Cambridge Computer Laboratory ***
- T. Pasquier, J. Bacon, **J. Singh**, and D. Evers, “**Data-centric access control for cloud computing**,” in *Access Control Models and Technologies (SACMAT’16)*. ACM, 2016, pp. 81–88.
- T. Pasquier, **J. Singh**, J. Bacon, and D. Evers, “**Information flow audit for PaaS clouds**,” in *Cloud Engineering (IC2E’16)*. IEEE, 2016, pp. 42–51.
- H. Ko, **J. Singh**, T. F. J.-M. Pasquier, C. Dong, D. Evers, and J. Bacon, “**Information Flow Control with Minimal Tag Disclosure**,” in *Internet of Things and Cloud Computing*. ACM, 2016.
- T. Pasquier, **J. Singh**, J. Bacon, and O. Hermant, “**Managing big data with Information Flow Control**,” in *Cloud Computing (CLOUD’15)*. IEEE, 2015, pp. 524–531.
- **J. Singh**, T. Pasquier, and J. Bacon, “**Securing tags to control information flows within the Internet of Things**,” in *Recent Advances in Internet of Things (RIoT’15)*. IEEE, 2015.
- **J. Singh**, T. Pasquier, J. Bacon, and D. Evers, “**Integrating middleware and Information Flow Control**,” in *Cloud Engineering (IC2E’15)*. IEEE, 2015, pp. 54–59.
- T. Pasquier, **J. Singh**, and J. Bacon, “**Information Flow Control for strong protection with flexible sharing in PaaS**,” in *Cloud Engineering (IC2E), Future of PaaS*. IEEE, 2015, pp. 279–282.
- **J. Singh**, D. Evers, and J. Bacon, “**Policy enforcement within emerging distributed, event-based systems**,” in *Distributed Event-Based Systems (DEBS’14)*. ACM, 2014, pp. 246–255.
- J. Bacon, **J. Singh**, D. Trossen, D. Pavel, A. Bontozoglou, N. Vastardis, K. Yang, S. Pennington, S. Clarke, and G. Jones, “**Personal and social communication services for health and lifestyle monitoring**,” in *Global Health Challenges (GlobalHealth’12)*, 2012.
- **J. Singh**, D. Evers, and J. Bacon, “**Disclosure control in multi-domain publish/subscribe systems**,” in *Distributed Event-Based Systems (DEBS’11)*. ACM, 2011, pp. 159–170.

- **J. Singh** and J. Bacon, “**Managing health information flows with a reconfigurable component-based middleware,**” in *Mobile Data Management (MDM), Managing Health Information in Mobile Applications*, IEEE, 2011, pp. 52–54.
- D. Eyers, L. Vargas, **J. Singh**, K. Moody, and J. Bacon, “**Relational database support for event-based middleware functionality,**” in *Distributed Event-Based Systems (DEBS’10)*. ACM, 2010, pp. 160–171.
- **J. Singh**, P. Brandao, and J. Bacon, “**Context-aware disclosure of health sensor data,**” in *Pervasive Computing Technologies for Healthcare (PervasiveHealth’10)*. IEEE, 2010.
- D. Trossen, D. Pavel, K. Guild, J. Bacon, and **J. Singh**, “**Information-centric pervasive healthcare platforms,**” in *Pervasive Computing Technologies for Healthcare (PervasiveHealth’10)*, IEEE, 2010.
- **J. Singh** and J. Bacon, “**Governance in patient-centric healthcare,**” in *International Conference on Information Society (i-Society’10)*, IEEE, 2010, pp. 502–509.
- J. Bacon, D. Eyers, **J. Singh**, and P. R. Pietzuch, “**Access control in publish/subscribe systems,**” in *Distributed Event-Based Systems (DEBS’08)*. ACM, 2008, pp. 23–34.
- **J. Singh**, L. Vargas, J. Bacon, and K. Moody, “**Policy-based information sharing in publish/subscribe middleware,**” in *Policy for Distributed Systems and Networks (Policy’08)*. IEEE, 2008, pp. 137–144.
- **J. Singh**, D. Eyers, and J. Bacon, “**Controlling historical information dissemination in publish/subscribe,**” in *Middleware Security (MidSec)*. ACM, 2008, pp. 34–39.
- **J. Singh**, D. Eyers, and J. Bacon, “**Credential management in event-driven healthcare systems,**” in *Middleware (Companion)*, ACM/IFIP/USENIX, 2008, pp. 48–53.
- **J. Singh** and J. Bacon, “**Event-based data control in healthcare,**” in *Middleware (Companion)*. ACM/IFIP/USENIX, 2008, pp. 84–86.
- **J. Singh**, L. Vargas, and J. Bacon, “**A Model for Controlling Data Flow in Distributed Healthcare Environments,**” in *Pervasive Computing Technologies for Healthcare (PervasiveHealth’08)*. IEEE, 2008.
- **J. Singh**, J. Bacon, and K. Moody, “**Dynamic trust domains for secure, private, technology-assisted living,**” in *Availability, Reliability and Security (ARES’07)*. IEEE, 2007, pp. 27–34.
- [Unrefereed] G. Russello, C. Dong, N. Dulay, **J. Singh**, J. Bacon, and K. Moody, “**A policy-based framework for e-Health applications,**” in *Proceedings of the UK e-Science All Hands Meeting (AHM’07)*, 2007, pp. 252–261.

Other publications

Thesis

- **J. Singh**, “**Controlling the dissemination and disclosure of healthcare events,**” Ph.D. dissertation, University of Cambridge, and Computer Laboratory Technical Report TR 770, 2009.

Technical reports (unrefereed)

NB The use of SSRN is standard dissemination practice by the legal community.

- **J. Singh** and D. Michels “**Blockchain as a Service: Providers and Trust**,” SSRN, 2017.
- J. Bacon, D. Michels, C. Millard, and **J. Singh**, “**Blockchain Demystified: An introduction to blockchain technology and its legal implications**,” SSRN, 2017.
- R. Diaconu, J. Bacon, J. Deng, and **J. Singh**, “**ComFlux: External Composition and Adaptation of Pervasive Applications**,” CoRR/arXiv, 2017.
- **J. Singh**, I. Walden, J. Crowcroft, and J. Bacon, “**Responsibility & Machine Learning: Part of a Process**,” SSRN, 2016.
- D. Kamarinou, C. Millard, and **J. Singh**, “**Machine Learning with Personal Data**,” SSRN, 2016.
- K. Hon, C. Millard, and **J. Singh**, “**Twenty legal considerations for clouds of things**,” SSRN, 2016.
- **J. Singh**, J. Bacon, J. Crowcroft, A. Madhavapeddy, T. Pasquier, W. K. Hon, and C. Millard, “**Regional clouds: Technical considerations**,” University of Cambridge, Tech. Rep. *UCAM-CL-TR-863*, 2014.
- **J. Singh** and J. Bacon, “**SBUS: A generic, policy-enforcing middleware for open pervasive systems**,” University of Cambridge, Tech. Rep. *UCAM-CL-TR-847*, 2014.

Related articles in broader media (unrefereed, but subject to editorial)

- J. Powles and **J. Singh**, “**Why the Internet of Things favours dominance**,” *The Guardian*, 24 Jul 2015. <http://www.theguardian.com/technology/2015/jul/24/internet-of-things-centralisation-dominance>
- **J. Singh** and J. Powles, “**Transparency and clear guidelines can help regulators through the fog**,” *Atlantic Community*, 13 Feb 2015.
- **J. Singh** and J. Powles, “**The Internet of Things - the next big challenge to our privacy**,” *The Guardian*, 28 Jul 2014. <http://www.theguardian.com/technology/2014/jul/28/internet-of-things-privacy>