# CURRICULUM VITAE

## PERSONAL DATA

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|---|---|
| **Name** | **LANNY SITANAYAH** |
| **Date of birth** | 19 April 1983 |
| **Place of birth** | Ambon, Indonesia |
| **Nationality** | Indonesian |
| **Visa status** | Require sponsorship to work full time |
| **Expected PhD finish date** | September 2012 |

## CONTACT INFORMATION


**CAMPUS ADDRESS**

Mobile & Internet Systems Laboratory
Lab 2-09 Western Gateway Building
Department of Computer Science
University College Cork
Cork, Ireland
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Homepage: http://www.cs.ucc.ie/~ls3

**RESIDENTIAL ADDRESS**

Flat 1, Avril House
Magazine Road
Cork, Ireland
Tel: (+353) 86 4022 904


## RESEARCH INTEREST

My research interests are in design and test of real-time, adaptive and distributed systems; including wireless, mobile, ad hoc and sensor networks.

## EDUCATION

**PhD Candidate** **2008 – present**
Department of Computer Science, University College Cork, Ireland
Research topic: Communication protocols and topology design for emergency response using wireless sensor networks.

**Master of Science** (by Research) **2006 – 2009**
School of Computer Science and Software Engineering, The University of Western Australia, Australia
Research topic: Efficient centralized and distributed algorithms for accurate boundary detection and object tracking in wireless sensor networks.

**Graduate Diploma in Computer Science** (upgraded to MSc) **2006**
School of Computer Science and Software Engineering, The University of Western Australia, Australia
GPA: 7.00 / 7.00

**Bachelor of Engineering** **2000 – 2004**
Informatics Engineering Department, Faculty of Engineering, De La Salle Catholic University, Indonesia
GPA: 4.00 / 4.00

## HONORS AND AWARDS

**NEMBES PhD Studentship** **Dec 2008 – present**
Recipient of a scholarship for postgraduate study

**IFIP Wireless Days 2011 Student Travel Grant Award** **Oct 2011**
Recipient of the student travel grant award to attend the conference

The University of Western Australia **May 2007**
Recipient of **the Adept Electronic Solutions Prize** for outstanding academic achievement in CITS4240 Computer Vision in Semester 1 2006

**Australian Development Scholarship** **Jan 2006 – Nov 2008**
Recipient of a scholarship for postgraduate study

**Australian Development Scholarship** **Aug 2005 – Oct 2005**
Recipient of a scholarship for English for Academic Purposes (EAP) Training at IALF Bali, Indonesia

**Advendo Scholarship** **Sept 2001 – Jul 2004**
Recipient of a supplementary scholarship for bachelor study

De La Salle Catholic University **2000 – 2004**
Outstanding academic achievement

## COMPUTER SKILLS

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|---|---|
| **Network Simulator** | NS-2, Cooja (Contiki OS) |
| **Programming languages** | Java, C, C++, Matlab, Delphi, Visual Basic, Pascal, QBasic |
| **Web-based** | PHP, ASP, HTML |
| **Databases** | MySQL, Ms Access, DB III |
| **Graphics/presentation** | Macromedia Flash, Adobe Photoshop, MS PowerPoint |
| **Word processing** | MS Word, Wordstar |
| **Spreadsheet** | MS Excel, Lotus 123 |
| **Operating systems** | Win 95/98/2K/XP/Vista, Linux Fedora, MAC OSX, DOS |

## WORK EXPERIENCE

**Lab demonstrator** for Network Computing **Feb 2009 – present**
Department of Computer Science, University College Cork, Ireland

**Lab demonstrator** for: **Feb 2007 – Nov 2007**
1. Data Structures and Algorithms
2. Computing for Engineers and Scientists

School of Computer Science and Software Engineering, The University of Western Australia, Australia

**IT Division Assistant** **Apr 2004 – Jun 2005**
De La Salle Catholic University, Indonesia

**Lecturer** in: **Aug 2004 – Jun 2005**
1. Algorithm and Programming
2. Web Programming

Informatics Engineering Department, Faculty of Engineering, De La Salle Catholic University, Indonesia

**Lecturer** in: **Aug 2004 – Jun 2005**
1. Assembly Language
2. Digital Image Processing

Computer Science Department, Faculty of Mathematics and Natural Science, De La Salle Catholic University, Indonesia

**Lecturer** in: **Aug 2004 – Feb 2005**
1. Algorithm and Programming I
2. Algorithm and Programming II
3. Assembly Language

Computer Electronics Engineering Department, Faculty of Engineering, Universitas Pembangunan Indonesia, Indonesia

**Teaching Assistant** for Algorithm and Programming **Even Semester 2004**
Informatics Engineering Department, Faculty of Engineering, De La Salle Catholic University, Indonesia

**Teaching Assistant** for: **Even Semester 2004**
1. Algorithm and Programming I
2. Algorithm and Programming II

Computer Science Department, Faculty of Mathematics and Natural Science, De La Salle Catholic University, Indonesia

**Internship** **1 Jul – 8 Nov 2003**
Customer Lottery System
COCO Supermarket and Department Store, Indonesia

**Workshop's Instructor** **5 – 8 Mar 2003**
PC Assembling and Audio-Video Editing with PCplus and Intel Indonesia
De La Salle Catholic University, Indonesia

## PROFESSIONAL AFFILIATION

Member of IEEE **2008 – present**

Member of Social and Culture Division **2007 – 2008**
Association of Indonesian Postgraduate Students and Scholars in Australia (AIPSSA), Western Australia

## PROFESSIONAL SERVICE

**Reviewer for:**

International Journal of Communication Systems (IJCS) **2012**

Wireless Communications and Mobile Computing (WCM) **2011**

6th International Conference on Information & Communication Technology and Systems (ICTS'10) **2010**

6th International Symposium on Wireless Communication Systems (ISWCS'09) **2009**

4th IEEE Conference on Wireless Communication and Sensor Networks (WCSN'08) **2008**

# PUBLICATION

## JOURNAL ARTICLES

Y. Zeng, C.J. Sreenan, L. Sitanayah, N. Xiong, J.H. Park, and G. Zheng. An Emergency-Adaptive Routing Scheme for Wireless Sensor Networks for Building Fire Hazard Monitoring. *Sensors*, 11(3):2899-2919, Mar. 2011.

L. Sitanayah. Boundary Detection Algorithms in Wireless Sensor Networks: A Survey. *Jurnal Informatika*, 2010.

L. Sitanayah, A. Datta, and R. Cardell-Oliver. Heuristic Algorithm for Finding Boundary Cycles in Location-free Low Density Wireless Sensor Networks. *Computer Networks*, 54(10):1630-1645, Jul. 2010.

## CONFERENCE PAPERS

L. Sitanayah, K.N. Brown, C.J. Sreenan. Fault-Tolerant Relay Deployment Based on Length-Constrained Connectivity and Rerouting Centrality in Wireless Sensor Networks. In *Proc. 9th European Conference on Wireless Sensor Networks (EWSN'12)*, Trento, Italy, Feb. 2012.

L. Sitanayah, K.N. Brown, and C.J. Sreenan. Fault-Tolerant Relay Deployment for *k* Node-Disjoint Paths in Wireless Sensor Networks. In *Proc. 4th Int'l Conf. IFIP Wireless Days (WD'11)*, Niagara Falls, Ontario, Canada, Oct. 2011.
**Nominated for the best paper award**.

L. Sitanayah, C.J. Sreenan, and K.N. Brown. ER-MAC: A Hybrid MAC Protocol for Emergency Response Wireless Sensor Networks. In *Proc. 4th Int'l Conf. Sensor Technologies and Applications (SENSORCOMM'10)*, pages 244-249, Venice/Mestre, Italy, Jul. 2010.

Y. Zeng, C.J. Sreenan, and L. Sitanayah. A Real-Time and Robust Routing Protocol for Building Fire Emergency Applications Using Wireless Sensor Networks. In *Proc. 8th Ann. IEEE Int'l Conf. Pervasive Computing and Communications (PerCom'10), 1st Ann. Workshop Pervasive Networks for Emergency Management (PerNEM'10)*, pages 358-363, Mannheim, Germany, Mar. 2010.

Y. Zeng, S.Ó. Murphy, L. Sitanayah, T.M. Tabirca, T. Truong, K. Brown, and C.J. Sreenan. Building Fire Emergency Detection and Response Using Wireless Sensor Networks. In *Proc. 9th Int'l Conf. Information Technology and Telecommunications (IT&T'09)*, pages 163-170, Dublin, Ireland, Oct. 2009.

## POSTER ABSTRACT

L. Sitanayah, C.J. Sreenan, and K.N. Brown. Poster Abstract: Emergency Response MAC Protocol (ER-MAC) for Wireless Sensor Networks. In *Proc. 9th ACM/IEEE Int'l Conf. Information Processing in Sensor Networks (IPSN'10)*, pages 364-365, Stockholm, Sweden, Apr. 2010.

## THESES

L. Sitanayah. Finding Boundary Cycles in Location-free Low Density Wireless Sensor Networks for Mobile Target Tracking. Master thesis, Computer Science and Software Engineering, The University of Western Australia, Perth, Australia, Jun. 2009.

L. Sitanayah. Characterization for Graphs without Interior Vertices Having Rectangular Duals. Honour thesis, Informatics Engineering, De La Salle Catholic University Manado, Manado, Indonesia, Sept. 2004.