



Dr. Yijun Yu

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<http://mcs.open.ac.uk/yy66>

1 Qualifications

- 1995 – 1998: **Department of Computer Science, Fudan University**, Ph.D. on Performance Engineering, Shanghai, China
- 1992 – 1995: **Department of Computer Science, Fudan University**, M.Sc. on Software Engineering, Shanghai, China
- 1988 – 1992: **Department of Computer Science, Fudan University**, B.Sc. on Computer Science, Shanghai, China

2 Academic Experience

- 10/06 – present: **Senior Lecturer** in Computing, The Open University, Milton Keynes, UK
- 01/17 – present: **Co-maintainer** in GNU, Bison, Free Software Foundation
- 03/08 – 04/08: **Visiting Professor** in Information Engineering and Computer Science, University of Trento, Trento, Italy
- 09/04 – 07/05: **Lecturer** in Department of Computer Science, University of Toronto, Toronto, Canada
- 01/03 – 09/06: **Research Associate** in Department of Computer Science, University of Toronto, Toronto, Canada
- 01/03 – 12/06: **Visiting Research Scientist** in Center for Advanced Studies (CAS), IBM Canada, Ltd, Toronto, Canada
- 01/99 – 12/02: **Post-Doctorate Researcher** in Department of Electrical Engineering (ELIS), Ghent University, Ghent, Belgium

3 Professional Membership

2001 – present	IEEE Computer Society	Member
2016 – present	AIAA	Member
2007 – present	BCS Computer Society	Member
2017 – present	BCS Requirements Engineering Specialist Group	Chair
2008 – present	International Software Quality Journal	Associated Editor
2018	NL4SE - Natural Language Modeling for Software Engineering	Programme co-Chair
2010 – present	RE	Programme Committee Member
2017 – present	ESEC/FSE	Programme Committee member
2017 – present	ICPC	Program Committee Member
2016 – present	SEAMS	Programme Committee member
2012 – present	CAiSE	Programme Committee member
2017 – present	Cloud Forensics	Programme Committee Member
2014 – 2016	ICSE	Programme Committee Member (Mentoring, Poster)
2012 – 2014	SANER (CSMR/WCRE)	Programme Committee member
2016	iRENIC	Programme Committee Member
2016	iStar	Program Co-Chair
2012 – 2013	SQM	Program Co-Chair
2012 – 2013	EASSY	Program Co-Chair
2012 – 2013	ESSoS	Programme Committee Member
2009	ICSME	Programme Committee Member
2005	RETR	Program Chair

4 Research Grants

He is interested in adapting evolving systems to meaningful contextual changes by developing automated software engineering methods such as reasoning, modularising, visualising, and restructuring, solving both fundamental and practical problems in the research areas of requirements engineering, maintenance and evolution, security and privacy, through empirical studies.

He is an investigator of the following granted research projects:

2018 – 2019	Live Blackbox - Tracking and Verifying Aircraft in Motion	USD 8,000, PI, Amazon AWS Award
2018	NESTA Drone Fly High Challenge (London)	£50000, co-I, NESTA
2018 – 2023	Secure Adaptable Usable Software Engineering (EP/R013144/1)	£1,330,879, co-I, EPSRC Platform Grant, UK
2017 – 2018	Live Blackbox - Tracking and Verifying Aircraft in Motion	USD 20,000, PI, Microsoft Azure
2017 – 2018	Ask Programming Aloud using Alexa Devices	£5,000, PI, Open University eSTeEM Teaching Innovation, UK
2012 – 2017	Adaptive Security And Privacy	€2,499,041, co-I, ERC Advanced Grant, EU
2013 – 2016	Adaptive Information Security: Relating Security Requirements to Design	USD 1,048,103.12, co-I, QNRF, Qatar
2015	Interdisciplinary Workshop on Cyber Security	£30K, co-I, British Council
2012 – 2013	Classifying Security Bug Reports using Statistical Machine Learning	£13,500, co-I, EPSRC, UK
2012 – 2013	Applications of bidirectional transformations in model-driven software engineering	JPY 1,800,000, PI, NII, Japan
2011 – 2012	Software Engineering for Usable Mobile Privacy Management	USD 74,800, co-I, Microsoft Award
2011 – 2012	Model-Driven Invariant Traceability for Engineering Adaptive Software Systems	RMB 40,000, PI, National Key Lab on SE
2011	Statistical Analysis of Software Bugs	£373, co-I, London Mathematics Society Scheme 7

2009 – 2011	SecureChange: Security Software Engineering for life-long Evolving Systems	€5 millions, co-I, FP7 STREP, EU
2009	Analysing requirements of low carbon alternatives of websites	£1,350, PI, European Regional Development Fund
2009 – 2011	Construction of Intelligent Self-Managing Software Systems (IPL-09-015)	RMB 20,000, PI, China
2008 – 2010	Research on Self-Adaptive Fault-Tolerant Software	RMB 500,000, co-I, China NSF
2007	Model-based Formal Security Analysis of Crypto-Protocol Implementations	£10,300, co-I, Royal Society, UK
2007	International Joint Project with NII Japan on Security Software Engineering	£11,860, co-I, Royal Society, UK

5 Selected Publications

- [1] P. Maia, L. Vieira, M. Chagas, Y. Yu, A. Zisman, and B. Nuseibeh, “Dragonfly: a tool for simulating self-adaptivedrone behaviours,” in *SEAMS’19: Proceedings of the 14th International Conference on Software Engineering for Adaptive and Self-Managing Systems*. IEEE Computer Society, 2019. [Online]. Available: <http://oro.open.ac.uk/59815/>
- [2] N. Bui, Y. Yu, and L. Jiang, “Bilateral dependency neural networks for cross-language algorithm classification,” in *The 26th IEEE International Conference on Software Analysis, Evolution, and Reengineering*, D. Lo and E. Shihab, Eds. IEEE Computer Society, 2019. [Online]. Available: <http://oro.open.ac.uk/58410/>
- [3] Y. Yu, “fast: Flattening abstract syntax trees for efficiency,” in *41st ACM/IEEE International Conference on Software Engineering*. ACM and IEEE, 2019, p. (In Press). [Online]. Available: <http://oro.open.ac.uk/59268/>
- [4] A. Bennaceur, T. T. Tun, Y. Yu, and B. Nuseibeh, “Requirements engineering,” in *Handbook of Software Engineering*, S. S. Cha, R. N. Taylor, and K. C. Kang, Eds. Springer, February 2019, pp. 51–92. [Online]. Available: <http://oro.open.ac.uk/53621/>
- [5] H. Liu, Y. Yu, B. Li, Y. Yang, and R. Jia, “Are smell-based metrics actually useful in effort-aware structural change-proneness prediction? an empirical study,” in *25th Asia-Pacific Software Engineering Conference*, December 2018. [Online]. Available: <http://oro.open.ac.uk/56504/>
- [6] Z. Yuan, X. Chen, J. Liu, Y. Yu, H. Sun, T. Zhou, and Z. Jin, “Simplifying the formal verification of safety requirements in zone controllers through problem frames and constraints based projection,” *IEEE Transactions on Intelligent Transportation Systems*, p. (In Press), 2018. [Online]. Available: <http://oro.open.ac.uk/56334/>
- [7] T. T. Tun, M. Yang, A. K. Bandara, Y. Yu, A. Nhlabatsi, N. Khan, K. M. Khan, and B. Nuseibeh, “Requirements and specifications for adaptive security: Concepts and analysis,” in *SEAMS’18: Proceedings of the 13th International Conference on Software Engineering for Adaptive and Self-Managing Systems*. New York: ACM, May 2018, pp. 161–171, **Best Paper Award**. [Online]. Available: <http://oro.open.ac.uk/54029/>
- [8] F. Peters, T. Tun, Y. Yu, and B. Nuseibeh, “Text filtering and ranking for security bug report prediction,” *IEEE Transactions on Software Engineering*, p. (Early Access), 2018. [Online]. Available: <http://oro.open.ac.uk/53059/>
- [9] X. Peng, L. Gu, T. H. Tan, J. Sun, Y. Yu, B. Nuseibeh, and W. Zhao, “Crowdservice: Optimizing mobile crowdsourcing and service composition,” *ACM Transactions on Internet Technology (TOIT)*, vol. 18, no. 2, pp. 1–25, 2018. [Online]. Available: <http://oro.open.ac.uk/49854/>
- [10] A. Bennaceur, T. T. Tun, A. K. Bandara, Y. Yu, and B. Nuseibeh, “Feature-driven mediator synthesis: Supporting collaborative security in the Internet of Things,” *ACM Trans. Cyber-Phys. Syst.*, vol. 2, no. 3, pp. 21:1–21:25, Jun. 2018. [Online]. Available: <http://doi.acm.org/10.1145/3134843>
- [11] P. A. Akiki, A. K. Bandara, and Y. Yu, “Visual simple transformations: Empowering end-users to wire internet of things objects,” *Transactions on Computer-Human Interaction*, vol. 24, no. 2, p. 140, 2017. [Online]. Available: <http://oro.open.ac.uk/48243/>
- [12] Y. Yu, M. Yang, and B. Nuseibeh, “Live blackboxes: Requirements for tracking and verifying aircraft in motion,” in *SCiA 2017: 4th Software Challenges in Aerospace Symposium, Dallas, Texas, USA*, January 2017. [Online]. Available: <http://oro.open.ac.uk/47163/>
- [13] T. Tun, B. Price, A. Bandara, Y. Yu, and B. Nuseibeh, “Verifiable limited disclosure: Reporting and handling digital evidence in police investigations,” in *iRENIC: 1st International Workshop on Requirements Engineering for Investigating and Countering Crime*, September 2016, **Best Vision Paper Award**. [Online]. Available: <http://oro.open.ac.uk/46914/>
- [14] J. Gray, V. N. L. Franqueira, and Y. Yu, “Forensically-sound analysis of security risks of using local password managers,” in *1st International Workshop on Requirements Engineering for Investigating and Countering Crime*. IEEE, September 2016, **Best Paper Award**. [Online]. Available: <http://oro.open.ac.uk/46871/>
- [15] P. A. Akiki, A. K. Bandara, and Y. Yu, “Engineering adaptive model-driven user interfaces,” *IEEE Transactions on Software Engineering*, vol. 42, no. 12, pp. 1118–1147, December 2016. [Online]. Available: <http://oro.open.ac.uk/45960/>
- [16] M. Barhamgi, A. K. Bandara, Y. Yu, K. Belhajjame, and B. Nuseibeh, “On protecting privacy in the cloud,” *IEEE Computer*, vol. 49, no. 2, pp. 68–72, January 2016. [Online]. Available: <http://oro.open.ac.uk/44987/>
- [17] Y. Yu, “The aftermath of mystery flight MH370: what can engineers do?” *Proceedings of the IEEE*, vol. 103, no. 11, pp. 1948–1951, September 2015. [Online]. Available: <http://oro.open.ac.uk/44381/>

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- [19] A. Nhlabatsi, T. Tun, N. Khan, Y. Yu, A. Bandara, K. M. Khan, and B. Nuseibeh, "'why can't i do that?': Tracing adaptive security decisions," *EAI Endorsed Transactions on Self-Adaptive Systems*, vol. 1, no. 1, 1 2015.
- [20] M. Yang, Y. Yu, A. Bandara, and B. Nuseibeh, "Adaptive sharing for online social networks: a trade-off between privacy risk and social benefit," in *IEEE TrustCom'14*, 2014, pp. 45–52, winner of the IEEE TrustCom'14 **Best Paper Award**. [Online]. Available: <http://oro.open.ac.uk/40549/>
- [21] C. Bailey, L. Montrieux, R. de Lemos, Y. Yu, and M. Wermelinger, "Run-time generation, transformation, and verification of access control models for self-protection," in *ACM/IEEE SEAMS'14*, 2014, pp. 135–144. [Online]. Available: <http://oro.open.ac.uk/39748/>
- [22] B. Chen, X. Peng, Y. Yu, B. Nuseibeh, and W. Zhao, "Self-adaptation through incremental generative model transformations at runtime," in *ACM/IEEE ICSE'14*, 2014, pp. 676–687. [Online]. Available: <http://oro.open.ac.uk/39627/>
- [23] B. Chen, X. Peng, Y. Yu, and W. Zhao, "Uncertainty handling in goal-driven self-optimization limiting the negative effect on adaptation," *Journal of Systems and Software*, vol. 88, p. (In press), 2014. [Online]. Available: <http://oro.open.ac.uk/39260/>
- [24] —, "Requirements-driven self-optimization of composite services using feedback control," *IEEE Transactions on Services Computing*, vol. 8, no. 1, pp. 107–120, 2015. [Online]. Available: <http://oro.open.ac.uk/39225/>
- [25] L. Pasquale, Y. Yu, M. Salehie, L. Cavallaro, T. T. Tun, and B. Nuseibeh, "Requirements-driven adaptive digital forensics," in *21st IEEE Requirements Engineering Conference (RE'13), 15-19 July, 2013, Rio de Janeiro, Brazil, 2013*, **Best Poster Award**.
- [26] P. Akiki, A. Bandara, and Y. Yu, "RBUIS: simplifying enterprise application user interfaces through engineering role-based adaptive behavior," in *Fifth ACM SIGCHI Symposium on Engineering Interactive Computing Systems (EICS 2013)*, 2013, pp. 3–12, **Best Paper Award**. [Online]. Available: <http://oro.open.ac.uk/37476/>
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- [29] Y. Yu, Y. Lin, Z. Hu, S. Hidaka, K. Hiroyuki, and L. Montrieux, "Maintaining invariant traceability through bidirectional transformations," in *34th International Conference on Software Engineering, ICSE 2012, June 2-9, 2012, Zurich, Switzerland, 2012*, pp. 540–550. [Online]. Available: <http://oro.open.ac.uk/32501/>
- [30] Y. Yu, T. T. Tun, and B. Nuseibeh, "Specifying and detecting meaningful changes in programs," in *26th ACM/IEEE International Conference on Automated Software Engineering, 2011*, 2011, pp. 273–282. [Online]. Available: <http://oro.open.ac.uk/29450/>
- [31] A. Bauer, J. Jürjens, and Y. Yu, "Run-time security traceability for evolving systems," *The Computer Journal*, vol. 54, no. 1, pp. 58–87, 2011, a preliminary version of this paper was presented at the BCS08 Visions of Computer Science Conference, held on 22-24 September 2008. [Online]. Available: <http://oro.open.ac.uk/21678/>
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- [35] A. Lapouchnian, Y. Yu, S. Liaskos, and J. Mylopoulos, "Requirements-driven design of autonomic application software," in *16th IBM Centre for Advanced Studies Conference*, October/Autumn 2006, **10 Year Most Influential Paper Award at CASCON'16**. [Online]. Available: <http://oro.open.ac.uk/7781/>
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A complete list of publications can be found at <http://mcs.open.ac.uk/yy66/index.php?page=publications>.