

Prof. Sami S Alwakeel

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## RESUME



KING SAUD UNIVERSITY  
COLLEGE OF COMPUTER & INFORMATION SCIENCES  
DEPARTMENT OF COMPUTER ENGINEERING

RIYADH , SAUDI ARABIA

## **SAMI SALEH ALWAKEEL**

### **PROFESSOR**

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Resourceful and innovative professional with a 30+ year academic career producing powerful learning opportunities for graduate and undergraduate university students, Saudi national educational facilities and corporate training. Recognized for teaching excellence and expertise in computer education programs development and in providing solutions to individuals and corporations which enhance productivity, strengthen responsiveness, improve quality, and drive sustained performance. Pioneering computer education ,computer awareness , and IT national planning. Strong follow-through, administrative and academic management capabilities.

Specialties: A senior level consultant with many years' experience in the networking and communication fields. Expert in building and supervision of networking and communication products , strategies and policies , and development of ICT legal proposals and contracts. Background includes Computer Networks design, Communications systems & products development, Health informatics research and ICT organization management. Available for interim opportunities or specific large-scale networking and ICT projects requiring senior level consultancy and support.

#### **CORE COMPETENCEIES:**

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|---|---------------------------------------|
| · IT Curriculum Development                   | · Extra Curricular Initiatives        |
| · Research & Reporting ICT Systems & Products | · Academic Leadership                 |
| · Computing & IT Awareness                    | · Technical Negotiation & Consultancy |
| · Legal ICT Advising & Arbitration            | · Scientific Authoring & Lecturing    |
| · ICT Centers Management                      | · Scientific Society Involvement      |
| · Islamic Jurisdiction                        | · Multi Culture & Ethnic Awareness    |

#### **EDUCATION DEVELOPMENT**

- B.Sc. degree in electrical engineering with honor degree 1st class from **King Saud University** (KSU), Riyadh Saudi Arabia in June 1975.
- M.Sc. degrees, department of electrical engineering, **Stanford University**, Calif., U.S.A., 1978.
- Ph.D. degrees, department of electrical engineering, **Stanford University**,

Calif., U.S.A. 1983.

- Ph.D. thesis: Development of a Distributed Routing algorithms for microprocessor -based digital telephony switching.

### **ACADEMIC CAREER PATH & JOBS**

- Teaching assistant , electrical engineering department ,King Saud University June 1976
- Grader/ Research Assistant, Electrical Engineering Department ,Stanford University 1978-1983
- Assistant professor, electrical engineering department ,King Saud University June 1983 ,
- A founding group of the college of computer and information sciences (CCIS) at KSU and a member in the college council, June 1984
- Chairman of computer engineering department at CCIS September 1985 - September 1988
- Deputy dean of CCIS. 1988 to December 1990
- Director of Information Center at CCIS. 1994 to 1996
- Director of research center at CCIS 1998 to 2003
- Dean of CCIS , King Saud University 2003-2009
- Member King Saud university Council 2003-2009

### **ACADEMIC , TRAINING & EDUCATIONAL ACTIVITIES**

- Chairman of the National Computer Education Committee , Ministry of Education 1996-2000
- Member of the National Computer Education Committee , Ministry of Education 2000-2006
- Author of several text books in computer and information technology for secondary high schools. Ministry of Education 1996
- Chairman and member of the Computer Education Committee , Teachers Colleges , Ministry of Education 1996-2005
- Author for three text books in networking for Community and Technical Colleges
- Member of the Scientific council , Teachers Colleges , Ministry of Education 2000-2006
- Member of Study Plans and Academic System Committee , King Saud university 2003-2012
- Chairman of Appeal Committee for university degree equivalence , Ministry of Higher Education , Saudi Arabia 2008-2009
- Chairman Committee for E-learning and distant learning bylaws development, E-learning center , Ministry of Higher Education , Saudi Arabia ,2008-2009
- Author for three books and several articles in social sciences.
- Principle Advisor for about twenty master thesis , King Saud university
- Advisor for a master thesis, Prince Naif University for security sciences (NUSS).
- Associate Advisor for Ph.D. thesis, higher Judicial Institute, Imam Mohammad bin Saud University (IMBSU).
- Member of thesis examination committee for more than twenty master thesis ,

King Saud university

- Member of several thesis examination committees , Prince Naif University for security sciences (NUSS). 2005-2010
- Associate Advisor for Ph.D. thesis, higher Judicial Institute, Imam Mohammad bin Saud University (IMBSU).
- Examiner, for three Ph.D. thesis's in IMBSU and NUSS and Girls colleges
- Member national IT R&D advisory committee, king Abdul-Aziz City for science & technology 2007
- Member King Saud University Council 2003-2009
- Member of the Scientific council , Teachers Colleges , Ministry of Education 2000-2006
- Member of board of trustee , AlBaha Private college for science. 7/10/1427 2007-now

## **RESEARCH & SCIENTIFIC ACTIVITIES**

- Visiting scholar, department of computer science and engineering at Florida Atlantic University. U.S.A Januarys 1990- 1991 *and May 2011-2012*
- A research visitor to GMD and FHG research institutes, Siemens research labs. , West Germany in 1985
- A research visitor to General Electric (GE) Corp. Space Labs. U.S.A in 1989
- A scientific visitor, center of International Cooperation for Computerization in Japan in September 1992.
- Member and Chairman of editorial board , King Saud university Journal – Information and Computer science Branch , 2005-2012
- Contributed to more than fifty scientific papers in research journals and conferences in the fields of computer communication, networking and planning for information technology.

## **CONFERENCES , SOCIETIES & COMMUNITY SERVICES ACTIVITIES**

- A founder of the Saudi Computer Society ( SCS) and chairman of the society board of directors ,1988 -Dec. 1992
- A board member of the Saudi Computer Society ( SCS) 1994 -Dec. 2004
- A member of various organizational committees of the Saudi National Computer Conference 1986 -2004
- Head of the First and Second National Information Technology symposium organizational committee 2005 , 2008
- Chairman of the SCS academic committee. 1996-2004
- A member of the team who developed the "Saudi IT National Plan" , 2002-2003, approved by the Saudi Council of Ministers 2006
- Panel discussion Speaker , National guard Heritage & Folk culture Festival ,2005
- A member of IEEE, ACM and IASTED societies
- Attendance for more than thirty IEEE , IASTD , ACM conferences 1995-2010
- Session chairman, Information Technology and National Security Conference, 2007

- Panel discussion speaker , Saudi Library and information science conferences , 2007& 2009
- Panel discussion speaker , first International symposium on computers and Arabic language , king Abdul-Aziz City for science & technology , 11/2007
- Panel discussion speaker , Arabic Computational linguistics symposium , Imam Mohammad Bin Saud university 2007
- Session chairman, First International Conference on e-Learning and Distance Learning, The National Centre for E-Learning and Distance Learning ,16 to 18 March 2009 Riyadh, Saudi Arabia
- Attendance Saudi E-Health 2008 & 2010 conferences, Saudi Association for Health Informatics, Riyadh.
- Panel discussion speaker , IT on Islamic and Arabic Sciences symposium , Imam Mohammad Bin Saud university 2008
- Keynote Speaker , " The IT Jurisdiction in confronting the Digital Divide" , Digital Divide Symposium , Islamic Educational, Scientific and Cultural Organization – ISESCO, Tunisia ,5-9 October 2009
- Keynote Speaker ,Saudi Moroccan Culture Week , "The Role of Computing Disciplines in Sustainable Development" , Al Akhawayn University University, Ifrane , Morocco , 2010.

## **CONSULTATION & PROFESSIONAL ACTIVITIES**

- Consultant and a member of various national consultation committees for various government agencies in Saudi Arabia including :
  - General Organization For Technical Education and Vocational Training
  - Ministry Of Foreign Affairs -Diplomatic Institute
  - Ministry Of Hajj and Endowment
  - General Presidency for Girls Education
  - Ministry of PTT
  - Saline Water Conversion Corporation
  - King Abdul-Aziz City for Science and Technology ,
  - Ministry of Transportation
  - Ministry of Education.
  - Ministry of Higher Education
  - Public Transportation Company
  - Alalmia Electronic Company
  - Dr Mandura Office for Engineering Consultation
  - Alalmia Institute for Science and Technology
  - Saudi commission for Health Specialties
  - Board of Grievances
  - Tabouk University
  - Ministry of Information and Communication Technology
  - Center for Distant and E learning, Ministry of Education

## **AWARDS & GRANTS & PROJECTS**

- Saudi government scholarship for graduate study in U.S.A in 1976.
- Research grant for the project, "Recommendation for the Future Development of the Saudi PTT Network", funded by King Abdulaziz City for Science and Technology 1985-1988
- KSU scientific council award for one year research sabbatical leave at Florida Atlantic University. U.S.A. , January 1991
- Research grant RC3/421-422. for the project, " Performance modeling of dial up Internet access traffic over the Saudi Telecommunication Network ", funded by research Center, College of Computer & Information sciences , King saud University , 2004-2005
- Research grant RC02 /24-25 for the project, " Development of planning and Cost Models for Designing A Wide Area Network In Kingdom of Saudi Arabia ", funded by research Center, College of Computer & Information sciences , King Saud University , 2004-2005
- KSU scientific council award for one semester research sabbatical leave at Stanford University. U.S.A. , January 2010
- Research grant for the project, " Design of an Energy Efficient Routing Scheme for Wireless Mobile Sensor Network ", funded by University of Tabuk , Sensor Networks and Cellular Systems Collaborative Research Center (SNCS) , 2011
- Research grant for the project, " A Virtual Server Based Admission Control and Handover Management Systems", funded by University of Tabuk , Sensor Networks and Cellular Systems Collaborative Research Center (SNCS) , 2012

## **Patents & Patents Application**

- United States Patent No.: US 8,606,903 , Date of Patent: Dec. 10, 2013 title: Cooperative Packet Routing for Wirless Sensor Network, Inventors: Sami S. Al-Wakeel (Riyadh, SA) Najla A. Al-Nabhan, US Patent application number: 12/328,662, December 4<sup>th</sup>, 2008
- Patent application title: "System for Facilitating Participation of Plurality of Pilgrims of Annual pilgrimage", Inventors: Sami S. Al-Wakeel (Riyadh, SA) Mohammad Alwakeel (Tabuk, SA) , Bassem Al-Halabi (Florida, USA) submitted May 6<sup>th</sup> 2012, US Patent application number 13478496:
- United States Patent No.: US 8,661,484, Date of Patent: February 25, 2014 title: Dynamic Probability-Based Admission Control Scheme for Distributed Video on Demand System, Inventors: Sami S. Al-Wakeel (Riyadh, SA), Hesham Al-Twejri , Mohammad Ammaddeen, US Patent application number: 13/587,881, Filed August 16, 2012
- Patent application title: "An Autistic child Monitor and Assistant System", Inventors Bassem Al-Halabi (Florida, USA) , Sami S. Al-Wakeel (Riyadh, SA) Mohammad Alwakeel (Tabuk, SA) , Dr. el-Hadi Aggoune US Patent application number: 1.259.13

## **Publications**

- [1] Sami Al-Charchfchi and Sami Alwakeel, "A Voltage Controlled Negative Resistance Device", *Electronic Engineering*, Vol. 49, 1977.
- [2] Warren Tan; Sami Alwakeel; Hamid Najafi; and James Sytw, "The Design of a Digital Switch", *Intelcom '80 Conference Proceeding*, Los Angeles, November 1980.
- [3] Sami Alwakeel, "Development of a Distributive Routing, Algorithm", *IEEE ICC '83 Proceeding*, Boston, USA, June 1983.
- [4] Sami Alwakeel, "A Distributed Software for a Modular Digital Switch", *IEEE ICC '84*, Amsterdam, May 1984, pp. 536-538.
- [5] Sami Alwakeel, "Performance Evaluation of a Microprocessor Based Digital Telecommunication Controller", *8th Saudi National Computer Conference Proceeding*, Al-Khobar, Saudi Arabia, 1985.
- [7] Sami Alwakeel, "Development of an Integrated National Plan for Informatics in the Kingdom of Saudi Arabia", *International Journal of Policy and Information*, Tamkang University, Taiwan, Vol II, No. 2, Dec. 1987.
- [8] Bruce Lusignan, Amar Badawi, and Sami Alwakeel, "VLSI Based Distributed Control System Architecture for Digital Telecommunication", *MIDCON '83 Conference Proceeding*, Chicago, September 1983.
- [9] Saad Bakry; M. Samarkandy; and Sami Al-Wakeel, "A Methodology for the Investigation of Telephone Demands in Saudi Arabia", *Telecommunication Journal*, Vol. 54, (ITU) Geneva, 1987, pp. 38-45.
- [10] Sami Alwakeel, "A Computerized Branch Exchange for Office Communications", *The Journal of Engineering Sciences*, King Saud University, Vol. 14, No.1, Riyadh, Saudi Arabia, 1988.
- [11] Abdulaziz Al-Swell and Sami Alwakeel, "A Knowledge Based System for Arabic: Retrospective and Prospective", *Arab Journal for Humanities*, Kuwait University, No. 33, Vol. 1, Winter 1989.
- [12] Saad Bakry; M. Samarkandy; and Sami Al-Wakeel, "Evaluation of Telephone Access Service Contrasts in Saudi Arabia: Riyadh Region vs. Southern Region", *The Journal of King Saud University*, Vol. 2, Engineering Sciences (1), King Saud University, Riyadh, 1990.
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- [14] Saad Bakry; M. Samarkandy; and Sami Al-Wakeel, "Analysis of Factors Require for Investigation of Telephone Demand in Saudi Arabia: IEEE Montech '86 Conference on Antennas and Communication, September 29, 1986, pp. 138-144.
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- [16] Sami Alwakeel and Sam Hsu, "Modeling and Congestion Analysis of a Multimedia Traffic in an ATM Network Server with Multiservice Disciplines", *Journal of Mathematical Modeling and Scientific Computing*, Vol.4, 1994.
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- [6] Sami Alwakeel and Mohammed Samarkandi, "Planning for a Satellite Network for Data and Telephony of Rural Areas in Saudi Arabia" (in Arabic), *Journal of King Saud University, Computer and Information Division*, Vol. 7, 1996.

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- [20] Sami Alwakeel, "Architecture Design of an ATM Switch Based on a High Speed Network", The Journal of King Saud University, Computer and Information Division, Vol. 9, 1997.
- [21] Al-Wakeel Sami S.\*; Rikli Nasser-Eddine and Al-Wehaibi Abdullah A. "Evaluation of Fairness Strategies for ATM Congestion Control Policing Mechanisms", Proceedings of the IASTED International Conference , Applied Modeling and Simulation , September 1-3, 1999, Cairns, Australia
- [22] Sami S. Alwakeel , Mohammad M. Al-Fawaz , " DPAP : A Dynamic Polling Based Access Protocol for Wireless Networks " , The Ninth IEEE International Symposium on Personal, Indoor and Mobile Radio Communications , September 8-11 , 1998 , Boston Massachusetts , U.S.A
- [23] Sami S. Alwakeel , Mohammad M. Alwakeel, "An Architecture Design of a VSAT Satellite Network for Multimedia on Demand Services", IEEE Wireless Communications and Networking Conference WCNC2000, 23-28 /9/2000. Chicago , U.S.A
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- [26] Sami S. Al-Wakeel , Abdullah Saleh Al-Obaid "Performance Modeling of A Telecommunications Network With Internet Traffic" , IASTED International Conference on Applied Simulation and Modelling (ASM 2003) ,Sept 03-05, 2003 , Mirabella, Spain
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- [29] Sami Alwakeel, Najla Al-Nabhan , "COOPERATIVE PACKET ROUTING FOR WIRELESS SENSOR NETWORKS" , US patent bending , application No. 12/328662, 12/4/2008
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- [48] Sami Al-Wakeel, " P2P-based VOD Architecture: A Common Platform for Provisioning of Pervasive Computing Services" , Book Chapter in Pervasive Communications Handbook , Edited By: Syed Ijlal Ali Shah,; Mohammad Ilyas, Florida; Hussein T. Mouftah, CRC Press , November 14, 2011
- [49] Sami Al-Wakeel, Shaker S. AlGhanmi, " A Real Time Leaky Bucket Based Admission Control Scheme for VOIP Networks", IEEE International Conference on Multimedia Computing and systems (ICMCS'2012), Tangier , Morocco , May 10 - 12, 2012
- [50] Sami Al-Wakeel, Hesham Altwaijry , Muhammad Ammad-uddin , "Class Based P- Persistent Scheme for Smart Grid Load Balancing" The 2012 IEEE Electrical Power and Energy Conference (EPEC 2012) , London, Ontario, Canada , October -12, 2012
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- [52] Sami Al-Wakeel, Najla A. Al-Nabhan, " A Cooperative Learning Scheme for Energy Efficient Routing in Wireless Sensor Networks " The IEEE 11th International Conference on Machine Learning and Applications ICMLA 2012, 12-15 December 2012 Boca Raton , Florida, USA .
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- [54] Sami AlWakeel, Musaed A. Alhussein , Muhammad Ammad-uddin , "Performance Analysis of Centralized, Distributed and Hybrid Demand Load Control Architecture for Smart Power Grid" The 2013 IEEE Conference on

Electro/Information Technology (EIT 2013) , South Dakota School of Mines & Technology , Rapid City, SD, USA, May 9-11, 2013

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[62] Sami S Alwakeel, Bassem Alhalabi, Mohammed Alwakeel . " Advanced Cloud-based Systems and Smart Mobile Devices for Mega Event Pilgrimage Ritual Management" , A white paper for industrial talk session ,The 11th Annual IEEE Consumer Communications and Networking Conference (CCNC2014) , Las Vegas, USA, Jan. 10-13, 2014

[63] Sami S Alwakeel, Bassem Alhalabi, Mohammed Alwakeel . " Perspectives on System-of-Systems for Pilgrimage Ritual Guidance and Management" , **IEEE**

International Systems Conference (SysCon 2014) , Ottawa , Canada , March. 31-April 3<sup>rd</sup> , 2014

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[65] Deena M Barakah , Ayman M Alrobia , Sami Alwakeel . “ Strategic Plan and Development Projects for Modern Health Clinical Information Systems at King Saud Medical City” , International Conference on Information Systems Engineering (iCISE 2014) , May 9-10. 2014. Hays , USA

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- [1] Author for many articles on computers &IT society in newspapers , and culture magazines.
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