

Dr Samir El-Masri, PhD
Professor & Senior Consultant in e-Health

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Nationality: Australian and Lebanese

Languages: English, Arabic, French, Japanese

Department of Information Systems
College of Computer and Information Sciences
King Saud University



Summary:

- I have been working in Information Technology as an academic and industry senior manager in France, Japan, Australia and currently Saudi Arabia for over 17 years.
- I have been an academic professor and senior industry consultant specialized in e-Health and health informatics for the past 12 years. I have published over 70 research papers in International journals, books and conferences.
- I worked as a senior consultant and expert in Healthcare Information Technology with Australian Health Departments and hospitals for 7 years through a large Australian IT consulting company
- I have close work collaborations / projects with the National Guard Hospitals, King Faisal Specialized Hospital, Military Hospital, King Abdulaziz and King Khaled university hospitals and the Saudi ministry of health.
- I am currently leading a team of 15 researchers building world class systems in e-Health such as Comprehensive Emergency System, Electronic Health Record (EHR) Cloud Integration System, and Clinical Decision Support Systems (CDSS).
- I have international collaborations with Health Informatics Centers at Dalhousie University, and Ontario University, Canada, University of New South Wales, Australia, and University of West Florida, USA.

Education:

- Ph.D. in Information System, National Polytechnic Institute of Grenoble, Grenoble, France, 1997.
- M.Sc. in Computer Science, Polytechnic Institute of Grenoble, Grenoble, France, 1994.
- Engineering Degree in Electronics and ICT, Faculty of Engineering, Lebanese University, Lebanon, 1993.

Academic Experience:

- **Department of Information Systems, College of Computer and Information Sciences, King Saud University, Riyadh, Saudi Arabia, Associate Professor (Applied for professor), 2009 - Present (full time).**
- Department of Software Engineering, School of Computer and Information technology, University of Western Sydney, Sydney, Australia, Associate Professor, 2003-2006
- School of Computer Science and Engineering, Central Queensland University, Sydney Australia, Assistant/Associate Professor, 2001-2003
- College of Computer and Engineering, Hokkaido University, Sapporo, Japan, Researcher/Assistant Professor, 1998-2001
- College of Engineering, National Polytechnic Institute of Grenoble, Grenoble, France, PostDoc, 1997-1998

Teaching:

Health Informatics, System Analysis and Design, Software Engineering, Programing, SOA, UML, XML, Graduation projects etc.

Research Interests:

Main research interest is **Health Informatics (E-health)**: Emergency system, Electronic Health Records integration, Clinical Decision Support System, E-prescribing, Mobile e-health solutions, E-health cloud computing system, Mobile ICU System.

Industry Experience:

- DWS Advance Business Solutions (leading IT consultancy), Senior consultant, Project/Program manager managing large software development projects, Sydney Australia, 2006-2009, full time
- E-Health senior consultant since 2002

Certifications or Professional Registrations:

- Prince 2 formal certification (Project management)
- Business consultant certification
- Blackboard professional trainer

Current Membership in Professional Organizations :

- IEEE
- IEEE Computer Society
- Australian Computer Society
- Member of Saudi Association for Health Informatics
- Member of Editorial Board of Health Informatics Journal in Developing Countries
- Member in the Lebanese Order of Engineers and Architects
- Founder and manager of Arab Health Informatics Association

Research Grants and Awards:

- Co-Investigator, \$3,000,000 – Grant of NTT DoCoMo, Japan 1998-2001: *Building Talking Robot*
- Principle Investigator, SR 2,000,000 – Grant of National Plan for Science and Technology 2010-2012: *Mobile SOA Web Services for Intelligent Communication System. Application: Healthcare Comprehensive Emergency System*
- Principle Investigator, SR 1,500,000 – Grant of National Plan for Science and Technology 2013-2015: *Cloud Computing and Integration of National Electronic Health Record*
- Co-Investigator, SR 1,450,000 – Grant of National Plan for Science and Technology 2013-2015: *Mobile Air Pollution and Asthma Monitoring in Riyadh*
- Best PhD Research breakthrough within a federation of 8 world class research institutes, Grenoble France, 1995.

Service Activities:

- Deputy head of the PhD Affairs Committee in the college
- Head of the department PhD Affairs Committee
- Member of the department affairs committee
- Member of the department international relations
- Head of the department public relations committee
- Blackboard trainer at the college

Academic Supervision:

- Over 100 Graduations projects
- Over 30 Master Students
- 10 PhD students

Reviewer for PhD and Master Thesis:

PhD Thesis - University of Western Sydney – Australia
PhD Thesis – University of Wollongong – Australia

Several Master Thesis

Reviewer / editors for Journals and Conferences:

Journal of Medical Systems (ISI)
Journal of Supercomputing (ISI)
Journal of Medical Internet Research (ISI)
International Journal of Numerical Modeling (ISI)
Health Informatics Journal (ISI)
Journal of Health Informatics in Developing Countries

Over 20 International Conferences

Sports and Hobbies:

Tennis, Swimming, Snowboarding

Selected publications:

ISI and refereed Journals:

1. Shaker H. El-Sappagh, Samir El-Masri, A. M. Riad, Mohammed Elmogy, "An Ontological Case Base Engineering Methodology for Diabetes Management", Journal of Medical Systems, (Submitted)
2. Shaker H. El-Sappagh, Samir El-Masri, A. M. Riad, Mohammed Elmogy, "Case based reasoning: A survey of case representation methodologies", Journal SpringerPlus, (Submitted)
3. Thamer Al-Enazi and Samir El-Masri, "HL7 Engine Module for Healthcare Information Systems", Journal of Medical Systems, (Accepted)
4. Abdullah Al-Dahmash, Samir El-Masri, "A New proposed Software Engineering Methodology For Healthcare Applications Development, International Journal of Modern Engineering Research, Vol. 3, Issue 3, pp. 1566-1570, May 2013
5. Amal Al Rasheed and Samir El-Masri, "Comparing E-Commerce Content Management Systems", Journal of Theoretical and Applied Information Technology, Vol. 53, July 2013
6. Asma Aljarullah and Samir El-Masri, "A Novel System Architecture for the National Integration of Electronic Health Records: A Semi-Centralized Approach", Journal of Medical Systems, Vol. 37, No. 4, June 2013
7. Shaker H. El-Sappagh and Samir El-Masri, "Data Mining and Knowledge Discovery: Applications, Techniques, Challenges and Process Models in Healthcare", International Journal of Engineering Research and Applications, Vol. 3, Issue 3, pp.900-906, May-Jun, 2013
8. Reham Alabduljabbar and Samir El-Masri, "Design of Web Content Management System for Dental Laboratories", International Journal of Computer Science Issues, Vol. 10, Issue 1, No 1, pp. 82-89 January 2013
9. Shaker H. El-Sappagh and Samir El-Masri, "A Distributed Clinical Decision Support System Architecture" Journal of King Saud University, Computer and Information Sciences, March 2013

10. AlHogail, A and El-Masri, S., "An Integrated Resource Discovery Component for Virtual Learning Environments", *The International Arab Journal of e-Technology*, Vol. 3, No. 1, pp 27- 36, January 2013
11. Alotaibi, S. and El-Masri S., "Design of School Content Management Framework.", *INFORMATION*, an International Interdisciplinary Journal, Vol.16, No. 1(A), pp 77-94, January 2013
12. El-Masri, S. and Saddik B., "An emergency system to improve ambulance dispatching, ambulance diversion and clinical handover communication", *Journal of Medical Systems*, Vol. 36, Issue 6, pp 3917-3923, 2012
13. Samir El-Masri, Shaker H. El-Sappagh A. M. Riad, Mohammed Elmogy, "An Adaptive Evidence Based Medicine System Based on a Clinical Decision Support System", *Journal of Science Series Data Report*, Vol. 4, Issue 11, pp 160-172, November 2012
14. Abdullah Al –Faifi, Samir El-Masri, , "Key Factors for the Implementation of Health Information Systems in Saudi Arabia", *Journal of Science Series Data Report*, Vol. 4, Issue 10, pp 90-108, October 2012
15. Shaker H. El-Sappagh, Samir El-Masri, A. M. Riad, Mohammed Elmogy, "Electronic Health Record, Data Model Optimized for Knowledge Discovery", *International Journal of Computer Science issues*, Vol. 9, issue 5 (1), pp 329-338, September 2012
16. Hamdan Al-Sabri, Samir El-Masri, "Orientation towards a Service Oriented Architecture for designing and building a Comprehensive Emergency System", *International Journal of Computer Science issues*, Vol. 9, issue 6, No 1, pp 278-288, November 2012
17. Al-Husain, L. and El-Masri S., "An Approach for Automatic Generation of Tables for Semantic Data in Wikis", *Journal of Theoretical and Applied Information Technology*, Vol. 40, Issue 1, pp 89-97, June 2012
18. Hebah Eljibreen, Samir El-Masri, "Web Personalization and Web Content Management System" *Journal of Engineering and Technology Research*, Vol. 4 (7), pp 149-163, December 2012
19. Alotaibi, S. and El-Masri S., "Web Content Management System for Schools.", *Signal Processing and Information Technology*, 2012
20. El-Masri S., "Analysis of discontinuities in rectangular ducts and higher order mode excitations using TLM and FEM methods" *International Journal of Numerical Modelling*, 17:353-364, 2004.
21. El-Masri S., Miki N., "High-frequency transfer function model of the vocal tract sections using FEM matrix condensation and transfer matrix techniques", *Journal of Acoustical Society of America*, 1999, USA.
22. El-Masri S., Miki N., "Matrix condensation and transfer matrix techniques with finite elements in the 3-D Analysis of the vocal tract", *Journal of Institute of Electronics Information Communication Engineers, Circuit and Systems*, 99 (104): 51-58, 1999.
23. El-Masri S., Pelorson X., Saguet P., Badin P., "Development of the Transmission Line Matrix method in acoustics. Applications to higher modes in the vocal tract and other complex ducts ", *International Journal of Numerical Modelling*, 11: 133-151, 1998.

Books/Book chapters:

1. El-Masri S. " Mobile Comprehensive Emergency System ", book chapter VIII of " *Handbook of Research on Mobile Business: Technical, Methodological, and Social Perspectives*" ISBN: 1-59140-817-2, published by *Information Science Reference*, USA, pp 106-112 (2006)
2. El-Masri S. " Understanding Mobile Web Services (MWS) and Their Role in Integrating Mobile Devices", book chapter VIII of " *Handbook of Research on Mobile Business: Technical,*

Conferences:

1. Hebah Mirza, Samir El-Masri, "National Electronic Medical Records integration on Cloud Computing System", The 14th World Congress on Medical and Health Informatics, MedInfo, Copenhagen Denmark, 20-23 August 2013
2. Warda Bawazir, Basema Saddik, Samir El-Masri, "Investigating the impact of an emergency information system on patient's length of stay in the emergency department of a tertiary hospital in Saudi Arabia" The 14th World Congress on Medical and Health Informatics, MedInfo, Copenhagen Denmark, 20-23 August 2013
3. Hebah Mirza and Samir El-Masri, "Cloud Computing System for Integrating Electronic Health Records" Proceedings of the 2012 International Conference on Bioinformatics and Computational Biology (BIOCOMP'12), The 2012 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'12), Las Vegas, Nevada, USA, July 16-19, 2012
4. Reham Alabduljabbar and Samir El-Masri, "Open-source Dental Laboratories Web Content Management Systems vs. Commercial Web Content Management Systems" Proceedings of the 2012 International Conference on Bioinformatics and Computational Biology (BIOCOMP'12), The 2012 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'12), Las Vegas, Nevada, USA, July 16-19, 2012
5. Hebah ElGibreen and Samir El-Masri, "Template Personalization and Evolutionary Algorithms" Proceedings of the 2012 International Conference on Genetic and Evolutionary Methods (GEM'12), The 2012 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'12), Las Vegas, Nevada, USA, July 16-19, 2012
6. Fatma Al-terkestany and Samir El-Masri, "Analyzing the Content Protection Mechanisms in Open Source Web Content Management Systems" Proceedings of The 2012 International Conference on Internet Computing (ICOMP'12), The 2012 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'12), Las Vegas, Nevada, USA, July 16-19, 2012
7. Luluah Al-Husain and Samir El-Masri, "An Approach for Representing Semantic Data in Wikis" Proceedings of The 2012 International Conference on Internet Computing (ICOMP'12), The 2012 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'12), Las Vegas, Nevada, USA, July 16-19, 2012
8. Asma Aljarullah and Samir El-Masri, "Proposal of an Architecture for the National Integration of Electronic Health Records: A Semi Centralized Approach", Studies in Health Technology and Informatics, MIE, Pisa, Italy, [PubMed Indexed], [Medline Indexed], August 26-29, 2012
9. Nada Al-Harbi, Samir El-Masri and Basema Saddik, "An Emergency Department Information System Integrated with Ambulance System", Studies in Health Technology and Informatics, MIE, Pisa, Italy, [PubMed Indexed], [Medline Indexed], August 26-29, 2012
10. Saddik, B. and El-Masri, S., "Building an Advanced Wireless End-to-End Emergency Medical System", Studies in Health Technology and Informatics, Vol. 168, No. 1 (2011), 141-149 [PubMed Indexed], [Medline Indexed].

11. El-Masri, S. and Saddik, B., "Proposal of an End-to-End Emergency Medical System", Studies in Health Technology and Informatics, Proceedings of the 23rd International Conference of European Federation for Medical Informatics, Oslo, Norway, August 28-31, (2011), 349-353
12. El-Masri, S. and Saddik, B., "Mobile Emergency System and integration", Proceedings of the 12th IEEE International Conference on Mobile Data Management, Lulea, Sweden, June 6-9, (2011), 67-72.
13. El-Masri, S., Al-Sabri, H. and Ghoneim, A. "Modeling and Designing a Service Oriented Framework for a Comprehensive Emergency System." Proceedings of the 2011 International Conference on Semantic Web and Web Services (SWWS' 11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011), 31-37
14. Emam, A., Youssef, A., EL-Masri, S., and Alnuem, M. "Integrating Electronic Health Records Using Universal Patient Identifiers in KSA.", Proceedings of the 2011 International Conference on Information and Knowledge Engineering (IKE'11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011), 481-487.
15. Alnuem, M., El-Masri, S., Youssef A., Emam A., "Towards Integrating National Electronic Care Records in Saudi Arabia. ", Proceedings of the 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP'11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011) 777- 782.
16. @Aljarullah, A. and El-Masri, S., "A Proposal of a Comprehensive Medical Emergency Decision Support System ", Proceedings of the 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP'11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011) 744- 750.
17. El-Sappagh, S. and El-Masri, S., "A Proposal of Clinical Decision Support system Architecture for Distributed Electronic Health Records. ", Proceedings of the 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP'11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011) 787- 794.
18. Mirza, H. and El-Masri, S., "Proposal of a Web Based Ambulance System in Saudi Arabia. ", Proceedings of the 2011 International Conference on Bioinformatics & Computational Biology (BIOCOMP'11), The 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP'11), Las Vegas, Nevada, US- July 18-21, (2011) 760- 766.
19. Alhogail, A. and El-Masri, S., "A Proposal of a Resource Discovery Component for Virtual Learning Environments (VLEs). ", Proceedings of the 2011 International Conference on e- learning, e-business and e-Government (EEE' 11), the 2011 World Congress in Computer Science, Computer Engineering, and Applied Computing (WORLDCOMP' 11), Las Vegas, Nevada, US- July 18-21, (2011), 496-502.
20. Al-Rasheed, A. and El-Masri, S., "Content Management Systems and E-Commerce: A Comparative Case Study", Proceedings of the 2011 International Conference on Software and Computing Technology (ICSCT 2011), Singapore December 9-10, (2011).
21. El-Masri S. "Mobile Comprehensive Emergency System", the Second International Conference on Innovations in Information Technology, September 26-28 2005 Dubai, UAE (2005)
22. El-Masri S. and Solumein B. "Providing Web Services on Mobile Devices", the Second International Conference on Innovations in Information Technology, September 26-28 Dubai, UAE (2005)

23. Foster D., McGregor C. and El-Masri S. "A Survey of Agent-Based Intelligent Decision Support Systems to Support Clinical Management and Research", First International Workshop on Multi-Agent Systems for Medicine, Computational Biology, and Bioinformatics, Health Informatics, Utrecht, The Netherlands (2005)
24. Foster D., McGregor C. and El-Masri S. "Intelligent multi-agent decision support system in an intensive care unit for premature babies", International Conference, Health Informatics, Singapore. (2005)
25. El-Masri S. and Unhelkar B. "Modelling XML and Web Services Messages with UML" May 15-18, 2005 IRMA International Conference, San Diego, California, USA (2005)
26. El-Masri S., "XML Web Services and UML" QUALIT International Conference November 24-26, 2004 – Brisbane Australia.
27. El-Masri S., "A new automatic meshing system applied to vocal tract modelling"
28. 6th International Seminar on Speech Production, December 7-10, 2003, Manly Sydney, Australia.
29. Pelorson X., Badin P., Saguet P., El-Masri S., "Numerical simulation of the vocal tract acoustics using the TLM Method", Proc. Forum Acusticum, Sept. 2002, Sevilla Spain.
30. El-Masri S., Miki N., "Generation of semi-automatic FEM mesh for vocal tract" Sciences and technologies workshop, November 13-14, 2000, Tokyo Japan.
31. El-Masri S., Miki N., "Automatic meshing for elliptical cross-section vocal tract modeling"
32. Technical report for CREST-NTT project and Future University Hakodate, October 19, 2000, Hokkaido, Japan.
33. El-Masri S., Miki N., "A new efficient FEM and analysis of relation between impedance function and geometrical parameters of the vocal tract", 5th seminar on speech production: Models and data CREST workshop on models of speech production: Motor planning and articulatory modeling, May 1-4, 2000, Munich Germany.
34. El-Masri S., Miki N., "Study of partial and total transfer functions within the vocal tract
35. Using FEM matrix condensation technique", *Technical report at Graduate school of Engineering, Hokkaido University*, Oct. 24, 1999, Sapporo Japan.
36. El-Masri S., Miki N., "Development of finite element method using matrix condensation and transfer matrix techniques for the vocal tract modeling", Sciences and Technologies Workshop, October 7-8, 1999, Tokyo Japan.
37. El-Masri S., "Generation of higher order modes at discontinuities in rectangular ducts using TLM method", *International Hokkaido Workshop on Speech Production*, 14-21, 1998, Kutchan, Japan.
38. Pelorson X., Laboissiere R., El-Masri S., "Vocal tract acoustics at high frequencies", *Acoustic Journal*, vol. 1, 401-404, 1997.
39. El-Masri S., "Application de la methode numerique TLM aux ondes acoustiques et a la parole".

40. *Ph.D. thesis, Institut National Polytechnique de Grenoble, 1997, Grenoble France.*
41. El-Masri S., "Etude de la fonction de transfert du conduit vocal par la methode TLM", *2eme rencontre des jeunes chercheurs en Parole, 1997, La Rochelle, France.*
42. El-Masri S., Saguet P., Pelorson X., Simon J., "The use of Transmission Line Matrix in acoustics", *2nd International Conference on Computer Simulation, 309-405, 1997, Beirut Lebanon.*
43. Pelorson X., Laboissiere R., El-Masri S., "Vocal tract acoustics at high frequencies", *4th French Congress on Acoustics, 435-440, 1997, Marseille France.*
44. El-Masri S., Pelorson X., Saguet P., and Badin P., "Vocal tract acoustics using the Transmission Line Matrix (TLM) method ", *Proc. ICSLP, vol. 2, 953-956, 1996, Philadelphia, USA.*
45. El-Masri S., Pelorson X., Saguet P., Badin P., "Etude et analyse par la methode TLM de la propagation acoustique dans le conduit vocal : Effet des modes d'ordre superieure", *Proc. XXIes Journee d'Etude sur la Parole, 243-246, 1996, Avignon France.*
46. El-Masri S., Application de la methode TLM aux ondes acoustiques, Rapport de DEA Optique Optoelectronique et Micro-ondes ENSERG / INPG, 1994, France.