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Citizenship: Singaporean

Education

2000 - 2006	PhD in Computer Science Carnegie Mellon University Pittsburgh, PA
1999 - 2000	Masters in Computer Science National University of Singapore
1995 - 1998	B.Sc in Computer Science (Honours) National University of Singapore

Position(s) Held

Jul 2013 - Now	Associate Professor (as of 1 July 2013) School of Information Systems Singapore Management University
Apr 2012 - Now	Director, The LiveLabs Urban LifeStyle Innovation Platform
Jun 2006 - Jun 2013	Assistant Professor (as of 1 July 2006) School of Information Systems Singapore Management University

Research Interests

1. Mobile and pervasive computing
2. Operating systems
3. Distributed computing
4. Software engineering
5. Usability of software systems
6. Usability testing
7. Networking

Conference Proceedings Article

1. "DeepSense: A GPU-based deep convolutional neural network framework on commodity mobile devices", by HUYNH, Loc Nguyen; BALAN, Rajesh Krishna; LEE, Youngki, 06/2016, *WearSys'16: Proceedings of the 2016 Workshop on Wearable Systems and Applications: June 30, 2016, Singapore*, 25 - 30, New York: ACM, http://dx.doi.org/10.1145/2935643.2935650. (Published, Peer-Reviewed)

2. "Demo: GPU-based image recognition and object detection on commodity mobile devices", by HUYNH, Loc N.; BALAN, Rajesh Krishna; LEE, Youngki, 06/2016, *MobiSys '16 Companion: Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, Singapore, June 26-30, 2016*, 111 - 111, New York: ACM, http://dx.doi.org/10.1145/2938559.2938577. (Published, Peer-Reviewed)

3. "LiveLabs: Building in-situ mobile sensing and behavioural experimentation testbeds", by JAYARAJAH, Kasthuri; BALAN, Rajesh Krishna; RADHAKRISHNAN, Meeralakshmi; MISRA, Archan; LEE, Youngki, 06/2016, *Mobisys '16: Proceedings of the 14th International Conference on Mobile Systems, Applications, and Services, Singapore, 25-30 June 2016*, 1 - 15, New York: ACM, http://dx.doi.org/10.1145/2906388.2906400. (Published, Peer-Reviewed)

4. "Jasper: Sensing gamers' emotions using physiological sensors", by HUYNH, Sinh; LEE, Youngki; PARK, Taiwoo; BALAN, Rajesh, 06/2016, *MobiGames '16: Proceedings of the 3rd Workshop on Mobile Gaming, Singapore, June 30*, 1 - 6, New York: ACM, http://dx.doi.org/10.1145/2934646.2934648. (Published, Peer-Reviewed)

5. "Small scale deployment of seat occupancy detectors", by HUY, Nguyen Huy Hoang; HETTIARACHCHI, Gihan; LEE, Youngki; BALAN, Rajesh Krishna, 06/2016, *WPA '16: Proceedings of the 3rd International on Workshop on Physical Analytics 2016: Singapore, June 26*, 25 - 30, New York: ACM, https://dx.doi.org/10.1145/2935651.2935660. (Published, Peer-Reviewed)

6. "Graph-Aided Directed Testing of Android Applications for Checking Runtime Privacy Behaviours", by CHAN, Joseph J. K.; JIANG, Lingxiao; TAN, Kiat Wee; BALAN, Rajesh K., 05/2016, *11th International Workshop on Automation of Software Test (AST)*, Austin, Texas: ACM. (Published, Peer-Reviewed)

7. "Demo: Profiling power utilization behaviours of smartwatch applications", by KENG, Joseph Chan Joo; JIANG, Lingxiao; BALAN Rajesh Krishna; LEE, Youngki; MISRA, Archan, 01/2016, *MobiSys '16 Companion: Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, Singapore, June 26-30, 2016*, 96 - 96, New York: ACM, http://dx.doi.org/10.1145/2938559.2938565. (Published, Peer-Reviewed)

8. "Demo: Real-world deployment of seat occupancy detectors", by HUY, Nguyen Huy Hoang; Hettiarachchi, Gihan; LEE, Youngki; BALAN, Rajesh Krishna, 01/2016, *MobiSys '16 Companion: Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, Singapore, June 26-30, 2016*, 103 - 103, New York: ACM, http://dx.doi.org/10.1145/2938559.2938588. (Published, Peer-Reviewed)

9. "Demo: Sensing gamers' emotions using physiological sensors", by HUYNH, Sinh; BALAN, Rajesh Krishna; LEE, Youngki, 01/2016, *MobiSys '16 Companion: Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, Singapore, June 26-30, 2016*, 104 - 104, New York: ACM, http://dx.doi.org/10.1145/2938559.2938576. (Published, Peer-Reviewed)

10. "Demo: Smartwatch based food diary and eating analytics", by SEN, Sougata; SUBBARAJU, Vigneshwaran; MISRA, Archan; LEE, Youngki; BALAN, Rajesh Krishna, 01/2016, *MobiSys '16 Companion: Proceedings of the 14th Annual International Conference on Mobile Systems, Applications, and Services Companion, Singapore, 26-30 June 2016*, 118 - 118, New York: ACM, http://dx.doi.org/10.1145/2938559.2938569. (Published, Peer-Reviewed)

11. "IoT+Small Data: Transforming In-Store Shopping Analytics and Services", by RADHAKRISHNAN, Meera; SEN, Sougata; SUBBARAJU, Vigneshwaran; MISRA, Archan; BALAN, Rajesh Krishna, 01/2016, *COMSNETS 2016 Workshop: Wild and Crazy Ideas on the interplay between IoT and Big Data (WACI): January 5-9, 2016, Bangalore, India*, Piscataway, NJ: IEEE. (Forthcoming, Peer-Reviewed)

12. "Real-time Detection of Seat Occupancy and Hogging", by NGUYEN, Huy Hoang; GULATI, Nakul; LEE, Youngki; BALAN, Rajesh Krishna, 11/2015, *IoT-App '15: Proceedings of the 2015 International Workshop on Internet of Things towards Applications: Seoul, Korea, November 1, 2015*, 29 - 34, Seoul, Korea: ACM, http://dx.doi.org/10.1145/2820975.2820981. (Published, Peer-Reviewed)

13. "Smartphones and BLE Services: Empirical Insights", by RADHAKRISHNAN, Meera; MISRA, Archan; BALAN, Rajesh Krishna; LEE, Youngki, 10/2015, *IEEE International Conference on Mobile Ad Hoc and Sensor Systems MASS 2015: October 19-22, Dallas, Texas: Proceedings*, 226 - 234, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/MASS.2015.92. (Published, Peer-Reviewed)

14. "Need accurate user behaviour?: Pay attention to groups!", by JEYARAJAH, Kasthuri; LEE, Youngki; MISRA, Archan; BALAN, Rajesh Krishna, 09/2015, *UbiComp '15: Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing: Osaka, Japan, September 7-11, 2015*, 855 - 866, New York: ACM, http://dx.doi.org/10.1145/2750858.2804289. (Published, Peer-Reviewed)

15. "Matchmaking Game Players on Public Transport", by ZHANG, Nairan; LEE, Youngki; BALAN, Rajesh Krishna, 05/2015, *Proceedings of the 2nd Workshop on Mobile Gaming (MobiGames)*, 31 - 36, Florence, Italy: ACM New York, http://dx.doi.org/10.1145/2751496.2751503. (Published, Peer-Reviewed)

16. "GameOn: p2p gaming on public transport", by ZHANG, Nairan, LEE, Youngki, RADHAKRISHNAN, Meera, BALAN, Rajesh Krishna, 05/2015, *MobiSys '15: Proceedings of the 13th Annual International Conference on Mobile Systems, Applications, and Services: May 19-22, 2015, Florence, Italy*, 105 - 119, New York: ACM, http://dx.doi.org/10.1145/2742647.2742660. (Published, Peer-Reviewed)

17. "QueueVadis: Queuing analytics using smartphones", by OKOSHI, Tadashi; LU, Vu; VIG, Chetna; LEE, Youngki; BALAN, Rajesh Krishna; MISRA, Archan, 04/2015, *IPSN '15: Proceedings of the 14th International Conference on Information Processing in Sensor Networks, Seattle, 13-16 April 2015*, 214 - 225, New York: ACM, http://dx.doi.org/10.1145/2737095.2737120. (Published, Peer-Reviewed)

18. "Using Infrastructure-provided Context Filters for Efficient Fine-grained Activity Sensing", by SUBBARAJU, Vigneshwaran; SEN, Sougata; MISRA, Archan; Chakraborty, Satyadip; BALAN, Rajesh Krishna, 03/2015, *IEEE International Conference on Pervasive Computing and Communication 13th PerCom: Proceedings: 23-27 March 2015, St Louis, MO*, 87 - 94, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/PERCOM.2015.7146513. (Published, Peer-Reviewed)

19. "The case for smartwatch-based diet monitoring", by SEN, Sougata; SUBBARAJU, Vigneshwaran; MISRA, Archan; BALAN, Rajesh Krishna; LEE, Youngki, 03/2015, *IEEE International Conference on Pervasive Computing and Communication Workshops: Proceedings: 23-27 March 2015, St Louis, MO*, 585 - 590, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/PERCOMW.2015.7134103. (Published, Peer-Reviewed)

20. "myDeal: A Mobile Shopping Assistant Matching User Preferences to Promotions", by MURALIDHARAN, Kartik; GOTTIPATI, Swapna; JIANG, Jing; RAMSUBBU, Narayan; BALAN, Rajesh Krishna, 12/2014, *MOBIQUITOUS '14: Proceedings of the 11th International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services: 2-5 December 2014, London*, 238 - 247, Brussels: ICST, http://dx.doi.org/10.4108/icst.mobiquitous.2014.257708.

(Published, Peer-Reviewed)

21. "GruMon: Fast and accurate group monitoring for heterogeneous urban spaces", by SEN, Rijurekha; LEE, Youngki; JAYARAJAH, Kasthuri; BALAN, Rajesh Krishna; MISRA, Archan, 11/2014, *SenSys '14: Proceedings of the 12th ACM Conference on Embedded Network Sensor Systems: November 3-6, 2014, Memphis, TN*, 46 - 60, New York: ACM, http://dx.doi.org/10.1145/2668332.2668340. (Published, Peer-Reviewed)

22. "Cloud-based query evaluation for energy-efficient mobile sensing", by MO, Tianli; SEN, Sougata; LIPYEOW, Lim; MISRA, Archan; BALAN, Rajesh Krishna; LEE, Youngki, 07/2014, *2014 IEEE 15th International Conference on Mobile Data Management: IEEE MDM 2014: 15-18 July 2014, Brisbane, Australia*, 221 - 224, Los Alamitos, CA: IEEE Computer Society, http://dx.doi.org/10.1109/MDM.2014.33. (Published, Peer-Reviewed)

23. "The case for human-centric personal analytics", by LEE, Youngki; BALAN, Rajesh Krishna, 06/2014, *WPA'14: Proceedings of the 2014 ACM Workshop on Physical Analytics: June 16, 2014, Bretton Woods, NH*, 25 - 29, New York: ACM, http://dx.doi.org/10.1145/2611264.2611267. (Published, Peer-Reviewed)

24. "Handling Location Uncertainty in Event Driven Experimentation", by MURALIDHARAN, Kartik; BALAN, Rajesh Krishna; SESHAN, Srini; RAMASUBBU, Narayan, 05/2014, *EBS'14: proceedings of the 8th ACM International Conference on Distributed Event-Based Systems: May 26-29, 2014, Mumbai, India*, 206 - 212, New York: ACM. (Published, Peer-Reviewed)

25. "Deal or No Deal: Catering to User Preferences", by MURALIDHARAN, Kartik; GOTTIPATI, Swapna; BALAN, Rajesh Krishna, 03/2014, *2014 IEEE International Conference on Pervasive Computing and Communication (PERCOM) Workshops: 24-28 March 2014, Budapest, Hungary: Proceedings*, 199 - 202, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/PerComW.2014.6815200. (Published, Peer-Reviewed)

26. "LiveLabs: Building An an in-situ real-time mobile experimentation testbed", by BALAN, Rajesh Krishna; MISRA, Archan; LEE, Youngki, 02/2014, *Proceedings of the 15th Workshop on Mobile Computing Systems and Applications HotMobile '14, Santa Barbara, CA, February 26-27, 2014*, New York: ACM, http://dx.doi.org/10.1145/2565585.2565597. (Published, Peer-Reviewed)

27. "Barometric Phone Sensors: More Hype than Hope!", by MURALIDHARAN, Kartik; KHAN, Azeem Javed; MISRA, Archan; BALAN, Rajesh Krishna; AGARWAL, Sharad, 02/2014, *Proceedings of the 15th Workshop on Mobile Computing Systems and Applications HotMobile '14, Santa Barbara, CA, February 26-27, 2014*, New York: ACM, http://dx.doi.org/10.1145/2565585.2565596. (Published, Peer-Reviewed)

28. "Mobile Platform and Application Research at SMU LiveLabs", by GOTTIPATI, Swapna; Sebastian, Jeena; TUAN, Luong Trung; TAN, Kiat Wee; CHAN, Joseph; KENG, Joo; Muralidharan, Kartik; Okoshi, Tadashi; LEE, Youngki; MISRA, Archan; BALAN, Rajesh Krishna, 01/2014, *2014 6th International Conference on Communication Systems and Networks (COMSNETS): January 7-10, 2014, Bangalore, India*, 1 - 4, NEW YORK: IEEE, http://dx.doi.org/10.1109/COMSNETS.2014.6734911. (Published, Peer-Reviewed)

29. "The challenge of continuous mobile context sensing", by BALAN, Rajesh Krishna; LEE, Youngki; TAN, Kiat Wee; MISRA, Archan, 01/2014, *2014 Sixth International Conference on Communication Systems and Networks (COMSNETS): 6-10 January 2014, Bangalore*, 1 - 8, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/COMSNETS.2014.6734869. (Published, Peer-Reviewed)

30. "Challenges and Opportunities in Taxi Fleet Anomaly Detection", by Sen, Rijurekha; BALAN, Rajesh Krishna, 11/2013, *SENSEMINE'13: Proceedings of the 1st International Workshop on Sensing and Big Data Mining (SenseMine)*, 1 - 6, Rome, Italy: ACM, http://dx.doi.org/10.1145/2536714.2536715. (Published, Peer-Reviewed)

31. "Focus: A Usable & Effective Approach to OLED Display Power Management", by TAN, Kiat Wee; Okoshi, Tadashi; MISRA, Archan; BALAN, Rajesh Krishna, 09/2013, *UbiComp '13 Proceedings of the 2013 ACM international joint conference on Pervasive and ubiquitous computing*, 573 - 582, Zurich, Switzerland. (Published, Peer-Reviewed)

32. "The Case for Mobile Forensics of Private Data Leaks: Towards Large-Scale User-Oriented Privacy Protection", by Chan, Joseph Joo Keng; TAN, Kiat Wee; JIANG, Lingxiao; BALAN, Rajesh Krishna, 07/2013, *APSys '13 Proceedings of the 4th Asia-Pacific Workshop on Systems*, Singapore: ACM New York. (Published, Peer-Reviewed)

33. "CAMEO: A Middleware for Mobile Advertisement Delivery", by Khan, Azeem Javed Iqbal; Jeyarajah, Kasthuri; HAN, Dongsu; MISRA, Archan; BALAN, Rajesh Krishna; SESHAN, Srinivasan, 06/2013, *MobiSys '13 Proceeding of the 11th annual international conference on Mobile systems, applications, and services*, 125 - 138, New York, NY, USA: ACM, http://dx.doi.org/10.1145/2462456.2464436. (Published, Peer-Reviewed)

34. "Experiences with Performance Tradeoffs in Practical, Continuous Indoor Localization", by Khan, Azeem Javed; Ranjan, Vikash; Luong, Trung-Tuan; BALAN, Rajesh Krishna; MISRA, Archan, 06/2013, *14th International Symposium on a World of Wireless, Mobile and Multimedia Networks (WoWMoM), Madrid, Spain, June 4-7, 2013: Proceedings*, 1 - 9, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/WoWMoM.2013.6583387. (Published, Peer-Reviewed)

35. "The Case for Cloud-Enabled Mobile Sensing Services", by SEN, Sougata; MISRA, Archan; BALAN, Rajesh Krishna; LIM, Lipyeow, 08/2012, *MCC '12: Proceedings of the first edition of the MCC Workshop on Mobile Cloud Computing: August 17, 2012, Helsinki, Finland*, 53 - 58, New York: ACM, http://dx.doi.org/10.1145/2342509.2342521. (Published, Peer-Reviewed)

36. "Adaptive Display Power Management for OLED Displays", by TAN, Kiat Wee; BALAN, Rajesh Krishna, 08/2012, *MobiGames'12: Proceedings of the ACM International Workshop on Mobile Gaming: August 13, 2012, Helsinki, Finland*, 25 - 30, New York: ACM, http://dx.doi.org/10.1145/2342480.2342487. (Published, Peer-Reviewed)

37. "Dynamic Lookahead Mechanism for Conserving Power in Multi-Player Mobile Games", by Thirugnanam, Karthik; Anand, Bhojan; Sebastian, Jeena; Kannan, Pravein; Ananda, Akhihebbal L.; BALAN, Rajesh Krishna; Chan, Mun Choon, 03/2012, *Proceedings 2012 IEEE INFOCOMM International Conference on Computer Communications, Orlando, Florida, 25-30 March 2012*, 2721 - 2725, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/INFCOM.2012.6195687. (Published, Peer-Reviewed)

38. "HuMan: Creating Memorable Fingerprints of Mobile Users", by PAYAS, Gupta; TAN, Kiat Wee; RAMASUBBU, Narayanasamy; LO, David; GAO, Debin; BALAN, Rajesh Krishna, 03/2012, *2012 IEEE International Conference on Pervasive Computing and Communications Workshops, Lugano, Switzerland, 19-23 March 2012: Proceedings*, 479 - 482, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/PerComW.2012.6197540. (Published, Peer-Reviewed)

39. "Adaptive Display Power Management for Mobile Games", by ANAND, Bhojan; THIRUGNANAM, Karthik; SEBASTIAN, Jeena; KANNAN, Pravein G.; ANANDA, Akhihebbal L.; CHAN, Mun Choon; BALAN, Rajesh Krishna, 07/2011, *MobiSys '11: Proceedings of the 9th International Conference on Mobile Systems, Applications, and Services: June 28 - July 1, 2011, Bethesda, MD*, 57 - 70, New York: ACM, http://dx.doi.org/10.1145/1999995.2000002. (Published, Peer-Reviewed)

40. "Providing Real-Time Feedback for a Large Taxi Fleet", by BALAN, Rajesh Krishna; KHOA, Nguyen Xuan; JIANG, Lingxiao, 07/2011, *MobiSys '11: Proceedings of the 9th International Conference on Mobile Systems, Applications and Services: June 28 - July 1, 2011, Bethesda, MD*, 99 - 112, New York: ACM, http://dx.doi.org/10.1145/1999995.2000006. (Published, Peer-Reviewed)

41. "Configuring Global Software Teams: A Multi-Company Analysis of Productivity, Quality, and Profits", by RAMASUBBU, Narayanasamy; Cataldo, Marcelo; BALAN, Rajesh Krishna; Herbsleb,

James, 05/2011, *ICSE 2011: Proceedings of the 2011 International Conference on Software Engineering: May 21-28, 2011, Waikkiki, Honolulu*, 261 - 270, New York: ACM, http://dx.doi.org/10.1145/1985793.1985830. (Published, Peer-Reviewed)

42. "PGTP: Power Aware Game Transport Protocol for Multi-Player Mobile Games", by Anand, Bhojan; Sebastian, Jeena; SOH, Yu Ming; Ananda, Akhihebbal L.; CHAN, Mun Choon; BALAN, Rajesh Krishna, 02/2011, *International Conference on Communications and Signal Processing (ICCSP), 2011: 10 - 12 February 2011, [Calicut], Kerala, India*, 399 - 404, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/ICCSP.2011.5739346. (Published, Peer-Reviewed)

43. "ARIVU: Power-Aware Middleware for Multiplayer Mobile Games", by Bhojan, Anand; Thirugnanaman, Karthik; LE, Thanh Long; Pham, Duc-Dung; Ananda, Akhihebbal L.; BALAN, Rajesh Krishna; Chan, Mun Choon, 11/2010, *NetGames 2010: 2010 9th Annual Workshop on Network and Systems Support for Games, November 16-17, 2010, Taipei, Taiwan*, 1 - 6, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/NETGAMES.2010.5679571. (Published, Peer-Reviewed)

44. "Evolution of a Bluetooth Test Application Product Line: A Case Study", by RAMASUBBU, Narayanasamy; BALAN, Rajesh Krishna, 11/2010, *Proceedings of the 18th ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE), November 7 - 11, 2010, Santa Fe, NM*, 107 - 116, New York: ACM, http://dx.doi.org/10.1145/1882291.1882309. (Published, Peer-Reviewed)

45. "Game Action Based Power Management for Multiplayer Online Game", by Bhojan, Anand; Ananda, A. L.; Chan, Mun Choon; Long, Le Thanh; BALAN, Rajesh Krishna, 08/2009, *First ACM SIGCOMM Workshop on Networking, Systems, Applications on Mobile Handhelds (MobiHeld)*, Barcelona, Spain: ACM, http://dx.doi.org/10.1145/1592606.1592619. (Published, Peer-Reviewed)

46. "mFerio: The Design and Evaluation of a Peer-to-Peer Mobile Payment System", by BALAN, Rajesh Krishna; RAMASUBBU, Narayanasamy; Prakobphol, Komsit; Christin, Nicolas; Hong, Jason, 06/2009, *MobiSys'09: Proceedings of the 7th ACM International Conference on Mobile Systems, Applications and Services, June 22-25, 2009, Krako w, Poland*, 291 - 305, New York: ACM, http://dx.doi.org/10.1145/1555816.1555846. (Published, Peer-Reviewed)

47. "The Impact of Process Choice in High Maturity Environments: An Empirical Analysis", by RAMASUBBU, Narayanasamy; BALAN, Rajesh Krishna, 05/2009, *IEEE 31st International Conference on Software Engineering: ICSE 2009: 16-24 May 2009, Vancouver, Canada: Proceedings*, 529 - 539, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/ICSE.2009.5070551. (Published, Peer-Reviewed)

48. "User Guidance of Resource-Adaptive Systems", by SOUSA, JoÃ£o Pedro; BALAN, Rajesh Krishna; Poladian, Vahe; Garlan, David; Satyanarayanan, Mahadev, 07/2008, *Proceedings of the Third International Conference on Software and Data Technologies: Porto, Portugal, July 5 - 8, 2008*, 36 - 44, Porto, Portugal: INSTICC Press, http://worldcat.org/isbn/9789898111524. (Published, Peer-Reviewed)

49. "Towards Governance Schemes for Distributed Software", by RAMASUBBU, Narayanasamy; BALAN, Rajesh Krishna, 05/2008, *SDG '08: Proceedings of the 1st International Workshop on Software Development Governance: 2008, Leipzig, Germany, May 12-12, 2008*, 11 - 14, New York: ACM, http://dx.doi.org/10.1145/1370720.1370725. (Published, Peer-Reviewed)

50. "Globally Distributed Software Development Project Performance: An Empirical Analysis", by RAMASUBBU, Narayanasamy; BALAN, Rajesh Krishna, 09/2007, *ESEC/FSE 2007: The 6th Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering: Dubrovnik, Croatia, September 3-7, 2007*, 125 - 134, New York: ACM, http://dx.doi.org/10.1145/1287624.1287643. (Published, Peer-Reviewed)

51. "Simplifying Cyber Foraging for Mobile Devices", by BALAN, Rajesh Krishna; Gergle, Darren; Satyanarayanan, Mahadev; Herbsleb, James, 06/2007, *MobiSys '07: Proceedings of the 5th*

International Conference on Mobile Systems, Applications and Services: San Juan, Puerto Rico, June 11-13, 2007, 272 - 285, New York: ACM, http://dx.doi.org/10.1145/1247660.1247692. (Published, Peer-Reviewed)

52. "Matrix: Adaptive Middleware for Distributed Multiplayer Games", by BALAN, Rajesh Krishna; Ebling, Maria; Castro, Paul; MISRA, Archan, 12/2005, *Middleware 2005: ACM/IFIP/USENIX 6th International Middleware Conference, Grenoble, France, November 28 - December 2, 2005: Proceedings*, 390 - 400, Berlin: Springer Verlag, http://dx.doi.org/10.1007/11587552_20. (Published, Peer-Reviewed)

53. "Tactics-Based Remote Execution for Mobile Computing", by BALAN, Rajesh Krishna; SATAYANARAYANA, Mahadev; PARK, SoYoung; OKOSHI, Tadashi, 05/2003, *MobiSys '03: Proceedings of the 1st International Conference on Mobile Systems, Applications and Services: San Francisco, May 5-8, 2003*, 273 - 286, New York: ACM, http://dx.doi.org/10.1145/1066116.1066125. (Published, Peer-Reviewed)

54. "The Case for Cyber Foraging", by BALAN, Rajesh Krishna; Flinn, Jason; Satyanarayanan, Mahadev; Sinnamohideen, Shafeeq; YANG, Hen-I, 07/2002, *EW 10: Proceedings of the 10th Workshop on ACM SIGOPS European Workshop: Saint Emillion, France, July 1, 2002*, 87 - 92, New York: ACM, http://dx.doi.org/10.1145/1066116.1066125. (Published, Peer-Reviewed)

55. "TCP HACK: TCP Header Checksum Option to Improve Performance Over Lossy Links", by BALAN, Rajesh Krishna; LEE, Boon Peng; KUMAR, Renjish; Lillykutty, Jacob; Seah, Winston; Ananda, A. L., 04/2001, *INFOCOM 2001: Proceedings of 20th Annual Joint Conference on Computer Communications, 22-26 April 2001, Anchorage, Alaska*, 309 - 318, Piscataway, NJ: IEEE, http://dx.doi.org/10.1109/INFCOM.2001.916713. (Published, Peer-Reviewed)

Journal Article

1. "ARIVU: Making Networked Mobile Games Green: A Scalable Power-Aware Middleware", by BHOJAN, Anand; Akhihebbal L., Ananda L.; CHAN, Mun Choon; BALAN, Rajesh Krishna, 02/2012, *Mobile Networks and Applications*, 17, 1, 21 - 28, http://dx.doi.org/10.1007/s11036-011-0312-8. (Published, Peer-Reviewed)

2. "The Digital Wallet: Opportunities and Prototypes", by BALAN, Rajesh Krishna; RAMASUBBU, Narayanasamy, 04/2009, *Computer*, 42, 4, 100 - 102, http://dx.doi.org/10.1109/MC.2009.134. (Published, Peer-Reviewed)

3. "Powerful Change Part 2: Reducing the Power Demands of Mobile Devices", by BALAN, Rajesh Krishna, 01/2004, *IEEE Pervasive Computing*, 3, 2, 71 - 73, http://dx.doi.org/10.1109/mprv.2004.1316822. (Published, Peer-Reviewed)

4. "Avoiding Congestion Collapse on the Internet Using TCP Tunnels", by LEE, Boon Peng; BALAN, Rajesh Krishna; Lillykutty, Jacob; Seah, Winston; Ananda, A. L., 06/2002, *Computer Networks*, 39, 2, 207 - 219, http://dx.doi.org/10.1016/s1389-1286(01)00311-5. (Published, Peer-Reviewed)

5. "TCP Hack: TCP Header Checksum Option to Improve Performance over Lossy Links", by BALAN, Rajesh Krishna; LEE, Boon Peng; KUMAR, Renjish; Lillykutty, Jacob; Seah, Winston; Ananda, A. L., 01/2002, *Computer Networks*, 39, 4, 347 - 361, http://dx.doi.org/10.1016/s1389-1286(01)00310-3. (Published, Peer-Reviewed)

6. "Multi-Modal Network Protocols", by BALAN, Rajesh Krishna; Akella, Aditya; Seshan, Srini, 01/2002, *Computer Communication Review*, 32, 1, 60 - 60, http://dx.doi.org/10.1145/510726.510734. (Published, Peer-Reviewed)

Report

1. "Spatio-Temporal Efficiency in a Taxi Dispatch System", by SANTANI, Darshan; BALAN, Rajesh Krishna; WOODARD, C. Jason, 10/2008. (Published)

2. "Dimorphic Computing", by Lagar-Cavilla, H. Andreas; Tolia, Niraj; BALAN, Rajesh Krishna; De Lara, Eyal; Satyanarayanan, Mahadev; O'Halloran, David, 04/2006, Pittsburgh: Carnegie Mellon University, http://repository.cmu.edu/pdl/43/. (Published)

3. "Giving Users the Steering Wheel for Guiding Resource-Adaptive Systems", by SOUSA, Joao; BALAN, Rajesh Krishna; Poladian, Vahe; Garlan, David; Satyanarayanan, Mahadev, 12/2005, Pittsburgh: Carnegie Mellon University. (Published)

4. "Meeting the Software Engineering Challenges of Adaptive Mobile Applications", by BALAN, Rajesh Krishna; SOUSA, Joao; SATYANARAYANAN, Mahadev, 02/2003, Pittsburgh: Carnegie Mellon University, http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.13.728. (Published)

Thesis

1. "Simplifying Cyber Foraging", Rajesh Krishna Balan, Ph.D. Thesis, CMU-CS-06-120, Computer Science Department, Carnegie Mellon University, 291 pages, May 2006

2. "CHAMELEON - A System for Adaptive QoS Provisioning", Rajesh Krishna Balan, Masters Thesis, School of Computing, National University of Singapore, August 2000

3. "Distributed Computing for the CAVE Virtual Reality Display Environment", Rajesh Krishna Balan, Honours Thesis, School of Computing, National University of Singapore, November 1998

Patents

1. (Application / Filed): Publication number WO1997045879 A1
   An apparatus is described for converting heat energy into electrical energy. A heat source (2) produces heat radiation of a broad band spectrum. A rare earth (Ytterbia/Erbia) selective emitter (4) absorbs the heat radiation from the heat source and reradiates narrow band radiation. The narrow band radiation is absorbed by thermophotovoltaic cells (6) that contain multiple quantum well structures and convert the narrow band radiation into electrical energy.1 December 1997

Thesis Chairman (Ph. D)

1. Kartik Muralidharan, August 2010 - August 2015

Awards, Recognition and Honors

1. Co-General Chair for MobiSys 2016, June 2016 - June 2016

2. Lee Kong Chian Fellowship, January 2015 - December 2016

3. Technical Program Committee Chair for HotMobile 2012, February 2012

4. Awarded a SMU Innovation Award (Innovative Ideas category) for the myDeal Research System , October 2011

5. 2011 ACM SIGSOFT Distinguished Paper Award. Presented at ICSE 2011, June 2011

6. 2007 ACM SIGSOFT Distinguished Paper Award. Presented at FSE 2007, September 2007

Conference Program Committee and Advisory Services

1. Program Committee Member, 13th IEEE International Conference on Sensing, Communication and Networking (SECON), IEEE, June 2016 - June 2016

2. Program Committee Member, 14th IEEE International Conference on Pervasive Computing and Communications (PerCom), IEEE, 03.2016 - March 2016

3. Poster and Demo Chair, 17th International Conference on Distributed Computing and Networking (ICDCN)
, ICDCN, January 2016 - January 2016

4. Poster and Demo Chair, The 13th ACM Conference on Embedded Networked Sensor Systems (SenSys) , ACM, November 2015 - November 2015

5. Program Committee Member, 12th EAI International Conference on Mobile and Ubiquitous Systems: Computing, Networking and Services (MobiQuitous), EAI, July 2015 - July 2015

6. Program Committee Member, 6th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys)
, ACM, July 2015 - July 2015

7. Technical Program Committee Group Leader, The 12th IEEE International Conference on Sensing, Communication and Networking (SECON), IEEE, June 2015 - June 2015

8. Workshop Chair, The 10th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2015 - June 2015

9. Program Committee Member, The 11th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2015 - June 2015

10. Program Committee Member, The 10th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2014

11. Program Co-Chair, The ACM Multimedia Systems Conference Special Session on Mobile Multimedia Sensing (MMSys), ACM SIGMM, March 2014

12. Steering Committee Member, The Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SIGMOBILE, February 2014

13. Program Co-Chair, The Seventh International Conference on Mobile Computing and Ubiquitous Networking (ICMU), Information Processing Society Of Japan, January 2014

14. Program Committee Member, The 4th Asia-Pacific Workshop on Systems (APSys), ACM SIGOPS and ACM SIGCOMM, July 2013

15. Program Committee Member, The 9th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2013

16. Poster and Demo Chair, The 3rd Asia-Pacific Workshop on Systems (APSys), ACM SIGOPS and ACM SIGCOMM, July 2012

17. Program Committee Member, The 3rd Asia-Pacific Workshop on Systems (APSys), ACM SIGOPS and ACM SIGCOMM, July 2012

18. Program Committee Member, The Thirteenth International Symposium on Mobile Ad Hoc Networking and Computing (MobiHoc), ACM SIGMOBILE, June 2012

19. Program Committee Member, The 9th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2012

20. Program Committee Member, The International Conference on Pervasive Computing and Communications (Percom), IEEE, March 2012

21. Program Chair, The Thirteenth Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SIGMOBILE, February 2012

22. Program Committee Member, The 9th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2011

23. Poster and Demo Chair, The Twelfth International Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SigMobile, March 2011

24. Program Committee Member, The 8th Annual International Conference on Mobile Systems, Applications and Services (MobiSys), ACM SIGMOBILE, June 2010

25. Poster and Demo Chair, The 8th Annual International Conference on Mobile Systems, Applications, and Services (MobiSys), ACM SIGMOBILE, June 2009

26. Program Committee Member, The Tenth International Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SIGMOBILE, February 2009

27. Doctoral Consortium Chair, The Tenth International Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SIGMOBILE, February 2009

28. Program Committee Member, The Eighth International Workshop on Mobile Computing Systems and Applications (HotMobile), ACM SIGMOBILE, February 2007

29. Program Committee Member, System Support for Ubiquitous Computing (UbiSys) Workshop, ACM SIGCOMM, August 2004

Grants

1. The LiveLabs Urban LiveStyle Innovation Platform funded by Innovation Testbed Fund of the Interactive Digital Media Program Office of the Media Development Authority of Singapore, April 2012 - April 2017

2. Ministry of Education (MOE) ACRF Tier-2 Grant entitled "Energy-Efficient Stream Analytics on Smartphones for Realtime Contextual Insight", January 2012 - January 2015

3. Ministry of Education (MOE) ACRF Tier-2 Grant entitled "Power and Network-Aware Software Infrastructure for Multiplayer Mobile Games", December 2008 - May 2012

4. USENIX student research grant for work on Cyber Foraging, January 2002 - January 2003

Scholarships

1. IBM Ph.D. Fellowship Recipient. This is a highly prestigious fellowship awarded annually to the top Ph.D. candidates worldwide, 2004 - 2005

2. Agency for Science and Technology (A*STAR) Research International Fellowship Recipient , April 2002 - April 2003

Professional Activities

1. Reviewer for submissions to INFOCOMM, SIGCOMM, MobiCom, MobiSys, OSDI, SOSP, UbiComp, Pervasive, IEEE Transactions on Mobile Computing, and the IEEE Pervasive Computing Magazine, 2006 - Now

Conducting Workshops

1. Co-ran the "SIGCOMM Workshop on Mobile Gaming" which was co-located with the ACM SIGCOMM conference in Helsinki, Finland, August 2012

2. Co-ran the "Next generation mobile computing for dynamic personalised travel planning" workshop co-located with the 10th International Conference on Mobile Systems, Applications and Services (MobiSys) in the Lake District, England., June 2012