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Education

- 2009-2015 **Doctor of Philosophy - PhD in Information Security in Healthcare Information Systems**, Cardiff University, Cardiff, UK. Thesis titled: *"Achieving a Secure Collaborative Environment in Patient-Centred Healthcare with Legacy Information Systems."* Supervised by Prof. W. Alex Gray (lead supervisor), and Mr. Jeremy Hilton.
- 2008 - 2009 **Master of Science - MSc. in Strategic Information Systems with Information Assurance** (Superseded by MSc. Information Security and Privacy since 2009), Cardiff University, Cardiff, UK. Dissertation titled: *"Towards Information Sharing in Virtual Organisations: The Development of an Icon-based Information Control Model."* Supervised by Mr. Jeremy Hilton. The degree was awarded with Merit.
- 2002 - 2007 **Bachelor of Computer and Information Sciences - BSc. in IT**, KSU, Riyadh, KSA. Undergraduate project titled: *"AraDict: An Add-In Speech Recognition Application to MS Word 2007."* The degree was awarded with a G.P.A of (4.55/ 5.00) and an "Excellent" grade with second class honours.

Employment and Professional

- 2017- Present **Assistant Professor**, Information Systems (IS) Department, College of Computer and Information Sciences (CCIS), KSU, Riyadh, KSA.
- Mar 2016- Present **Supervisor**, The Safe House Lab, The Centre of Excellence in Information Assurance (CoEIA) Female Branch, KSU, Riyadh, KSA.
- Mar 2016- Present **Coordinator**, The Female Chapter of CoEIA, KSU, Riyadh, KSA.
- Jan 2016- Present **Consultant**, CoEIA, KSU, Riyadh, KSA.
- Jun 2015- 2017 **Assistant Professor**, Information Technology (IT) Department, CCIS, KSU, Riyadh, KSA.
- Nov 2014- Jun 2015 **Lecturer**, IT Department, CCIS, KSU, Riyadh, KSA.
- Jul 2007- Nov 2014 **Teaching Assistant**, IT Department, CCIS, KSU, Riyadh, KSA.

Projects & Research Skills

Fine-grained Access Control Model for e-Government Web Services Using Protective Commons (PC) Icons and XML Security Technologies - Teamwork, co-investigator (Jan 2017 - Jan 2018)

- This project aims to design a secure data exchange framework for electronic cross-organisational services, and implement a comprehensive proof-of-concept prototype for e-Government web services using PC and XML security technologies..
- This project has secured a one-year research grant from **the Undergraduate Students Research Support Program, Deanship of Scientific Research, KSU.**

Emergency Line - Teamwork, principle investigator (Nov 2016 - present)

- In collaboration with the Saudi Arabian Red Crescent (SARC) and King Khalid University Hospital, (KKUH) KSU, Riyadh, Saudi.

- Aims to design and fully develop a discrete component for the SARC in-house developed Emergency Medical Services (EMS) Computer Aided Dispatch (CAD) system that is integrated with KCUH eSiHi (the electronic health record used at the Department of Emergency Medicine).
- Provides real-time synchronised information between EMS and hospital emergency team members for informed decision-making processes.

Bunyan Charity Technical Project - Teamwork, lead project manager (Nov 2016 - May 2017)

- Nominated by the Vice Dean of The College of Computer and Information Sciences and Head of The Community Service Committee to become the lead project manager for a short-time project as part of a mutual agreement between KSU and Bunyan Charity.
- Bunyan Charity is currently undergoing a national poverty alleviation project to serve Alsbala District community in Riyadh, Saudi Arabia, by rebuilding the district's infrastructure with adequate and sustainable housing.
- The technical project aims to develop a video-recording documentary about the Alsbala District project's development, as well as, a dedicated website and mobile application to connect district families with volunteers, donators, and the charity.

Identify.Me App - Teamwork, co-investigator (Sep 2016 - Jan 2021)

- In collaboration with Dr. Alqahtani, The Head of the Forensic Odontology Unit at the College of Dentistry, KSU, The Vice President of the Arab Association for Forensic Odontologists, a Co-Founder And Member Of The Forensic Odontologists For Human Rights Group (<http://identify.me>); and a Member of the Forensic Odontology Steering Group in the INTERPOL.
- Aims to design an interactive application on a mobile and wearable devices to:
 - ▶ Connect deceased victims in the event of mass fatality incidents with the Disaster Victim Identification team specialists to identify them beyond visual recognition,
 - ▶ Connect injured victims with a rescue team, and their families and friends to bring them relief and closure, as well as, to assist in the grieving process.
 - ▶ Collect Ante-Mortem data and information (i.e. prior to a disaster) and incident-related evidence (using social policing concepts)
 - ▶ Provide the right data and information which deploy a novel access control model specifically designed to help application users: Rescue Team members (Paramedics and Specialised Emergency Healthcare Professionals), and Disaster Victim Identification Team members (Law Enforcement Officers, Pathologists, Fingerprint Specialists, DNA Specialists, Odontologists) to have access to the right AM pieces of information at the right time in a speedy manner right after an incident has been detected.
- This project has been awarded a four-year research grant from the American Society of Forensic Odontology.

Watch my Health - BSc capstone project, solo supervision (Jan 2016 - May 2017)

- A smart mobile patient-centred alert system using a smart watch and beacon technology.
- Aims specifically to use state-of-the-art technology to balance between the availability of critical information to care team members in a speedy and visual manner, while maintaining its confidentiality. This is to enable immediate access to the right information (i.e. critical alerts) to the right care team member at the right time of treatment in a highly complex and demanding domain like healthcare.

Achieving a Secure Collaborative Environment in e-Government (Takaful scenario) - individual (2015 - present)

- Takaful Charity Foundation supports financially disadvantaged students in Saudi public schools to continue and succeed in receiving proper education. Serving more than 180,000 students in about 20,000 schools spanning all areas of KSA, Takaful relies on the collection of accurate information from multiple government data sources to make informed eligibility decisions.
- I study information security requirements in such information-rich collaboration for the achievement of a secure multi-agent collaborative environment.

The Effectiveness of PC Information Security Controls in Virtual Organisations - MSc co-supervision (2015 - 2016)

- PC is a set of nine icons illustrating Risks associated with information sharing in multi-agent collaboration in virtual organisations.

- I co-supervised a one-year MSc graduation project that studied the use of PC iconic labels designed for Chief Information Security Officers in raising information security aware of employees in virtual organisations at both human and machine levels.

SHarE - PhD project, individual (2009 - 2015)

- PhD project, short for **Secure Healthcare Collaborative Environment**.
- A proof-of-concept prototype system that uses Velindre Cancer Centre's real database schemes to secure modern patient-centred collaborative healthcare. SHarE is currently under a **pending patent**.
- Research poster won two "**Best Poster Prize**" awards at **Cardiff University Poster Day 2010** one based on students' votes and the other on staff's votes.
- Won Saudi Cultural Bureau's "**Research Distinction Prize**" award in the years 2011, 2013, and 2014.

ATLER - teamwork (2011)

- i-Solve project, short for the **Assessment and Treatment of Late and End Stage Rehabilitation**
- ATLER project was led by a team within the School of Healthcare Studies at Cardiff University who developed a product to assist decision making and progression of end stage rehabilitation. This would improve the reliability and consistency of a wide range of clinicians and was under patent and prototype manufacture.
- i-Solve team explored the commercial potential for this product, investigated key marketing strategies, as well as making important commercial and collaborative links for the future development and implementation. I was the team leader, and my role involved collecting primary and secondary data for market assessment and manufacturing, designing project logo, managing deliverables and milestones from team members, motivating the team, writing meeting minutes, and meeting deadlines.

Information Labelling Palette - capstone project, individual (2009)

- **MSc. graduation project (capstone)**; an icon-based information control model with an information labelling scheme (represented in a set of self-explanatory icons). This scheme is based on the graphical nature of pictograph, and its wide use in public places (such as airports) to serve as signs or instructions.
- Information Labelling Palette aims to sustain different levels of protection within shared information and communicate its information security needs in collaborative environments. This information control model is demonstrated with Microsoft Office Word 2007.
- **Awarded a Merit** with a total grade of **69%**.

Student-Pal - individual (2008)

- A mini-project for developing a prototype database application using different database management tools and techniques. Part of Software and Database Management MSc coursework deliverables along with an 8000-word report and a presentation.
- Awarded a **distinction** with a mark equivalent to **73%**.

AraDict - capstone project, teamwork (2007)

- Undergraduate final project, short for **Arabic Dictation** system
- An add-in dictation system for Arabic language to MS Word 2007 that utilises advanced features of Hidden Markov Model Toolkit (HTK) originally developed by Cambridge University and is primarily used for speech recognition research.
- Solo roles were specific to a full design of AraDict interface as an Microsoft (MS) Word add-in Ribbon and customisation using XML tags in Microsoft Visual Studio, an integration of the Ribbon with other system components as well as into MS Word hosting application, a full development of voice training and speech recognition process of HTK toolkit using my voice as a registered system user for testing and demonstration purposes, and building the recogniser. I also contributed to project teamwork by coding other major system implementation components using C# to deliver specifies functional requirements, documentation of the system requirements and implementation, team motivation, brain storming, problem solving, making bold risky decisions at critical system implementation phases.
- Awarded an **A+ grade** by all three members of the Graduation Project 2 Assessment Committee.
- Won the **3rd place** in a college wide competition across all CCIS departments under the name "Advanced Electronics Company's **Best Project Contest** for the Year 2007/ 1428"
- Received an **invitation from** King Abdulaziz City for Science and Technology (**KACST**) for a full demonstration at a national-level exhibition run and hosted by KACST.

www.ShadaCoffeeStore.com - individual (2005)

- Selected as one of the top three web sites designed during the e-commerce Web Design course project, and published in one of the most popular local news papers in Saudi Arabia, Al-Eqtisadiyah newspaper, in 20/3/2005 No.41778.
- Received an **invitation** for full demonstration in a **showroom** event hosted by **KSU**.

Research Interests

- Information security and assurance in discrete autonomous information systems and multi-agent collaborative environments with heterogenous information systems.
- Interoperability and integration of distributed heterogenous information systems.
- Information security policy design, development, integration, and management.
- Risk management including risk identification, assessment and control.
- Access control model design and implementation in discrete or cross-organisational systems.
- Modernisation of discrete legacy information systems.
- Threat modelling in electronic services including eHealth, eBusiness, and eGovernment.
- Modern healthcare systems security requirements, Health informatics and patient-centred healthcare needs.
- Design and implementation of smart applications on mobile and wearable devices.
- Information governance and information security life cycle.
- Business process management systems and workflow technology.
- Software engineering design and analysis.
- Planning and implementation of for contingencies, incidents, disasters, and business continuity.
- Social policing and eCrimes.
- Disaster victim identification, and ante- and post-mortem missing persons data collection and matching.

Publications

Books and book chapters

- **Alsalamah, S.** Alsalamah, H., Gray, A. W., & Hilton, J. (2016). Information Security Threats in Patient-Centred Healthcare. In A. Moumtzoglou (Ed.), *M-Health Innovations for Patient-Centered Care* (pp. 298-318). Hershey, PA: Medical Information Science Reference. doi: 10.4018/978-1-4666-9861-1.ch015
- **Alsalamah, S.** Gray, A. Hilton, J. and Alsalamah, H. (2013). Information Security Requirements in Patient-Centred Healthcare Supporting Systems. In: the 14th World Congress on Medical and Health Informatics (Medinfo), 20-23 August 2013, Copenhagen, Denmark. Pp. 812-816.
- **Alsalamah, S.** (2010). Towards Information Sharing in Virtual Organisations: The Development of an Icon-based Information Control Model. Saarbrücken: LAP Lambert Academic Publishing.

Peer-reviewed articles

- **Alsalamah, S.** (2017). Information Classification Scheme for Next Generation Access Control Models in Mobile Patient-Centered Care Systems. In: the 12th International Conference on Cyber Warfare and Security (ICWS), 2-3 March 2017, Dayton, Ohio, USA (**accepted**).
- **Alsalamah, S.** Gray, A. and Hilton, J. (2011). Towards Persistent Control over Shared Information in a Collaborative Environment. In: the 6th International Conference on Information Warfare and Security (ICIW), 17-18 March 2011, Washington, DC, USA. pp.278-287.

Theses

- **Alsalamah, S. (2015).** Achieving a Secure Collaborative Environment in Patient-Centred Healthcare with Legacy Information Systems. PhD. thesis, Cardiff University (<http://orca.cf.ac.uk/72127/>).
- **Alsalamah, S. (2009).** Towards Information Sharing in Virtual Organisations: The Development of an Icon-based Information Control Model. MSc. thesis, Cardiff University.
- Eshki, A. Radain, D., AL-Thonayan, H. Zain-Alabdeen, K. Nouh, M. **Alsalamah, S.** AL-Megren, S. (2007). AraDict: An Add-In Speech Recognition Application to MS Word 2007. BSc. thesis, King Saud University.

Short papers

- **Alsalamah, S.** AlQahtani, S. Almutawaa, S. Alkabani, H. Alsmari, M. Alashgar, N. & Alrajeh, A. (2017). *Find the Missing, Dentify the Found!* Presented in: the 12th International Conference on Cyber Warfare and Security (ICCWS), 2-3 March 2017, Dayton, Ohio, USA.
- **Alsalamah, S.** Algumeai, G. and Al Faisal, H. (2017). *Protective Commons: Do You Think You Can Control my Information?* Presented in: the 12th International Conference on Cyber Warfare and Security (ICCWS), 2-3 March 2017, Dayton, Ohio, USA.
- **Alsalamah, S.**, Alfutaimany, A., Alashaikh, L., Aldayel, G., Alqahtanni, M., & Alsabti, S. (2016). A Smart Mobile Patient-Centred Alert System Using a Smart Watch and Beacon Technology. Presented in the 3rd ACM-W Europe Celebration of Women in Computing (womENCourage), September 12-13. Linz, Austria. (Available at <http://womencourage.acm.org/acceptedPosters.cfm>)
- Alfutaimany, A. **Alsalamah, S.** Aldayel, G. Alashaikh, L. Alqahtani, M. Alsabti, S. (2016). *Watch my Health.* Presented at the 2nd Prince Sultan University Research Exhibition "بحثي مجتمعي" i27-29 March 2016, Riyadh, Saudi Arabia.
- Albabtain, K. Altewijri, S. and **Alsalamah, S.** (2016). *Security of Medical Devices.* Presented at the 2nd Undergraduate Research Forum (URF). 15-16 February 2016, Riyadh, Saudi Arabia.
- Al Faisal, H. Algumeai, G. and **Alsalamah, S.** (2016). *You think you can chase my information!* Presented at the 2nd Undergraduate Research Forum (URF). 15-16 February 2016, Riyadh, Saudi Arabia.
- **Alsalamah, S.** Alsalamah, H. Gray, W. A. and Hilton, J. (2014). Information Security in Patient-Centred Healthcare using Workflow Technology. In: 7th Saudi Students Conference in the UK (SSCUK). 1-2 February 2014, Edinburgh, UK.
- **Alsalamah, S.** Gray, A. and Hilton, J. (2011). Sharing Patient Medical Information among Healthcare Team Members while Sustaining Information Security. In: the 15th International Symposium on Health Information Management Research (ISHIMR), 8-9 September 2011, Zurich, Switzerland. pp. 553-554.
- **Alsalamah, S.** Hilton, J. and Burnap, P. (2010) Towards information sharing in virtual organisations: The development of an icon-based information control model. Presented at the UK All Hands Meeting.
- **Alsalamah, S.** Gray, A. and Hilton, J. (2010). How can my healthcare providers share my medical information and keep it secured at the same time? Presented at the Speaking of Science (SOS), 6th May 2010, Cardiff, United Kingdom.

Patent

Alsalamah, S. Alsalamah, H. Gray, W. A. and Hilton, J., "SHARE: Creation of a Secure Collaborative Environment," UK patent filed.

Honours & Awards

- Secured a one-year research grant from **the Undergraduate Students Research Support Program, Deanship of Scientific Research , KSU** in 2017.
- Secured a four-year research grant in 2017 from **the American Society of Forensic Odontology** in 2017 for Dentify.Me App project.

- PhD research poster won two “**Best Poster Prize**” awards based on students’ and staff’s votes at **Cardiff University Poster Day 2010**.
- Awarded three Saudi Cultural Bureau’s **Research Distinction prizes** for the years 2011, 2013, and 2014.
- Awarded an MSc degree with **Merit**.
- Awarded a **fully-funded scholarship** by Saudi Arabian Government for postgraduate studies in the UK.
- Awarded a BSc degree with **second-class honours**.
- Won the 3rd place in the **undergraduate AEC’s Best Project Contest** for the year 2007.
- Selected as one of the **top three e-commerce web-designers** in the Web Design undergraduate course batch in 2005.
- Award a High School Diploma from one of the most prestigious private schools in the Kingdom of Saudi Arabia, with a score of **97.48%**

Certifications, Professional Memberships, Committees, Councils, & Extra Curricular Activities

International

- Member of the **Journal of mHealth editorial review board**.
- Member of the **International Journal of Reliable and Quality E-Healthcare (IJRQEH) editorial review board**.
- Member of the **International Saudi Health Informatics Conference (ISHIC) editorial review board**.
- Member of the **Journal of King Saud University - Computer and Information Sciences (JKSU-CIS) editorial review board**.
- Member of the 1st Workshop on **M-Health Innovations for Quality in Healthcare program committee** for FedCSIS international conference.
- Member of the **Women in Cyber Security** international community.
- Member of the **IEEEWiE’s Riyadh affinity organising committee**.
- Registered **team proctor** for the 2016 international **IEEEExtreme 10.0 programming competition**.

National

- **CoEIA authorised Instructor** for a number of training seminars including but not limited to CISSP certification
- Member of the Organising Committee of the **Saudi Arabian Information Security Summer School**.
- KSU, CCIS representative at the **5th Girls in ICT for Women Empowerment in Computing** event organised by **Ericsson Saudi Arabia**. My role was to bridge between computing theory and practise to help women in computing make better career choices in Saudi Arabia.
- Member of **Hemaya, Saudi Group for Information Assurance** (<http://hemayagroup.org>).
- Member of the Saudi Arabian Chapter of Arab Women in Computing (**ArabWIC**).
- Certified in **Course Design and Development, Effective University Teaching, Micro-Teaching, and Evaluation of Learning Outcomes** by The Professional Certification Program for University Education, Deanship of Skills Development, KSU, Riyadh, KSA.
- Member of the **Centre of Excellence in Information Assurance**, KSU, Riyadh, KSA.
- Member of the **Female Chapter** of the **Centre of Excellence in Information Assurance**, KSU, Riyadh, KSA.
- Head of the **College Scientific Research Committee**, CCIS, KSU, Riyadh, KSA.
- Member of the **Student Rights Committee**, CCIS, KSU.
- Member of the **Project Clinic Committee** to support students and supervisors in the design and development or IT-related coursework and graduation projects, CCIS, KSU.
- Member of the **IT Department Council**, IT Department, CCIS, KSU.
- Member of the **joint KSU-Mega Day and IT Project Fair committees** for the organisation of the **ShowOff Day**, the annual CCIS projects’ and course deliverables showcase event and extending invitations to community members for participation and attendance (including high-school students and IT-related institutions in private and semi-private sectors), CCIS, KSU.

- Member of **IT496 BSc Graduation Project I Examination Committee** to assess undergraduate graduation projects (design and analysis phase), IT Department, CCIS, KSU.
- Member of **IT497 BSc Graduation Project II Examination Committee** to assess undergraduate graduation projects (implementation and testing phase), IT Department, CCIS, KSU.
- Member of **IT596 MSc Graduation Project I Examination Committee** to assess postgraduate graduation projects (design and analysis phase), IT Department, CCIS, KSU.
- Member of **IT597 MSc Graduation Project II Examination Committees** to assess postgraduate graduation projects (implementation and testing phase), IT Department, CCIS, KSU.

University Under- and Post-graduate Degree Courses Experience

- **Information Security** (lectures expected Fall 2017) core **IS** undergraduate course at CCIS, KSU lectures.
- **Database Management Systems** (lectures Spring 2017), core **IS** undergraduate course at CCIS, KSU lectures.
- **Information Security and Assurance** (lectures Fall 2015- Fall 2016), core IT undergraduate course (network and information security track) at CCIS, KSU.
- **Software Engineering I** (lectures Fall 2015- Spring 2016), core IT undergraduate course at CCIS, KSU.
- **Information Modelling and Database Systems** (tutorial sessions 2013), elective postgraduates course at Cardiff University.
- **Computer Programming (Java)** (Lab sessions Spring 2007), core IT undergraduate course at KSU.
- **Visual Basic** (Lab and tutorial sessions Spring 2007), core undergraduate course at the College of Science, KSU.

Professional Training Courses Qualifications and Skills

- (ISC)² CISSP[®] - Certified Information Systems Security Professional 5-day certification training course led by CoEIA (2016-present), Riyadh Chamber, Riyadh, Saudi Arabia.
- Fundamentals of Information Security and Assurance 4-day certification training course certified by CoEIA (2017-present), Riyadh, Saudi Arabia.

Invited & Submitted Talks

- The 12th International Conference on Cyber Warfare and Security (ICCWS) talk - (Dayton, USA, 2017) entitled: "Information Classification Scheme for Next Generation Access Control Models in Mobile Patient- Centered Care Systems"
- KSU, CCIS, Software and Knowledge Engineering Research Group (SKERG) talk - invited (Riyadh, 2017) entitled: "Information Classification Scheme for Next Generation Access Control Models in Mobile Patient- Centered Care Systems"
- CoEIA, Biweekly web-casted lectures - invited (Riyadh, 2017) entitled: "Information Classification Scheme for Next Generation Access Control Models in Mobile Patient- Centered Care Systems"
- KSU, College of Medicine, King Saud University Medical Centre (KSUMC), an invited keynote speaker at the i10X10 "Essentials of Health Informatics" Symposium - invited (Riyadh, 2016) entitled: "mHealth Security: Adoption Enabler or Hinderer?"
- KSU, CCIS, IT Department, IT 531 Advanced Networks Security MSc. and IT 342 Fundamentals of Multimedia BSc courses talk - invited (Riyadh, 2016) entitled: "Information Security Requirements in Patient-Centred Healthcare Support Systems"
- CCIS, IT Department, IT 496 Graduation Project 1 BSc. Capstone course talk - invited (Riyadh, 2016) entitled: "Student Guide to System Analysis & Design"
- Prince Sultan University (PSU), an invited keynote speaker at the Computer Science for High School (CS4HS) Google Initiative Training Workshops Program hosted by PSU - invited (Riyadh, 2016). Talk entitled: "Technology, Not a Substitute for Teachers but an Enabler for Learning- التقنية شريكة المعلمة في التعليم وليست بديلة عنها"

- **KSU, CCIS, SKERG talk - invited** (Riyadh, 2015) entitled: "Information Security Requirements in Patient-Centred Healthcare Support Systems"
- **Cardiff University, School of Computer Science & Informatics (COMSC), MSc Project Talk - invited** (Cardiff, 2010-2015). Talk entitled: "MSc Project, My Story back in 2009"
- **Saudi Students Conference in the UK talk** (Edinburg, 2014), entitled: "Information Security in Patient-Centred Healthcare using Workflow Technology"
- **World Congress on Medical and Health Informatics conference talk** (Copenhagen, 2013), entitled: "Information Security Requirements in Patient-Centred Healthcare Support Systems"
- **COMSC, Informatics Research Group Seminar talk** (Cardiff, 2013), entitled: "Information Security Requirements in Legacy Systems Supporting Patient-Centric Healthcare"
- **COMSC, Master's Information, Network and Cyber Security module talk - invited** (Cardiff, 2012), entitled: "Information security issues in healthcare collaborative environments"
- **Cardiff University, Medical School, Decision Lab talk - invited** (Cardiff, 2012), entitled: "Information Security Requirements for Patient-centric Healthcare Information Systems"
- **International Conference on Information Warfare and Security talk** (Washington DC, 2011), entitled: "Towards Persistent Control over Shared Information in a Collaborative Healthcare Environment"
- **International Symposium on Health Information Management Research conference, Doctoral Forum talk** (Zurich, 2011), entitled: "Sharing Patient Medical Information among Healthcare Team Members while Sustaining Information Security"
- **COMSC, Full Time Student Forum talk** (Cardiff, 2011), entitled: "How to win a Nobel Prize"
- **COMSC, Research Retreat talk** (Cardiff, 2011), entitled: "Healthcare Team Information Security Needs for Cross-organisational Information Exchange"
- **COMSC, Full Time Student Forum talk** (Cardiff, 2011), entitled: "Microsoft Word '07 application plug-in: a hands-on demo"
- **All Hands Meeting international conference talk** (Cardiff, 2010), entitled: "Towards information sharing in virtual organisations: The development of an icon-based information control model"
- **COMSC, Research Retreat talk** (Cardiff, 2010), entitled: "Sharing & Securing Medical Information in Healthcare Information Systems"
- **Speaking of Science national conference talk** (Cardiff, 2010), entitled: "How can my healthcare providers share my medical information and keep it secured at the same time?"
- **Al-Yamamah University, "Let's Think" Seminar talk - invited** (Riyadh, 2007). The seminar targets senior high school students from all over Riyadh city to assist and advise them in planning for their future. I was an IT field representative.

Expertise, Competences, & Skills

Fluent Spoken Languages: Bilingual, Arabic & English.

Fluent Programming Languages: Java, C#, C++, C, Visual Basic, HTML, PHP and SQL queries in Oracle, XML tags.

Expertise, Competences, & soft skills

- **Research:** independent researcher with advanced self-learning skills. Also experienced in interdisciplinary research in complex disciplines lacking well-defined research problems, that are hard to solve using traditional research methods.
- **Information Security, Assurance, and Governance:** expertise in information security, assurance, and governance with comprehensive risk management skills in complex distributed collaborative environments. In addition to, extensive information security design for environments with autonomous, discrete, and heterogenous information systems starting from strategic information security management system planning, through policy design, and down to technical implementation of controls. The ability to design targeted access control models for specific needs in discrete and multi-agent information systems.

- **Problem Solving Methodologies:** experienced in the use of Soft Systems Methodology, System Dynamics and Business Strategic Plan Evaluation as tools to problem solving.
- **Software Engineering:** well-skilled in developing various types of software applications including web-based, add-ins, and standalone ones. This involves a mixture of skills in software requirements gathering and analysis, design using modelling tools, and development in various platforms and applications using various programming languages.
- **Supervision:** experienced in supervising research-based projects conducted by under- and post-graduate students.
- **University Teaching:** certified instructor in micro-teaching, effective university teaching skills, and the evaluation of learning outcomes.
- **University Course Coordination and Management:** certified in course design, development, and coordination. In addition to possessing skills in course quality assurance that meets international accreditation requirements including ABET and NCAAA.
- Recruitment of information security professionals. I have experience in managing the process of selecting, contacting, and interviewing female KSU students in their senior year for recruiting private companies and governmental agencies.
- **Mind mapping** for conceptual planning and task management.
- Business process modelling, annotation, automation, and management for various scenarios and in different domains.

Technical Skills

- Business Process Management annotation and Modelling tools like **OmniGraffle** (expert)
- Business Process Management Systems like **Bizagi BPM Suite** and **Stateframe** (expert)
- Document preparation systems like **LaTeX** (expert)
- Bibliographies, citations and references management systems like **Mendeley** and **EndNote** (expert)
- Web designing including **PHP** and **ASP pages** (experienced).
- **Primary Key Infrastructure** setting (basic)
- **Computer forensics analysis and digital investigation** using tools and programs in Windows and Linux environments (intermediate)
- Application development in different platforms and using various programming languages using **MS Visual Studio** (expert)
- Photo editing, and general graphic designing skills (including: icons, logos, posters, and presentations) using **Adobe Photoshop** (expert)
- Video animation design and development using **GoAnimate** (experienced)

Communication Skills

- Arabic and English written and spoken communication skills.
- **Teamwork** as both a team member and leader.

Community Service and Charity Work

- The establishment of the 1st open information security and assurance training centre establishment for women in Riyadh as a fully-functioning female chapter of CoEIA, informally known as The Safe House. It aims to serve the female community across the country inside and outside KSU. This chapter has five objectives: building the largest community of female information security experts across Saudi Arabia, designing an information security program that includes periodic training courses in different information security fields and awareness programs, hosting and coordinating national and international competitions in cyber security (including Catch the Flag, and IEEE Extreme), consultation, and research.
- **Organising a semi-annual information security, governance, and assurance awareness program:** working with university students to create information security awareness material including infographics, comics, and video animations. In addition to organising events to present this

material to peer students, staff, and faculty members at KSU as well as to invited external community members to raise their awareness around potential threats they can be exposed to and ways to protect themselves.

- Co-organising the 1st Information Security Summer School in Saudi Arabia 2017.
- **Testing KSU Contingency Plan:** Volunteering to the test of King Saud University Evacuation Plans as part of their contingency planning.
- **Local and global charities:** conducting projects voluntarily with children and poverty alleviation charities at the national level like Bunyan Charity to sustain family poor community support. In addition, I have been involved in collaboration with global charities including UNICEF and Engineers Without Borders in the UK. This cause financially aids life-saving care provision to orphan children in danger, and engineering projects that empower communities to meet their basic human needs (including- but not limited to- water supply, civil works, and structures for school and shelter)
- **Human rights advocate:** conducting interdisciplinary pragmatic research-based projects to serve national and international communities and preserve human rights. Including collaboration with collaborating with Dentify.Me group members and Interpol DVI representatives to help in disaster victim identification, the Saudi Red Crescent Authority to provide information on trauma centres' bed capacity to the rescue team in real time and the shortest route to the closest trauma centre, and King Saud University Hospital to develop a mobile application on a wearable device to provide medical alerts wirelessly on the go to healthcare professionals caring for in-patients and those in Intensive Care Units.
- **Children charity work:** as a member of local Alshajarah Altaybah charity group serving the cause of Saudi children charity, I support children with cancer disease and provide some intellectual activities with means of entertainment for children especially orphans and those with some special needs.
- **Saudi youth education and future career advising:** participating in local Saudi youth support groups and accepted invitations by private-sector companies to provide advice to young Saudi women in planning for their education and future career. In addition to, attracting high school students with high intellectual potentials to annually and semi-annually organised computing-related events in KSU, that would facilitate exposure to a wide variation of IT projects, and networking with undergrad students and faculty members.
- **1st women-only squash club establishment in Riyadh:** having absolutely zero access to women-only squash courts in the city of Riyadh till courts were built in KSU campus recently contributed to squash being on top of neglected female sports in our society. Being an intermediate-level (DD) player myself and coached by an international champion in the US, Mr. Hussein Alnoor, and an internationally ranked player in the UK, Mr. Nick Birt, for over a year; I established the 1st women-only squash club in Riyadh where I voluntarily coach beginners (E) level on a regular basis to introduce this sport while engaging young Saudi women in active sports.