

Jeannette Chin PhD
Curriculum Vitae

Contact Information:

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Research Interests:

My primary research interest concerns ubiquitous computing. Current research contributions have been in the area of smart intelligent environments, end user programming and machine learning with analytics, and applications within: personalised services, smart or assisted living leveraging everyday artefacts and connectivity (IoT). My other research interests include affective computing, human and machine research, digital ecosystems, signals processing, analytics, trust and privacy.

Professional Bodies:

- **Fellow** of the British Computer Society (FBCS, since 2012)
- **Member** of the Institute of Electrical & Electronics Engineers (MIEEE, since 2010)
- **Fellow** of the Higher Education Academy (FHEA, since 2013)

Academic Qualifications:

- **BSc (1st class) Honours Internet Computing, 2003.** University of Essex, UK.
- **Doctor of Philosophy (PhD) in Computer Science, 2009.** 'Pervasive Interactive Programming' University of Essex, UK.

Other Qualifications:

- **Post Graduate Certificate in Learning and Teaching (PgCert), 2013.** Anglia Ruskin University, Cambridge, UK.
- **Cisco Academy Programme CCNA Instructor, 2013,** Anglia Ruskin University, UK.

Relevant Employment History:

- 07.2012 – present: **Senior Lecturer**, Department of Computing and Technology, Anglia Ruskin University, Cambridge, UK.
- 01.2010 – present: **Research Supervisor**, Essex University, UK.
- 01.2008 – 06.2012: **Senior Officer**, Institute for Social and Economic Research (ISER), Essex University, UK.
- 10.2003 – 09.2005: **Senior Research Officer**, Department of Computer Science, Essex University, UK.

Grants

1. Summer IoT Research grant (Principal Investigator, Anglia Ruskin University and Silicon Labs sponsored, £2,000) 2018
2. *Summer IoT Research grant (Principal Investigator, Anglia Ruskin University and industry sponsored, £3,000) 2017*
3. *Urban Living: Integrated Products and Services CR&D, "Hyperlocal Rainfall" (Principal investigator, InnovateUK, £230,566.00) ref 52301-399159, 2015-2017*
4. *Summer Research grant (co-Investigator; Anglia Ruskin University, £2,000) 2015*
5. *SmartLink: South-east-west Mobility for Advanced Research, Learning, Innovation, Network and Knowledge, (Co-Investigator; Principal Investigator Prof Alamgir Hossain; funded by EU Erasmus Mundus Action 2, REF: 552077-EM-1-UK ERA MUNDUS EMA21, €3,050,000), 2014-2018*
6. *Low carbon Document Management System, to support the digital record keeping in the healthcare sector in advance of the 'Paperless by 2018' NHS agenda. (Principal Investigator; Co-Investigator: Ayse Cufoglu, EU Low Carbon KEEP £112,367.66) 2014-2015*

7. Summer Research grant (Principal Investigator; Anglia Ruskin University, £2,000) 2014

Press Coverage and Magazines

- Cambridge News, By Chris Elliott – “Is it going to rain on your barbecue?” <http://www.cambridge-news.co.uk/news/cambridge-news/going-rain-your-barbecue-cambridge-13399037>, 28 JUL 2017 14:13
- Anglia Ruskin News “App can help banish those barbecue blues” <http://www.anglia.ac.uk/news/app-can-help-banish-those-barbecue-blues> 28 July 2017
- BBC Radio Essex, Live discussions and interviewed by Ronnie Barbour, 31 July 2017, 11.15. BBC Radio Essex has an audience figures of 185,000 listeners per week
- Cambridge Independent, interviewed by Adrian Peel, 1 August 2017, featured on printed copy, page 3, 2 August 2017
- “App hopes to beat the British weather”, <http://www.theenquirer.co.uk/app-hopes-to-beat-the-british-weather/> by Newsdesk, 3 August 2017
- “Rainfall predictions have never been so accurate”, First Issue, Anglia Ruskin University, 31 August 2017.
- “Academic-industrial collaboration leads to Hyperlocal Rainfall app”, IET Partner News, Issue 33, Summer 2017
- BBC Future, “The toaster that changed the world” by Theodora Sutcliffe, <http://www.bbc.com/storyworks/future/the-new-wave/innovation> 5 Sep 2017

Editorial boards

- Member of the Editorial Board of Journal of Ambient Intelligence and Smart Environments (JAISE) URL: <http://www.iospress.nl/journal/journal-of-ambient-intelligence-and-smart-environments>
- Member of the Editorial Board of Ambient Intelligence and Smart Environments (AISE) <http://www.iospress.nl/bookserie/ambient-intelligence-and-smart-environments/>
- Guest Editor of Journal (Special Issue) on Future Intelligent Environments (FIN), URL: http://www.mdpi.com/journal/jsan/special_issues/FIN

Reviewer/Referee/Examiner

- **EU grant proposals Referee** - Vidi programme, Technology Foundation STW - Scientific Research, NWO, and the Dutch Ministry of Economic Affairs (2016-2018), URL: <http://www.nwo.nl/en/funding/our-funding-instruments/nwo/innovational-research-incentives-scheme/vidi/index.html>
- **Reviewer** of *IEEE Transactions Journal on Human-Machine Systems (IF 1.8)*, *Journal on Sensor and Actuator Networks (JSAN)*, *Telematics and Informatics (IF 0.74)*, *MDPI* and *IEEE sponsored International Conferences*.
- **External Examiner** on UG and MSci courses, Coventry University, UK (2016 – 2020)

Research/PhD examiner:

- External for 3 PhDs; internal for 1 PhD

Higher Education External Examiner:

- BSc/MSci Ethical Hacking and Network Security, BSc Informatics, Coventry University, UK (2016 – 2020)

Other Professional Activities:

- **Member of IEEE-IES Subcommittee** on Computer Vision and Human-Machine Interaction in Industrial and Factory Automation http://ies-tcfa.dieei.unict.it/FA13_1415
- **Member of IEEE-IES TC** on Cloud and Wireless Systems for Industrial Applications <http://www.ee.cityu.edu.hk/~tccws/index.html>
- **Member** of ThinkTank the Internet of Things Council
- **Invited speaker:** Middlesex University, Cambridge Regional College

- **Member of the Steering Committee** of Sir Charles Kao University Technical College, Harlow, UK (2013)

Awards:

- Best Paper award nomination: "Understanding and personalising smart city services using machine learning, The Internet-of-Things and Big Data", ISIE, Edinburgh, 2017
- Made a Difference Awards nomination (nominated by Anglia Ruskin students), 2015-2017
- 1st prize for "Ubiquitous Hydration Checker" poster at Anglia Ruskin 5th Annual Faculty Conference, Chelmsford, 2015
- Institute Outstanding Contribution Prize, ISER, University of Essex, 2009
- PhD meritorious award, School of Computer Science, University of Essex, 2006-2007

Relevant HE teaching experience:

- **Module level Leadership:** Computer Systems (level 4; crossed-campus delivery); Network Routing (level 5, cross-campus delivery), Network Services Engineering and the Internet of Things (level 5, cross-campus delivery), Web Programming (level 5), Internet Services, Data Analytics and the Cloud (level 6), *with full responsibilities for:* cross-campus module management, module content design and development, module assessment (design and development)
- **Teaching:** Computer Systems (level 4); Network Routing (level 5), Network Services Engineering and the Internet of Things (level 5), Web Programming (level 5), Internet Server Engineering and the Cloud (level 6), Internet Services, Data Analytics and the Cloud (level 6), Computer Systems and Servers (level 7).

Computing Skills, Research Methods, Software and Tools:

Java, Ruby and Rails, Python, Agile Web applications and programming, Web services, Qualitative and Quantitative Research, SPSS, Cisco Packet Tracer, Wireshark, WEKA ML tool

Publications:

Journal and Book Publications

- **J. Chin**, D. Chik, V. Callaghan, N. Griffiths; "Towards an end-to-end ambient acoustic monitoring - a low-cost IoT implementation", submitted to: IEEE Access Journal, April 2018
- A. Tisan and **J. Chin**, "An End-User Platform for FPGA-Based Design and Rapid Prototyping of Feedforward Artificial Neural Networks With On-Chip Backpropagation Learning," in IEEE Transactions on Industrial Informatics, vol. 12, no. 3, pp. 1124-1133, June 2016. doi: 10.1109/TII.2016.2555936
- Holohan, **J. Chin**, V. Callaghan, P. Muhlau, "The Digital Home: a New Locus of Social Science Research". In The Handbook of Emergent Technologies in Social Research, Oxford University Press, 2010
- **Jeannette Chin**, Vic Callaghan, Graham Clarke "Soft-appliances: A vision for user created networked appliances in digital homes, Journal of Ambient Intelligence and Smart Environments", IOS Press, ISSN 1876-1364, Volume 1, Number 1 / 2009, pp 69-75
- **Jeannette Chin**, Victor Callaghan, Graham Clarke End-user Customisation of Intelligent Environments, Handbook of Ambient Intelligence and Smart Environments, Nakashima, Hideyuki; Aghajan, Hamid; Augusto, Juan Carlos (Eds.) 2009, Approx. 1205 p. 100 illus., Hardcover, ISBN: 978-0-387-93807-3, July 2009
- Victor Callaghan, Victor Zamudio, **Jeannette Chin** "Understanding Interactions in the Smart Home", Perada Magazine, (Pervasive Adaptation), 10.2417/2200904.1625, April 2009 (available at www.perada-magazine.eu/pdf/1625/1625.pdf)

- Callaghan V, Clarke G, **Chin J** "Some Socio-Technical Aspects Of Intelligent Buildings and Pervasive Computing Research", Intelligent Buildings International Journal, Vol 1 No 1, Published Autumn 2008, ISSN: 1750-8975, E-ISSN: 1756-6932
- Callaghan,V ., **Chin, J.S.Y** ., Shahi, A., Zamudio, V ., Clarke,G.S., Gardner,M., 'Domestic Pervasive Information Systems: End-user programming of digital homes', Journal of Management Information Systems, Special Edition on Pervasive Information Systems (volume editors Panos Kourouthanassis; George Giaglis), 24:01 (December 2007) pp.129-149 (inc), ME Sharp (New York), ISBN: 978-0-7656-1689-0
- **Chin J**, Callaghan V, Clarke G "An End User Tool for Customising Personal Spaces in Ubiquitous Computing Environments" Chapter in book called Ubiquitous Intelligence and Computing, part of series "Lecture Notes in Computer Science, ISBN 978-3-540-38091-7, Springer Berlin / Heidelberg pp1080-1089 Aug 2006
- Rukzio E, Leichtenstern K, Callaghan V, Holleis P , Schmidt A, **Chin J** "An Experimental Comparison of Physical Mobile Interaction Techniques: Touching, Pointing and Scanning", Lecture Notes in Computer Science, Springer Berlin / Heidelberg, Vol 4206/2006, ISSN 0302-9743, p87- 104, September 2006
- Callaghan V, Colley M, Hagraas H, **Chin J**, Doctor F, Clarke G, Programming iSpaces: A Tale of Two Paradigms, in Springer-Verlag book Intelligent Spaces: The Application of Pervasive ICT part of the series Computer Communications and Networks Steventon, Alan; Wright, Steve (Eds.) approx. 455 p. 162 illus. ISBN: 1-84628-002-January 2006
- Callaghan V, Clark G, Colley M, Hagraas H, **Chin JSY**, Doctor F "Intelligent Inhabited Environments", BT Technology Journal , Vol.22, No.3, Klywer Academic Publishers, Dordrecht, Netherlands, Pages: 233 - 247, ISSN:1358-3948, July 2004

Selection of Conference Papers

- **J. Chin**, V. Callaghan and I. Lam, "Understanding and personalising smart city services using machine learning, The Internet-of-Things and Big Data," 2017 IEEE 26th International Symposium on Industrial Electronics (ISIE), Edinburgh, 2017, pp. 2050-2055. doi: 10.1109/ISIE.2017.8001570
- N. Griffiths and **J. Chin**, "Towards unobtrusive ambient sound monitoring for smart and assisted environments," 2016 8th Computer Science and Electronic Engineering (CEEC), Colchester, United Kingdom, 2016, pp. 18-23. doi: 10.1109/CEEC.2016.7835882
- **Chin, J.**; Tisan, A., "An IoT-based pervasive body hydration tracker (PHT)," in Industrial Informatics (INDIN), 2015 IEEE 13th International Conference on, vol., no., pp.437-441, 22-24 July 2015. doi: 10.1109/INDIN.2015.7281774
- Tisan, A.; **Chin, J.**, "An end user platform for implementing Artificial Neutron Networks on FPGA," in Industrial Informatics (INDIN), 2015 IEEE 13th International Conference on , vol., no., pp.856-859, 22-24 July 2015. doi: 10.1109/INDIN.2015.7281848
- Cufoglu, A.; **Chin, J.**, "Towards an understanding classification of well-being for care of older people," in Industrial Informatics (INDIN), 2015 IEEE 13th International Conference on , vol., no., pp.1494-1499, 22-24 July 2015. doi: 10.1109/INDIN.2015.7281954
- **Chin, J.**; Tisan, A., "Ubiquitous Approach to Body Hydration Testing," in Intelligent Environments (IE), 2015 International Conference on, vol., no., pp.144-147, 15-17 July 2015. doi: 10.1109/IE.2015.30
- **Chin, J.**; Callaghan, V., "Recyclable, Eco-Friendly, On-Demand Bin (ReDBin)," in Intelligent Environments (IE), 2014 International Conference on, vol., no., pp.222-225, June 30 2014-July 4 2014. doi: 10.1109/IE.2014.42
- Scott, G.; **Chin, J.**, "A DIY approach to pervasive computing for the Internet of Things: A smart alarm clock," in Computer Science and Electronic Engineering Conference (CEEC), 2013 5th , vol., no., pp.57-60, 17-18 Sept. 2013. doi: 10.1109/CEEC.2013.6659445
- **Chin, J.**; Callaghan, V., "Educational Living Labs: A Novel Internet-of-Things Based Approach to Teaching and Research," in Intelligent Environments (IE), 2013 9th International Conference on, vol., no., pp.92-99, 16-17 July 2013. doi: 10.1109/IE.2013.48

- I. Ananta, V. Callaghan, **J. Chin**, M. Ball and M. Gardner, "Crowd Intelligence in Intelligent Environments: A Journey from Complexity to Collectivity," Intelligent Environments (IE), 2013 9th International Conference on, Athens, 2013, pp. 65-70. doi: 10.1109/IE.2013.40
- **Chin, J.**; Callaghan, V.; Winckles, A., "Personalising the iCampus: An End-User Programming Approach," in Web Intelligence and Intelligent Agent Technology (WI-IAT), 2012 IEEE/WIC/ACM International Conferences on, vol.3, no., pp.347-351, 4-7 Dec. 2012. doi: 10.1109/WI-IAT.2012.153
- **Chin, J.**; Callaghan, V., "A Show Me By Example Approach to Teaching Programming the Internet-of-Things in Immersive", 2nd European Immersive Education Summit, Paris, in proceeding pp. 57-66, 26-27 Nov. 2012
- Idham Ananta, Vic Callaghan, **Jeannette Chin** "Towards an Object Oriented Ambient Computing Model", Artificial Intelligence Techniques for Ambient Intelligence (AITAmI'11), Nottingham 26 July 2011
- A. C. Pena Rios, **J. S. Y. Chin** and V. L. Callaghan, "A Web Based Approach to Virtual Appliance Creation, Programming and Management," Intelligent Environments (IE), 2010 Sixth International Conference on, Kuala Lumpur, 2010, pp. 174-177. doi: 10.1109/IE.2010.39
- **J. S. Y. Chin**, V. Callaghan and G. Clarke, "A programming-by-example approach to customising digital homes," Intelligent Environments, 2008 IET 4th International Conference on, Seattle, WA, 2008, pp. 1-8. doi: 10.1049/cp:20081166
- Leichtenstern K., Rukzio E., Callaghan V., **Chin J.**, Schmidt A., "Mobile Interaction in Smart Environments", The 4th International Conference on Pervasive Computing, Pervasive2006, The Burlington Hotel, Dublin, Ireland, May 07-10, 2006
- Rukzio E; Leichtenstern K; Callaghan K; Holleis P; Schmidt A; **Chin J** "An Experimental Comparison of Physical Mobile Interaction Techniques: Touching, Pointing and Scanning", The 8th International Conference on Ubiquitous Computing (UBICOMP 2006), The Newport Beach Marriott Hotel, Irvine, California, September 19-21, Sept 2006
- **Chin J**, Callaghan V. Clarke G," An End User Tool for Customising Personal Spaces in Ubiquitous Environments ", IEEE the 3rd International Conference on Ubiquitous Intelligence and Computing (UIC-06), Wuhan and Three Gorges, China, 3-6 September 2006
- **J. S. Chin**, V. Callaghan and G. Clarke, "A Pervasive Computing Programming Approach for Non-Technical Users," 2006 First International Symposium on Pervasive Computing and Applications, Urumqi, 2006, pp. 235-240. doi: 10.1109/SPCA.2006.297575
- **J. S. Chin**, V. Callaghan and G. Clarke, "An End-User Programming Paradigm for Pervasive Computing Applications," 2006 ACS/IEEE International Conference on Pervasive Services, Lyon, 2006, pp. 325-328. doi: 10.1109/PERSER.2006.1652254
- **Chin JSY**, Callaghan V, Colley M, Hagraas H, Clarke G, End-User Programming in Pervasive Computing Environments, The 2005 International Conference on Pervasive Systems and Computing PSC-05, Monte Carlo Resort, Las Vegas, Nevada, USA, 27-30, June, 2005
- **J. S. Y. Chin**, V. Callaghan, M. Colley, H. Hagraas and G. Clarke, "Virtual appliances for pervasive computing: a deconstructionist, ontology based, programming-by-example approach," Intelligent Environments, 2005. The IEE International Workshop on (Ref. No. 2005/11059), 2005, pp. 152-161.
- Limb R, Armitage S, **Chin J**, Kalawsky R, Callaghan V, Bull P, Colley M, Hagraas H., "User interaction in a shared information space — A pervasive environment for the home," Perspectives in Pervasive Computing, London, 2005, pp. 139-150. doi: 10.1049/ic.2005.0796
- Zamudio, V., Callaghan, V., **Chin, J.** "A Multi-Dimensional Model for Task Representation and Allocation in Intelligent Environments", Proceedings of The Second International Symposium on Ubiquitous Intelligence and Smart Worlds. Nagasaki, Japan, 6-7 December, 2005
- **J. Chin**, V. Callaghan, G. Clarke, H. Hagraas, M. Colley, "Pervasive Computing and Urban Development: Issues for the individual and Society", Proceedings of the International

Research Foundation for Development (IRFD): UN-Habitat World Urban Forum, The Role of Cities in the Information Age, Barcelona, Spain, September 13-17th 2004

- **Chin J**, Callaghan V., 'Embedded-Internet Devices: A Means of Realising the Pervasive Computing Vision', Proceedings of the IADIS International Conference WWW/Internet 2003, ICWI 2003, Algarve Portugal, 2003

Patent:

Pervasive Interactive Programming - UK Patent No: GB 0523246.