

To,
Recruiting Manager
Altiux Innovations
Bangalore, India

Sep 20, 2013

Reference Job Code: JC_ENG_017

Dear Sir/Madam,

I am writing to you in response to your advertisement for the position of **Chief Architect** posted on LinkedIn.

I have been enthused by this opportunity as the requisites of this position match closely with my extensive experience and expertise in wireless sensor networks, Internet of Things, M2M and embedded systems.

Enclosed for your review is a copy of my *curriculum vitae* containing further details.

I would appreciate an opportunity to discuss with you my qualifications and interest in contributing to Altiux Innovations as Chief Architect.

In the meantime, should you have any queries please feel free to contact me.

Thanking you.

Best regards,

Dr. Vishwas Lakkundi, Ph.D.
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Patavina Technologies
Padova, Italy
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VISHWAS LAKKUNDI PH.D., MIEEE, MIET

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CAREER SUMMARY

- Accomplished wireless systems professional with a good mix of hands-on industry and research experience
- Expertise in wireless sensor networks, Internet of Things and embedded systems
- 2+ years of hands-on experience in the IoT/M2M domain: design, development and standardization
- 13 years of experience with a multitude of wireless systems and technologies
- Rich experience with several EU FP6 and FP7 multidisciplinary ICT R&D projects
- Management and leadership of scientific activities within various projects on wireless sensor networks
- Seasoned international experience in wireless technology innovation, research supervision & mentoring, external collaborations and project proposals & acquisition
- Strong publication record with several contributions in international conferences and journals
- Proven leadership, teamwork and communication skills in multicultural, transnational environments

WORK EXPERIENCE

Senior Research Engineer - Marie Curie Fellow, Patavina Technologies, Italy, Apr.2011-Present

- Currently contributing to EU FP7 SWAP and IoT-A projects on Internet of Things/M2M, energy-efficient wireless sensor networks, information security, smart & sustainable-development applications
- Contributed to ThinkIP™ Internet of Things 6LoWPAN-based protocol suite and architecture design
- Contributing to IoT network and device deployments at diverse client locations and environments
- Supervising a MS thesis on *DTLS for CoAP-based IoT* in collaboration with SIGNET Lab, Univ of Padova
- Actively participating in IoT/M2M standardization activities within IETF and ETSI

Postdoctoral Researcher - Marie Curie Fellow, Institute of Computer Science, Foundation for Research and Technology-Hellas, Greece, Feb.2009-Mar.2011

- Contributed to EU FP7 REACTION project on wireless body area sensor networks
- Contributed to EU FP6 ASPIRE project on signal processing for wireless communications, with emphasis on UWB and wireless sensor networks
- Contributed to several EU research proposals on advanced communication techniques
- Co-supervised a MS graduate thesis on OFDM-based UWB systems

Member of Research Staff, EU VAN-Project Consortium, Czech Republic/Germany, Sep.2005-Feb.2009

- Participated in wireless R&D tasks of EU FP6 Virtual Automation Networks project
- Collaborated with Siemens AG, Phoenix Contact GmbH and IFAK e.v. on wireless sensor networks
- Led a multinational team on tasks covering design and analysis of industrial wireless systems & technologies
- Contributed to design, specification, implementation and prototyping aspects of wireless sensor networks for industrial communication applications
- Actively contributed to information dissemination and demonstration activities of the project

Graduate Research Assistant, Institute of Radio Electronics, Brno University of Technology, Czech Republic, Sep.2003-Aug.2005

- Contributed to successful investigation of three research projects in the wireless domain funded by the Czech grant agencies: GACR 102/03/H109, GACR 102/04/0557, MSM 0021630513
- Supervised several student projects related to PHY layer issues of 2G/3G wireless systems

Software Engineer, Samsung Electronics Research Institute, Staines, UK, Jul.2002-Jan.2003

- Contributed to conformance testing, debugging and integration of PHY and MAC layers of GSM/GPRS for Samsung mobile phones

Software Engineer, Nuntius Systems, Bangalore, India, Mar.2001-Jul.2002

- Contributed to design and development of PHY/MAC layer features of GPRS and IEEE 802.11b WLAN

Project Trainee, Indian Space Research Organisation, Bangalore, India, Oct.2000-Mar.2001

- Designed and implemented a project titled 'satellite data communications system using GPRS'

Guest Lecturer, Dept. of Computer Science, Karnatak University, India, Nov.1998-Oct.1999

- Handled MCA and BCA courses on 'systems programming' and 'system analysis & design'

EDUCATION

- **Doctor of Philosophy** in Wireless Communications, Brno University of Technology, Czech Republic, Feb.2003-Aug.2006
DISSERTATION: *Efficient FEC Schemes in Next Generation Wireless Communication Systems*
- **Master of Technology** in Digital Electronics, BVB College of Engineering and Technology, Visveswaraiah Technological University, Karnataka, India, Oct.1999-Mar.2001
THESIS: *Satellite Data Communications using GPRS*
- **Bachelor of Engineering** in Electronics and Communication, National Institute of Engineering, University of Mysore, Karnataka, India, Oct.1994-Sep.1998

SELECTED PUBLICATIONS

Book Chapter:

- Invited Book Chapter titled 'Secure Communication for Smart IoT Objects: Practical Considerations', in 'Practical Cryptography: Algorithms & Implementations using C++', CRC Press, USA, Q2 2014

Journals/Conference Proceedings:

- Altolini, D., Lakkundi, V., Bui, N., Tapaarello, C., Rossi, M. 'Low Power Link Layer Security for IoT: Implementation and Performance Analysis', Proc. of *9th IEEE International Wireless Communications and Mobile Computing Conference IWCMC 2013*, Cagliari, Italy, July 2013
- Bonetto, R., Bui, N., Lakkundi, V., Olivereau, A., Serbanati, A., Rossi, M. 'Secure Communication for Smart IoT Objects: Protocol Stacks, Use Cases and Practical Examples', Proc. of *IEEE Intl. Symposium on a World of Wireless, Mobile and Multimedia Networks WoWMoM 2012*, San Francisco, CA, USA, June 2012
- Agrawal, T., Lakkundi, V., Griffin, A., Tsakalides, P. 'Compressed Sensing for OFDM UWB Systems', Proc. of *IEEE Radio & Wireless Symposium RWS 2011*, Phoenix, USA, January 2011
- Lakkundi, V., Tsakalides, P. 'Compressed Sensing for Enhanced Positioning in UWB Wireless Sensor Networks', *IDTechEx Wireless Sensor Networks & RTLS Conference Europe*, Munich, Germany, May 2010
- Lakkundi, V., Kratzig, M. 'Wireless Sensor Networks: VAN-Project Perspectives', *Radioengineering Journal*, vol. 18, no.2, pp. 215-222, June 2009
- Lakkundi, V., Beran, J., Kratzig, M. 'Wireless Sensor Network Prototype in Virtual Automation Networks: Implementation and Coexistence Aspects', Proc. of *IEEE 4th International Conf. on Wireless Communication and Sensor Networks WCSN 2008*, India, December 2008
- Rauchhaupt, L., Lakkundi, V. 'Wireless Network Integration into Virtual Automation Networks', Proc. of the *17th IFAC World Congress*, Seoul, Korea, July 2008
- Lakkundi, V. 'Ultra Wideband Communications: History, Evolution and Emergence', *Acta Polytechnica - Journal of Advanced Engineering*, vol. 46, issue 4, pp. 18-20, 2007

- Lakkundi, V., Marsalek, R. 'Novel FEC Schemes for UWB: Design, Modelling and Performance Analysis', Proc. of *IET Forum on Waveform Diversity & Design in Communications, Radar & Sonar*, London, UK, 2006
- Kasal, M., Kutin, P., Zamazal, M., Lakkundi, V. Satellite L-Band Front End Design, *WSEAS Transactions on Computers*, ISSN 1109-2750, vol. 3, issue 6, pp.1907-1910, 2004
- Lakkundi, V., Kasal, M. 'FEC for Satellite Data Communications: Towards Robust Design', *WSEAS Transactions on Computers*, ISSN 1109-2750, vol. 3, issue 6, pp. 2058-2061, 2004
- Lakkundi, V. 'Evolution of Cellular Wireless Networks: Role of Media Access Control Protocols', Proc. of *Radioelektronika International Conference*, Bratislava, Slovakia, April 2004

EU Project Deliverables:

- Communication Standards within BAN and PAN, REACTION Project Deliverable D5-1, 2010
- Wireless Prototype System, VAN Project Deliverable D03.4-2, 2008
- Design and Test Specifications for Wireless Prototype Implementations, VAN Project Deliverable D03.4-1, 2007
- Specification for Wireless in Industrial Environment and Industrial Embedded Devices, VAN Project Deliverable D03.2-1, 2007
- Status and Analysis of Wireless in Industries, VAN Project Deliverable D03.1-1, 2006
- State of the Art & Trends in Safety, Security, Wireless Technologies and Real-time Properties, VAN Project Deliverable D01.1-1, 2006

TECHNICAL SKILLS

- Domain: Wireless Systems Design, Wireless Sensor Networks, PHY/MAC Layers, Embedded Systems
- Technologies: Internet of Things, M2M, 6LoWPAN, ZigBee, UWB, WiMAX, GSM/GPRS, UMTS
- Hardware Tools: WSN/IoT Embedded Platforms based on ARM Cortex, Atmel AVR and XBee
- Software Tools: MATLAB, Simulink, VisSim/Comm, Ansoft Designer, MS VC++, MS Office, Linux, TinyOS, KDevelop, ARM OCD, GDB, FlashMagic, LPC21ISP, SVN, LaTeX, MS Project, MS Windows
- Programming Languages: C, C++

AWARDS AND RECOGNITIONS

- Recipient, Marie Curie Research Fellowship 2011-2013, Italy
- Recipient, Marie Curie Postdoctoral Research Fellowship 2009-2010, Greece
- Marquis Who's Who in the World, 25th Silver Anniversary Edition, 2008
- Recipient, Czech Government Doctoral Research Scholarship 2003-2006, Czech Republic
- First Prize, Intl. Student Conf. on Electrical Engineering - POSTER 2006, Prague, Czech Republic
- Second Prize, IEE Young Engineers' Competition 2005, Prague, Czech Republic
- Second Prize, Honeywell EMI International Conference & Competition 2005, Czech Republic
- Second Prize, EEICT Conference & Competition for Ph.D. Students 2005, Czech Republic
- Nominee, Siemens Research Scholarship 2005, Czech Republic
- First Prize, National Level Technical Symposium - ACUMEN 2002, India

PROFESSIONAL ACTIVITIES

- Member - Editorial Board, IEEE ComSoc RadioEngineering Journal
- Served as IET Global Ambassador 2013
- Invited Member - PhD Theses Evaluation Panel, Visveswaraya Technological University, India
- Reviewer - IEEE Transactions on Circuits & Systems, RadioEngineering Journal, Inderscience IJSNET

- Reviewer - IEEE PIMRC, GLOBECOM, AFRICON, IET and IFAC Conferences
- Invited Session Chair - Trust, Privacy and Security Symposium, IEEE IWCMC 2013 Conference, Italy
- Invited Speaker - IET SEISCON 2013, Chennai, India
- Invited Talks:
 - 'Security for Internet of Things: Implementation and Performance Analysis', IET Global Ambassadors Lecture, Dr. MGR University, Chennai, India, July 2013
 - 'Secure Communication for Smart IoT Objects: Practical Considerations', IET Global Ambassadors Lecture, KC Tech, Chennai, India, July 2013
 - 'R&D Experience with EU FP6 & FP7 Projects in the Wireless Domain', SIGNET Lab, University of Padova, Italy, November 2011
 - 'Compressively Sensed Ultra Wideband Communications', BVB College of Engineering and Technology, Hubli, India, April 2011
 - 'Wireless Sensor Networks: Implementation and Coexistence Aspects', Foundation for Research and Technology-Hellas, Greece, May 2009
 - 'Wireless Networks', Brno University of Technology, Czech Republic, Oct 2008 and Oct.2007
 - 'Wireless Communications and Networks', Brno University of Technology, Czech Republic, Nov.2006

PROFESSIONAL DEVELOPMENT

- Active Participant, IEEE and IET Conferences on Wireless Communications, Since 2002
- Distance Learning: Management, Leadership and Project Management courses from IEEE Computer Society in association with American Management Association and Thomson NETg
- ETSI Workshop on M2M Communications, Mandelieu, France, Oct.2012
- EUREL Young Engineers' Seminar, Brussels, Belgium, Nov.2005
- 'Wireless Systems and Microelectronics', 2nd International Summer Study Program 2003, Germany, Aug.2003
- 'GSM/GPRS Air Interface Professional' certification from Wray Castle, UK, Dec.2002
- Course on 'DSP Processors: Architecture & Features', Indian Inst. of Science, Bangalore, India, Jan-May 2002
- Course on 'Digital Compression and DSP', Indian Institute of Science, Bangalore, India, Jan-May 2001

PROFESSIONAL AFFILIATIONS

- Member - IEEE (Institute of Electrical and Electronics Engineers)
- Member - IET (Institution of Engineering and Technology)
- Member - IEEE Communications Society and Computer Society
- Member - IEEE Internet of Things Community
- Member - IEEE Computer Society Technical Committee on Security and Privacy
- Member - IETF DTLS for IoT Group

PERSONAL INFORMATION

- Date of Birth: May 22, 1976
- Nationality: Indian
- Availability: 1 Month's Notice

REFERENCES

1. Dr. Prof. Lorenzo Vangelista, Ph.D.
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