

## SAMINA R. ABIDI

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### ACADEMIC QUALIFICATION

Degree/ Dates	University/College	Major/Dissertation
PhD, 2010	Dalhousie University Nova Scotia, Canada	Health Informatics “Ontology Modeling for Handling Comorbid Chronic Heart Failure and Atrial Fibrillation in Decision Support Framework”
MSc IT, 2001	Universiti Sains Malaysia Penang, Malaysia	Information Technology “Electronic Medical Records: A Study in Requirements Specification and Design”
MBBS, 1992	Dow Medical College University of Karachi, Karachi, Pakistan	Medicine

### PROFESSIONAL APPOINTMENTS

June. 2017 - present	<i>Associate Professor</i> , Medical Informatics Program. Department of Community Health and Epidemiology, Faculty of Medicine. Dalhousie University, Halifax, NS
Sept. 2012- June 2017	<i>Assistant Professor</i> , Medical Informatics Program. Division of Medical Education, Dalhousie University, Faculty of Medicine, Dalhousie University. Halifax, NS
Sept. 2013 - present	<i>Adjunct Assistant Professor</i> , Department of Medicine, Faculty of Medicine, Dalhousie University, Halifax, NS

- Sept. 2010 - **Adjunct Professor**, Faculty of Computer Science, Dalhousie University,  
present Halifax, NS
- Sept. 2010 - **Post-doctoral Fellow**, Faculty of Computer Science, Dalhousie University,  
Sept. 2012 Halifax, NS
- Projects (3)*
1. Usability Evaluation of Family Physicians Interaction with COMET (CO-morbidity Modeling and ExecuTion) System. *PI: Shepherd M. Funded by Green Shield Canada: \$99, 905*
  2. Design and Development of a Personalized Patient Self-Management System for Chronic Heart Failure and its Integration with COMET. *PI: Shepherd M. Funded by Green Shield Canada: \$99, 905*
  3. Platform for Ocean Knowledge Management (POKM). *PI: Abidi R. Funded by CANARIE (Canada's Advance Research and Innovation Network): \$1,719,15*
- Jan. 2007 - **Sessional lecturer**, Master of Health Informatics, Faculties of Medicine and  
Dec. 2011 Computer Science. Dalhousie University, Halifax, NS
- Sessional lecturer**, Bachelor of Informatics, Faculty of Computer Science.  
Dalhousie University, Halifax, NS
- Jan. 2005 - **Project Team Member**, Dalhousie University and IWK Health Center, Halifax,  
Apr. 2005 NS
- Project: On-line survey tool as an evaluative tool to improve vaccine education for health professionals*
- Apr. 1998 - **Resident House Surgeon**, Sobraj Maternity Hospital, Karachi Metropolitan  
Oct. 1998 Corporation, Karachi, Pakistan
- Nov. 1994 - **General Practitioner**, Dr. Zishan Hussain Clinic, Karachi, Pakistan  
Dec. 1995
- Apr. 1992 - **Resident House Surgeon**, Civil Hospital, Karachi, Pakistan  
Apr. 1993

## **RESEARCH APPOINTMENTS**

- 2011 **Project Team Member**, School of Occupational Therapy, Dalhousie University, Halifax,  
NS
- Project: Cruise Control: First Gear—Development of the Community Research Alliance. PI: Versnel J (Occupational Therapy). Funded by NSHRF (Community Alliance Development Grant): \$19,777. My Responsibility: Worked with inter-professional healthcare team to help identify integrated healthcare solutions for individuals with complex healthcare needs.*
- 2006 - **Research Assistant**, Faculty of Computer Science, Dalhousie University, Halifax, NS  
2010 *Projects (5)*
1. 2010: Platform for Ocean Knowledge Management (POKM). *PI: Abidi R. Funded by CANARIE (Canada's Advance Research and Innovation Network): \$1,719,151.*

**My Responsibility:** Knowledge modeling, Ontology engineering and initial testing of POKM.

2. 2008-2010: TIME (Tools, Information, Motivation, Environment) for health: A Multi-Level Intervention to Promote Healthy Eating in Children and their Families. *PI:* Kirk S (Health Professions). *Funded by* Heart and Stroke Foundation of Canada & Canadian Institutes of Health Research (CIHR): \$599,603. **My Responsibility:** Knowledge modeling, Ontology engineering and app design.
3. 2009: Investigating the Potential for Clinical Decision Support Functionalities for the Practimax Electronic Medical Record System. *PI:* Abidi R. *Funded by* Industry Liaison and Innovation, Dalhousie University: \$15,000. **My Responsibility:** Creating simulated patients records and testing Practimax with simulated patient data.
4. 2007-2008: Neighborhood: Personalized Care Pathways for Prostate Cancer. *PI:* Butler L (Health Professions). *Funded by* National Cancer Institute of Canada (NCIC): \$8000. **My Responsibility:** Development of the clinical pathways, Modeling and computerization of the clinical pathways, Alignment of the three clinical pathways, System Design.
5. 2006: Modeling of Breast Cancer Clinical Practice Guidelines for Decision Support and Best Evidence Retrieval. *PI:* Abidi R. *Funded by* Nova Scotia Health Research Foundation (NSHRF): \$30,000. **My Responsibility:** Computerization of Canadian clinical guideline for breast cancer follow-up. Development of breast cancer ontology (knowledge model) and decision rules for decision support.

2000 - **Research Assistant**, Health Informatics Research Laboratory, School of Computer  
2001 Science, Health Universiti Sains Malaysia, Penang, Malaysia

*Projects (2)*

1. 2000-2001: Design & Development of A Tele-Healthcare Information and Diagnostic Environment. *PI:* Yousuf Z. *Funded by* Intensified Research in Priority Areas, Ministry of Science & Technology, Malaysia.: \$ N/A. **My Responsibility:** Preparation of the health education content, Development of decision logic to select relevant educational messages.
2. 2000: Web-Accessible Database for Chemical and Biological Information. *PI:* Yousuf Z. *Funded by* World Health Organization (WHO): \$ N/A. **My Responsibility:** Coding of chemical and biological information.

## **AWARDS/HONORS**

2006 - Canadian Institutes of Health Research (CIHR) Canada Graduate Scholarship – Doctoral  
2009 Award: \$40,000/year. This is the premier scholarship offered by CIHR to the top graduate students pursuing a health research project.

2007 COACH (Canada’s Health Informatics Association) Steven Huesing Award. The award is granted to the top Canadian health informatics graduate student.

## **GRADUATE STUDENT AWARDS/HONORS**

2015 Amina Russell (MHI Thesis under my supervision), won COACH (Canada’s Health Informatics Association) Steven Huesing Award. The award is granted to the top Canadian health informatics graduate student.

- 2015 Ghdeer Tashkandi (Health Informatics PhD under my supervision), won best poster award at International Symposium for Health Information Management Research (ISHIMR) 2015, York, UK.

## SCHOLARLY AND RESEARCH ACTIVITIES

### RESEARCH INTERESTS

Healthcare Knowledge Management, Healthcare Knowledge Modeling and Computerization, Clinical Decision Support Systems, Chronic Disease Management, Comorbid Care Planning, Patient Empowerment Strategies, Behaviour Modification for Self-Management, Evaluation of Health Information Systems

### DESCRIPTION OF RESEARCH PROGRAM

My research program is titled “**Informatics Enabled Patient-Centered Care Services**” and it is inspired by Canada’s Strategy for Patient-Oriented Care (SPOR) as proposed by Canadian Institutes of Health Research. My research program aims to investigate the incorporation of medical informatics theories and methods to design and implement innovative informatics-enabled patient care solutions. I pursue a healthcare knowledge management approach to investigate, develop and evaluate digital health systems and services that focus on (a) *Patient empowerment strategies* to help engage and educate patients achieve efficacy and motivation to self-manage their chronic conditions in home-based setting as per their prescribed longitudinal care plan. This includes empowering patients to achieve behavior modification and self-efficacy attainment through personalized strategies delivered using mobile interfaces; and (b) *Point of care decision support for chronic disease management* by translating evidence-based clinical guidelines and protocols in terms of computerized decision support aids to assist health professionals, particularly primary care physicians, to provide evidence-based and standardized risk assessment and disease management for chronic diseases. I also conduct research in *evaluation of digital health systems* in terms of their usability by end-users and their impact on health outcomes.

### FUNDED RESEARCH

- 2017- Advanced Data Analytics and Visualization to Optimize Pathology Lab Utilization:  
2018 Towards an Interactive Lab Utilization Dashboard for Primary Care. **PI:** Abidi R (Computer Science). **Co-I:** Samina Abidi, Elnenaei M, Gibson R, Cheng C, Stewart S, Crocker B. *Funding Agency:* NSHRF Catalyst Grant: \$50,000
- 2016- Pregnancy Weight Gain and Childhood BMI Trajectories: A Nova Scotia Cohort Study  
2017 using Canadian Primary Care Sentinel Surveillance Network Data.  
**PI:** Piccinini-Vallis H (Family Medicine). **Co-I:** Samina Abidi, Blanchard C, Attenborough R. *Funding Agency:* NSHRF Development Grant: \$14,718.
- 2015- Playing Telephone: Exploring the Potential for Interdisciplinary Shared Decision  
2016 Making for Medication Therapy in Shared Electronic Health Records.  
**PIs:** Samina Abidi, Grindrod K, (U Waterloo), Burns C (U Waterloo). **Co-I:** Abidi R, Dolovich L, Guirguis L, Guénette L, Légaré F, McMurray D, Yang J. *Funded by* CIHR Strategies for Patient Oriented Research (SPOR) Quick Strike Operating Grant &

TELUS Health: \$121,237.

- 2014-2015 A Computerized Special Authorization Decision Support System for Novel Oral Anticoagulant Therapy  
**PIs:** **Samina Abidi**, Cox J (Cardiology). **Co-I:** Abidi R. *Funded by Bayer's Canada:* \$119,350.
- 2013-2018 Integrated Management Program Advancing Community Treatment of Atrial Fibrillation (IMPACT-AF)  
**PI:** Jafna Cox (Cardiology). **Co-Is:** **Samina Abidi**, Abidi R, Parkash R, Xie F (McMaster U), Thabane L (McMaster U), MacKillop J. *Funded by Bayer's Canada:* \$530,0000.
- 2013-2015 D-WISE - A Diabetes Web-Centric Information and Support Environment: an E-health Solution Operationalizing Behaviour Change Models and Clinical Guidelines for Patient-centered Diabetes Self-management  
**PIs:** **Samina Abidi**, Vallis M (Psychology). **Co-I:** Abidi R, Piccinini-Vallis H, Imran SA. *Funded by CIHR E-Health Innovation Grant:* \$99,905.
- 2010-2013 An Integrated Knowledge Management Framework for Supporting Young Cancer Survivors  
**PI:** Abidi R. (Computer Science). **Co-Is:** **Samina Abidi**, Parker L, Bernstein M, Shepherd S. *Funded by CIHR (Catalyst Grant):* \$89,219.
- 2008-2011 Decision Support Services for Managing Chronic Diseases with Comorbidities  
**PIs:** **Samina Abidi**, Shepherd M (Computer Science). **Co-I:** Abidi R. *Funded by Green Shield Canada:* \$299,050.

## **RESEARCH BASED DEVELOPMENT WORK**

I have led or contributed as a member of various research and development teams that designed and developed the following research-based 'proof of concept' health informatics and computer systems. These systems reflect the outcomes of my funded research program.

- 2015 DWISE: Diabetes Web-bases Information and Support Environment  
*Short Description:* This is an E-health framework that comprises of provider and patient web-based tools and a mobile app for the patient. DWISE Operationalize Behaviour Change Models and Clinical Guidelines for patient-centered diabetes self-management.  
**My Responsibility:** Knowledge modeling and the design of DWISE, usability testing and analysis of the usability data.
- 2015 CSA-DSS: A Computerized Special Authorization Decision Support System for Novel Oral Anticoagulant (NOAC) Therapy  
*Short Description:* CSA-DSS is a web-based clinical decision support system that can appropriately identify patients eligible for NOAC based on specific authorization criterion in order to coordinate and manage the special authorization process.  
**My Responsibility:** Knowledge synthesis, modeling and design of the CSA-DSS.

- 2014 IMPACT-AF: Innovative Management Program Advancing Community Treatment of Atrial Fibrillation  
*Short Description:* IMACT-AF is a web-based clinical decision support system that computerizes the Canadian Atrial Fibrillation (AF) clinical guidelines, care processes at the AF clinic and AF related patient information. The IMPACT-AF system includes a provider tool to help family physician manage AF, as well as a patient tool that enables patients to self-monitor their signs and symptoms and shares this information with their providers.  
**My Responsibility:** Knowledge synthesis, modeling, design and initial testing of IMPACT-AF.
- 2011 COMET: Comorbidity Ontological Modeling & ExecuTion  
*Short Description:* COMET is a web-based clinical decision support system designed to provide evidence-based recommendations to general practitioners for managing chronic heart failure (CHF), atrial fibrillation (AF) and co-morbid CHF and AF in primary care settings.  
**My Responsibility:** This project includes my doctoral research. I was responsible for all the healthcare knowledge management activities.
- 2011 Oceanographic Sciences Ontology  
*Short Description:* The Oceanographic Sciences ontology in POKM serves as the formal semantic description of the concepts and relationships pertaining to the marine biology and the oceanography domain. This ontology allows semantic interoperability between the ocean and marine life domain.  
**My Responsibility:** Knowledge modeling, ontology engineering and initial testing of POKM.
- 2008 Prostate Cancer Care Planning and Management System  
*Short Description:* This web-based system coordinates the patient-specific prostate cancer care activities based on an institution's clinical pathway. The system models the clinical pathways for three different Canadian cancer care institutions in Halifax, Winnipeg and Calgary.  
**My Responsibility:** Development of the clinical pathways, modeling and computerization of the clinical pathways, alignment of the three clinical pathways, system design.
- 2007 BC-DSS: Breast Cancer Follow-up Decision Support System  
*Short Description:* The Breast Cancer Follow-up Decision Support System is based on the computerized version of the clinical guideline for the care and treatment of breast cancer. The web-based system assists family physicians in making guideline-based clinical decisions, recommendations and referrals for breast cancer survivors. The system was developed in collaboration with Cancer Care Nova Scotia.  
**My Responsibility:** Computerization of Canadian clinical guideline for breast cancer follow-up, development of breast cancer ontology (knowledge model) and decision rules for decision support.
- 2006 Web-based Parents Education System for Minor Head Injury in Children Ages 0 -16 years  
*Short Description:* The system provides injury-specific advice to parents in cases where their children suffer a minor head injury. The system provides relevant advice for home-based care or referral to the Emergency Department.

**My Responsibility:** Computerization of patient education material and decision logic for recommendations, system design in terms of database and interface design.

- 2005 On-line Vaccine Education for Health Professionals  
*Short Description:* This web-based system contains vaccine information to help health professionals in the delivery of vaccinations. The system provides best evidence about the diseases and response of the vaccines, and any news pertaining to the spread of the disease.  
**My Responsibility:** Developed mechanisms (an Info-Button) to access published literature, system design in terms of user information flows, messages and interface design.
- 2000 Tele-Healthcare Environment for Personalized Patient Education  
*Short Description:* Web-based personalized healthcare information is generated based on an individual's current health profile as recorded in his/her electronic health record.  
**My Responsibility:** Preparation of the health education content, development of decision logic to select relevant educational messages.
- 2000 Web-Accessible Database for Chemical and Biological Information  
*Short Description:* Web-enabled database storing coded chemical and biological information approved by the Malaysian Ministry of Health.  
**My Responsibility:** Coding of chemical and biological information.

#### **RESEARCH-BASED DEVELOPMENT WORK BY STUDENTS UNDER MY SUPERVISION**

- 2016 Tyler Wheeler (MD)  
Mobile Application for Hypertension Self-Management  
*Short Description:* This is a mobile app that uses ontology to computerize COM-B Model, behavior change strategies and hypertension guidelines. The app uses the associated Behaviour Change Wheel to identify relevant clinical and psychosocial parameters in order to create an individual profile and to personalize accompanying self-management strategies.
- 2015 Wasif Baig (MHI)  
Personalized Action Plans to Modify Behaviour  
A computerized framework that collect and model behavior change content targeting healthy living and physical activity. Semantic web technologies have been used to develop a SCT ontology and SWRL rules to infer personalized self-management plans based on a given patient profile.
- 2015 Amina Russell (MHI).  
iheart Web Application.  
*Short Description:* This is a web-based application that uses ontology to combine I-Change behavioral theory and choice architecture to engage patients in online shared decision making relevant to a non-critical chronic illness such as hypertension. It also uses real-time chats between patients and provider to share health information.

## PUBLICATIONS

### JOURNAL PAPERS (PEER-REVIEWED)

#### Published

- J1. Roy P, **Abidi Samina**, Abidi SSR. (2017). Possibilistic activity recognition with uncertain observations to support medication adherence in an assisted ambient living setting. *Knowledge-Based Systems. July 2017. (In Press)*
- J2. Mohammadhassanzadeh M, Van Woensel W, **Abidi, Samina**, Abidi R. (2017). Expanding the coverage of medical knowledge bases via semantics-based plausible reasoning. *BioData Mining Journal. 2017;10(7):*
- J3. Jafarpour B, **Abidi, Samina**, Abidi R. (2016). Exploiting owl reasoning capabilities to develop semantic-web based clinical practice Guideline execution engines. *IEEE Journal of Biomedical and Health Informatics. 2016; 20(1):424-431*
- J4. **Abidi, Samina**, Vallis M, Abidi R, Piccinini-Vallis H, Imran SA. (2014). D-WISE: Diabetes Web-Centric Information and Support Environment: Conceptual Specification and Proposed Evaluation. *Canadian Journal of Diabetes. 2014; 38(3):205-211*
- J5. **Abidi, Samina**, Shepherd M. (2008). A Clinical Practice Guideline-Based Ontology Driven Clinical Decision Support System for Breast Cancer Follow-Up. *Journal on Information Technology in Healthcare. 2008; 6(1); 23-32*
- J6. **Abidi, Samina**, Abidi R, Hussain S, Shepherd M. (2007). Ontology-based modeling of clinical practice guidelines: a clinical decision support system for breast cancer follow-up interventions at primary care settings. *Studies in Health Technology and Informatics. 2007; 129(2):845-849*

### HEALTH INFORMATICS BOOK CHAPTERS (PEER-REVIEWED)

These book chapters are extended versions of the papers that are carefully selected and peer-reviewed from the proceedings of the top international conferences.

- BC1. Roy PC, **Abidi, Samina**, and Abidi R (2016). Monitoring medication adherence in smart environments in the context of patient self-management: a knowledge-driven approach. In: Bouchard B., Bouzouane A. and Guillet S. (eds), *Assistive Technologies in Smart Environments for People with Disabilities*, Boca Raton, FL: CRC Press
- BC2. **Abidi, Samina**. (2014) Health informatics: opportunities, challenges, and prospects. In: Vaidya K and Soar J (eds.), *Health Informatics (e-Health) for the Curious: Why Study Health Informatics*. Amazon.com: The Curious Academic Publishing.
- BC3. **Abidi, Samina**. (2011) Ontology-based knowledge modeling to provide decision support for comorbid diseases. In: Riano D, ten Teije A, Miksch, S and Peleg M. (eds.), *KR4HC 2010: Knowledge Representation in Health Care, LNCS 6512*. Heidelberg, Germany: Springer, pp. 27-39
- BC4. **Abidi, Samina**. (2009) A conceptual framework for ontology based automating and merging of clinical pathways of comorbidities. In: Riano, D (ed) *Knowledge Management for Health Care Procedures LNCS 5626*. Heidelberg, Germany: Springer, pp. 56-66



- BC5. **Abidi, Samina**, Abidi R. (2009). Towards the merging of multiple clinical protocols and guidelines via ontology-driven modeling. In: Combi C, Shahar Y and Abu-Hanna A (eds), *12th Conference on Artificial Intelligence in Medicine, (AIME) 2009, Verona. LNAI 565.*, Berlin, Germany: Springer-Verlag, pp. 81-85
- BC6. **Abidi, Samina**, Abidi R, Hussain S, Butler L. (2008). Operationalizing prostate cancer clinical pathways: an ontological model to computerize, merge and execute institution-specific clinical pathways. In: Riano, D. (ed.) *Knowledge Management for Health Care Procedures, ECAI 2008*, Berlin, Germany: Springer, pp. 1-12

## CONFERENCE PAPERS (FULL-PAPER PEER-REVIEWED)

### 2017

- C1. Abidi Samina, Vallis M, Piccinini H, Imran SA, Abidi R. A Digital Framework to Support Providers and Patients in Diabetes Related Behavior Modification. European Federation of Health Informatics: Informatics for Health 2017. Apr. 24-26, 2017. Manchester, UK
- C2. Tashkandi G, **Abidi Samina**, Abidi SSR. Personalized Patient Education Application in the Pre-Anesthesia Clinic. *IEEE International Conference on Biomedical and Health Informatics (BHI 2016)*. Feb. 16-19, 2017. Orlando, USA

### 2016

- C3. **Abidi Samina**, Cox J, Abusharekh A, Hashemian N, Abidi R. A digital health system to assist family physicians to safely prescribe NOAC medications. *Health-Exploring Complexity: An Interdisciplinary Approach (HEC 2016). GMDS & DGEpi & IEA-EEF annual meeting, Medical Informatics Europe (MIE 2016)*. Aug. 28–Sept. 2, 2016. Munich, Germany
- C4. Baig W, **Abidi Samina**, Abidi R. An ontological model of behaviour theory to generate personalized action plans to modify behaviours. *Health-Exploring Complexity: An Interdisciplinary Approach (HEC 2016). GMDS & DGEpi & IEA-EEF annual meeting, Medical Informatics Europe (MIE 2016)*. Aug. 28–Sept. 2, 2016. Munich, Germany
- C5. Mohammadhasazadeh H, van Woensel W, **Abidi Samina**, Abidi R. A semantic web approach to plausible reasoning for improving clinical knowledge engineering. *IEEE International Conference on Biomedical and Health Informatics (BHI 2016)*. Feb. 24-27, 2016. Las Vegas, USA

### 2015

- C6. Mohammadhassanzadeh H, Van Woensel W, **Abidi Samina**, Abidi R. Multi-strategy semantic web reasoning for medical knowledge bases. *International Workshop on Biomedical Data Mining, Modeling, and Semantic Integration: A Promising Approach to Solving Unmet Medical Needs (BDM2I 2015) at The 14th International Semantic Web Conference*. Oct. 11-15, 2015. Bethlehem, Pennsylvania
- C7. Abidi R, **Abidi Samina**, Abusharek A, Cox J. A clinical decision support framework to monitor and manage atrial fibrillation patients at the primary care level. *17th International Symposium on Health Information Management Research (ISHIMR 2015)*. June 25-26, 2015. York, England, UK.
- C8. Van Woensel W, Roy PC, **Abidi Samina**, Abidi R. A mobile and intelligent patient diary for chronic disease self-management. *15th World Congress on Health and Biomedical Informatics (MEDINFO 2015)*. Aug. 19-23, 2015. Sao Paulo, Brazil.

- C9. Russell A, Van Woensel W, **Abidi Samina**. The shared decision making frontier: managing non-critical chronic illness using behavioral theory, decision theory and online technology. *15th World Congress on Health and Biomedical Informatics (MEDINFO 2015)*. Aug. 19-23, 2015. Sao Paulo, Brazil.
- C10. Jafarpour B, **Samina Abidi**, Ahmad AM, Abidi R. An alert management framework to avoid physicians' alert fatigue. *15th World Congress on Health and Biomedical Informatics (MEDINFO 2015)*. Aug. 19-23, 2015. Sao Paulo, Brazil.

#### 2014

- C11. Al Haider N, **Abidi Samina**, Van Woensel W, Abidi R. Integrating existing large scale medical laboratory data into the semantic web framework. *IEEE International Conference on Big Data (Special Session on Big Data Representation and Processing in Data Science)*. Oct. 27-30, 2014. Washington DC, USA.
- C12. Mufti H, **Abidi Samina**, Abidi SSR, Hirsch GM. Predictors of post-operative delirium after cardiac surgery, a machine learning approach. *Proceedings of Canadian Cardiovascular Society Conference*. Vancouver, BC. Oct. 2014;30(10): S237–S238
- C13. Russell A, **Abidi Samina**, Abidi, R. shared decision making: using theories and technology to engage the patient in their health journey. *25th European Medical Informatics Conference (MIE2014)*. Aug. 31-Sept. 3, 2014. Istanbul, Turkey
- C14. Stewart SA, **Abidi Samina**, Parker L, Bernstein M, Abidi R. Clinical guideline-driven personalized self-management diary for paediatric cancer survivors. *25th European Medical Informatics Conference (MIE2014)*. Aug. 31-Sept. 3, 2014. Istanbul, Turkey

#### 2013

- C15. **Abidi Samina**, Abidi R, Abusharek A. A semantic web based mobile framework for designing personalized patient self-management interventions. *Conference on Mobile and Information Technologies in Medicine and Health 2013*. Nov. 20, 2013. Prague, Czech Republic
- C16. **Abidi Samina**, Stewart S, Shepherd M, Abidi R. Usability evaluation of family physicians' interaction with COMET: Comorbidity Ontological Modeling and ExecuTion System. *MEDINFO 2013*. Aug. 20-23, 2013. Copenhagen, Denmark
- C17. Abidi R, **Abidi Samina**. An ontology-driven personalization framework for designing theory-driven self-management intervention. *5th International Workshop on Knowledge Representation for Health Care (KR4HC 2013-Pro-Health 2013)*. In conjunction with *14th Conference on Artificial Intelligence in Medicine (AIME 2013)*. June 1, 2013. Murcia, Spain

#### 2012

- C18. Jafarpour B, **Abidi Samina**, Abidi R. OWL-based execution of ontologically-modeled clinical practice guidelines. *24th European Medical Informatics Conference (MIE 2012)*. Aug. 26-29, 2012. Pisa, Italy
- C19. Omaish M, **Abidi Samina**, Abidi R. Ontology-based computerization of acute coronary syndrome clinical guidelines for clinical decision support in emergency departments. *24th European Medical Informatics Conference (MIE2012)*. Aug. 26-29, 2012. Pisa, Italy.
- C20. **Abidi Samina**, Abidi R. A semantic web approach to align institution-specific clinical pathways to develop a standardized care model. *25th IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012)*. Jun. 20-22 2012, Rome, Italy.
- C21. **Abidi Samina**, Cox J, Abidi R, Shepherd M. Semantic web based clinical guideline modeling to handle comorbidities: aligning ontologically-modeled single disease

- clinical pathways. *25th IEEE International Symposium on Computer-Based Medical Systems (CBMS 2012)*. Jun. 22-22 2012. Rome, Italy.
- C22. **Abidi Samina**, Abidi R. Aligning institution-specific clinical pathways to develop a standardized care model for prostate cancer. *2nd Advances in Health Informatics Conference (AHIC 2012)*. Apr. 25-27, 2012. Toronto, Canada
- C23. Jafarpour B **Abidi, Samina**, Abidi R. OWL-based execution of ontologically modeled clinical practice guidelines. *Advances in Health Informatics Conference (AHIC 2012)*. Apr. 25-27, 2012. Toronto, Canada
- C24. **Abidi Samina**, Shepherd M, Cox J. Computerizing comorbid clinical guidelines using OWL ontology: a decision support system for cardiac diseases. *2nd Advances in Health Informatics Conference (AHIC 2012)*. Apr 25-27, 2012. Toronto, Canada
- C25. **Abidi Samina**, Abidi R, Daniyal A, Abusharekh A, Kwan M. Ontology-driven e-science platform for ocean sciences. *IADIS International Conference on e-Society*. Mar. 10-13, 2012. Berlin, Germany
- C26. **Abidi Samina**, Cox J, Shepherd M, Abidi R. Using OWL ontologies for clinical guidelines based comorbid decision support. *45th Hawaii International Conference on System Sciences (HICSS-45)*. Jan. 4-7, 2012. Maui, Hawaii, USA

## 2011

- C27. Jafarpour B, **Abidi Samina**, Abidi R. Exploiting OWL reasoning services to execute ontologically-modelled clinical practice guidelines. *13th Conference on Artificial Intelligence in Medicine (AIME 2011)*. July 2-6, 2011. Bled, Slovenia
- C28. **Abidi Samina**, Abidi R, Kwan M, Daniyal A. (2011). An ontology framework for modeling ocean data and e-science semantic web services. *International Conference on Innovation and Management*. July 12-15, 2011. Kuala Lumpur, Malaysia
- C29. Abidi R, Daniyal A, Abusharekh A, **Abidi Samina**, Yeo P, Khan F, Kwan M, Mehdi F, Le Y. A semantic web based e-science framework for ocean knowledge management. *International Conference on Innovation and Management*. July 12-15, 2011. Kuala Lumpur, Malaysia
- C30. **Abidi Samina**, Abidi R, Kwan M, Daniyal A. (2011). Ontology-based modeling of oceans knowledge and data: towards semantic web services for ocean research. *International Conference on Intelligent Computational Systems*. July 8-9, 2011. Bangkok, Thailand

## 2010

- C31. Daniyal A, **Abidi Samina**, Abusharekh A, Kwan M, Abidi R. A knowledge-centric e-research platform for marine life and oceanographic research. *International Conference on Knowledge Management and Information Sharing*. Oct. 25-18, 2010. Valencia, Spain
- C32. **Abidi Samina**. Ontology based knowledge modeling to provide decision support for comorbid diseases. *2nd International Workshop on Knowledge Representation for Health-Care (KR4HC 2010)*. May 14, 2010. Lisbon, Portugal
- C33. Abidi R, Abusharekh A, Daniyal A, Kuan M, Mehdi F, **Abidi Samina**, Abbas F, Yeo P, Jamal F, Fathzadeh R. A service oriented e-research platform for ocean knowledge management. *6th IEEE World Congress on Services (Services 2010)*. July 5-10, 2010. Miami, USA

## 2009

- C34. Daniyal A, **Abidi Samina**, Abidi R. Computerizing clinical pathways: ontology based modeling and execution. *22nd International Conference on European Federation of Medical Informatics (MIE 2009)*. Aug. 30 - Sept. 2, 2009. Sarajevo, Bosnia and

Herzegovina

**2008**

- C35. **Abidi Samina**, Abidi R, Hussain S, Shepherd M. Ontology-based modelling of clinical practice guidelines: a clinical decision support system for breast cancer follow-up interventions at primary care settings. *12th World Congress on Medical Informatics (MEDINFO 2007)*. Aug. 20-24, 2007. Brisbane, Australia
- C36. Hussain S, **Abidi Samina**, Abidi R. Semantic web framework for knowledge-centric clinical decision support systems. *11th Conference on Artificial Intelligence in Medicine (AIME 2007)*. July 7-11, 2007. Amsterdam, The Netherlands
- C37. **Abidi Samina**, Shepherd M. Ontology-based modeling of clinical practice guidelines: a clinical decision support system. *International Conference on Semantic Web and Digital Libraries*. Feb. 21-23, 2007. Bangalore, India
- C38. **Abidi Samina**, Shepherd M. A CPG-based ontology driven clinical decision support system for breast cancer follow-up. *International Conference Addressing Information Technology and Communication in Health*. Feb. 16-18, 2007. Victoria, Canada

**2006**

- C39. Elvidge KL, **Abidi Samina**, Fitzpatrick E. Tailoring patient education intervention: Towards a computer-tailored patient information system for minor head injuries. *International Congress of European Federation of Medical Informatics (MIE 2006)*. Aug. 27-30, 2006. Maastricht, The Netherlands. ***This paper was nominated for Erasmus Award.***
- C40. **Abidi Samina**, Chedrawy Z, Abidi R. Embedding infobuttons in clinical practice guidelines: towards automatic generation of search queries for PubMed. *20<sup>th</sup> International Congress of the European Federation for Medical Informatics (MIE 2006)*. Aug. 27-30, 2006. Maastricht, The Netherlands
- C41. **Abidi Samina**, Elvidge KL, Kharrazi H., Shepherd M., Watters C., Duffy J. Reformulation of consumer health queries with standard medical vocabularies. *11<sup>th</sup> International Symposium on Health Information Management Research (iSHIMR 06)*. July 14-16, 2006. Halifax, Canada

**2005**

- C42. Abidi R, Hussain F, **Abidi Samina**. Morphing tacit and explicit medical knowledge: providing multi-faceted medical decision support. *10<sup>th</sup> International Symposium on Health Information Management Research (iSHIMR 2005)*. Sept. 22-24, 2005. Thessaloniki, Greece

**2001**

- C43. Abidi R, Han CY, **Abidi Samina**. Patient empowerment via 'pushed' delivery of personalized healthcare educational content over the internet. *10<sup>th</sup> World Congress on Medical Informatics (MEDINFO 2001)*. Sept. 2-5, 2001. London, UK
- C44. Abidi R, **Abidi Samina**. A case for supplementing evidence-based medicine with inductive clinical knowledge: towards a technology enriched integrated clinical evidence system. *14<sup>th</sup> IEEE Symposium on Computer Based Medical Systems (CBMS 2001)*. July 26-27, 2001. Bethesda, USA
- C45. Abidi R, Han CY, **Abidi Samina**. An intelligent info-structure for composing and publishing personalized healthcare information over the internet. *14<sup>th</sup> IEEE Symposium on Computer Based Medical Systems (CBMS 2001)*. July 26-27, 2001. Bethesda, USA

## HEALTH INFORMATICS ABSTRACTS AND POSTERS (PEER REVIEWED)

- A1. Waked K, Boersema J, **Abidi Samina**, Chin J, Guirguis L, Kerestecioglu D, Mercer K, Burns C, McKinnon A, Grindrod K. Playing Telephone: Playing Telephone: Interdisciplinary study of medication decision making across prescribers, patients and pharmacists. 45<sup>th</sup> North American Primary Care Research Group (NAPCRG) annual meeting. Nov. 17-21, 2017, Quebec, Canada
- A2. Tashkandi G, **Abidi Samina**, Abidi SSR. A Personalized Pre-Anesthesia Patient Education Framework for Minimizing Anxiety Amongst Patients Undergoing Surgery. 2<sup>nd</sup> International Saudi Health Informatics Conference (ISHIC 2017). April 15-20, 2017, Riyadh, Saudi Arabia
- A3. Waked K, Boersema J, **Abidi Samina**, Chin J, Guirguis L, Kerestecioglu D, Mercer K, Burns C, McKinnon A, Grindrod K. Playing Telephone: Understanding the State of Medication Decision Making in Growing Healthcare Teams in the Time of Electronic Health Records. 2017. Canadian Association of Health Services and Policy Research (CAHSR) Conference. May 24-26, 2017, Toronto, Canada
- A4. **Abidi Samina**, Vallis M, Piccinini-Vallis H, Imran SA, Abidi R. Decision Support To Design Personalized Behavior Modification Plans for Diabetes. *E-Health 2016*. June 4-7, 2017. Toronto, Canada
- A5. **Abidi Samina**, Vallis M, Piccinini-Vallis H, Imran SA, Abidi R. A decision support environment to design personalized behavior modification plans for diabetes self-management. *Health-Exploring Complexity: An Interdisciplinary Approach (HEC 2016)*. GMDs & DGEpi & IEA-EEF annual meeting, Medical Informatics Europe (MIE 2016). Aug. 28–Sept. 2, 2016. Munich, Germany
- A6. Waked K, Boersema J, **Abidi Samina**, Chin J, Guirguis L, Kerestecioglu D, Mercer K, Burns C, McKinnon A, Grindrod K. Playing telephone: understanding how we communicate and make decisions using medication records. *Trillium Primary Healthcare Research Day*. June 1, 2016. Toronto, Canada.
- A7. Waked K, Boersema J, **Abidi Samina**, Chin J, Guirguis L, Kerestecioglu D, Mercer K, Burns C, McKinnon A, Grindrod K. Playing telephone: medication management and integrated electronic health records. *Ontario Pharmacists Association Annual Conference*. June 9-11, 2016. Toronto, Canada
- A8. Abidi R, Abusharekh A, Hashemian N, **Abidi Samina**. Digital health decision -support eco-system for standardized atrial fibrillation care. *E-Health 2016*. June 5-8, 2016. Vancouver, Canada
- A9. **Abidi Samina**, Vallis M, Abidi R, Piccinini-Vallis H, Imran SA. Usability evaluation of a computerized behavioral intervention for diabetes management. *E-Health 2016*. June 5-8, 2016. Vancouver, BC, Canada
- A10. Abidi R, Van Woensel W, Roy P, **Abidi Samina**, Cox J. Mobile patient diary with decision support for chronic disease self-management. *E-Health 2016*. June 5-8, 2016. Vancouver, Canada
- A11. Abidi R, Cox J, **Abidi Samina**, Abusharekh A. IMPACT-AF: digital health based approach for providing evidence-based management of atrial fibrillation at the primary care level. *Dalhousie University Department of Medicine Research Day*. Apr. 7, 2016. Halifax, Canada

- A12. **Abidi Samina**, Vallis M, Piccinini-Vallis H, Imran SA, Abidi R. DWISE - diabetes web-centric information and support environment: engaging patients and providers in behavior modification in primary care. *Dalhousie University Department of Medicine Research Day*. Apr. 7, 2016. Halifax, Canada
- A13. Abidi R, Cox J, **Abidi Samina**, Roy P and van Woensel W. Mobile patient decision support services for monitoring atrial fibrillation. Dalhousie University *Department of Medicine Research Day*. Apr. 7, 2016. Halifax, Canada
- A14. Wheeler Y, **Abidi Samina**, Giacomantonio N, Vallis M. Approach to an ontology-based mobile intervention for patients with hypertension. *Second annual Research in Medicine (RIM) Research Day*. Faculty of Medicine, Dalhousie University. Apr. 1, 2016. Halifax, Canada
- A15. **Abidi Samina**, Vallis M, Piccinini-Vallis H, Imran SA, Abidi R. Computerized behavioral modification framework for improving patients' adherence to diabetes self-management plans. *IEEE International Conference on Biomedical and Health Informatics (BHI 2016)*. Feb. 24-27, 2016. Las Vegas, USA
- A16. Tashkandi G, **Abidi Samina**, Abidi R. Interface designs models based on psychological theories. *17th International Symposium on Health Information Management Research (ISHIMR 2015)*. Jun. 25-26, 2015. York, UK. **This poster won the best poster award.**
- A17. **Abidi Samina**, Vallis M, Abidi R, Piccinini-Vallis H, Imran SA. D-WISE: a mobile health application for translating behavior change strategies to deliver patient-specific diabetes self-management services. *E-Health 2015*. May 31- June 3, 2015. Toronto, Canada
- A18. Abidi R, Cox J, **Abidi Samina**, Abusharekh A, White J. An e-health based integrated management program advancing community treatment of atrial fibrillation (IMPACT-AF). *Qatar Foundation Annual Research Conference. (QF-ARC 2014)*. Nov. 18-19, 2013. Doha, Qatar
- A19. Abidi R, **Abidi Samina**. The ADVICE infrastructure for generating and delivering evidence-informed clinical decision support services: a knowledge management approach. *Qatar Foundation Annual Research Conference. (QF-ARC 2013)*. Nov. 24-25, 2013. Doha, Qatar
- A20. **Abidi Samina**, Abidi R, Cox J. A semantic web framework to computerize and execute clinical guidelines: towards the handling of co-morbidities in clinical decision support systems. *Qatar Foundation Annual Research Conference. (QF-ARC 2013)*. Nov. 24-25, 2013. Doha, Qatar
- A21. **Abidi Samina**, Abidi R. A patient education framework for designing personalized self-management interventions for home-based chronic disease management. *Qatar Foundation Annual Research Conference. (QF-ARC 2013)*. Nov. 24-25, 2013. Doha, Qatar
- A22. **Abidi Samina**, Abidi R, Shepherd M. Usability evaluation of family physicians' interaction with COMET: Comorbidity Ontological Modeling & ExecuTion System. *E-Health 2012*. May 27-30, 2012. Vancouver, Canada
- A23. **Abidi Samina**. Empowering physicians to handle comorbidities through evidence-based clinical decision support systems. *E-Health 2011*. May 29-June 1, 2011. Toronto, Canada
- A24. **Abidi Samina**. Semantic web based health knowledge modeling: decision support system for handling co-morbidities. *Atlantic Workshop on Semantics and Services*. May 18, 2011. Miramichi, Canada
- A25. Abidi R, **Abidi Samina**, Daniyal A. standardizing inter-institution care via ontologically

- modelled clinical pathways. *13<sup>th</sup> World Congress on Medical Informatics (MEDINFO 2010)*. Sept. 12-15, 2010. Cape Town, South Africa
- A26. **Abidi Samina**, Cox J, Howlett J, Shepherd M. Ontology modeling for handling co-morbidities in decision support systems. *13<sup>th</sup> World Congress on Medical and Health Informatics (MEDINFO 2010)*. Sept. 12-15, 2010. Cape Town, South Africa
- A27. **Abidi Samina**. Ontology-based modelling and alignment of comorbid clinical practice guidelines for decision support purposes. *E-Health 2010*. May 30 - June 2, 2010. Vancouver, Canada
- A28. Abidi R, **Abidi Samina**, Daniyal A. Standardizing inter-institution care via alignment of clinical pathways. *E-Health 2010*. May 30– June 2, 2010. Vancouver, BC, Canada
- A29. **Abidi Samina**, Abidi R, Hussain H, Salman A. a clinical decision support system for guideline-based cancer follow-up care at primary care setting. *Cancer Research Symposium*. Nov. 16-17, 2009. Halifax, Canada
- A30. **Abidi Samina**, Abidi R. Computerizing clinical pathways to generate patient-specific care-maps for prostate cancer management. *E-Health 2008*. May 4-7, 2008. Vancouver, Canada
- A31. **Abidi Samina**, Hussain S. Ontology-based modelling of breast cancer follow-up clinical practice guidelines: a decision support system. *Virtual Health Informatics Student Symposium, E-Health 2007*. May 27, 2007. Quebec, Canada
- A32. Abidi R, Hussain S, **Abidi Samina**. Computerizing and operationalizing clinical practice guidelines for point of care clinical decision support. *E-Health 2007*. May 27–30, 2007. Quebec, Canada
- A33. **Abidi Samina**. A CPG-Based ontology driven clinical decision support system for breast cancer follow-up. *KR-MED 2006 International Workshop*. Nov. 8, 2006. Baltimore, USA
- A34. Fitzpatrick E, **Abidi Samina**, Elvidge K. Towards a tailored web-based information system for minor head injury. *11<sup>th</sup> International Conference on Emergency Medicine*. June 3-7, 2006. Halifax, Canada

#### INVITED PRESENTATIONS

- 2016 ‘Digital Health in Action: Providing Information-Centric Healthcare Services’. *10<sup>th</sup> Annual Student Led Conference on Information without Borders (IWB 2016): Managing Health Information: Technologies and Strategies for the 21st Century*. Feb. 10, 2016. Halifax, NS, Canada
- 2015 ‘D-WISE: Diabetes Web-Centric Information and Support Environment- Enabling Patient Self-Management of Diabetes in Primary Care’. *CPD Research Presentations. Canadian Conference on Medical Education (CCME 2015)*. Apr. 25, 2015. Vancouver, BC, Canada
- 2015 ‘Translating and Integrating Clinical Guidelines, Behavior Models and Educational Content: Evidence-Informed Behavior Modification Aids for Providers and Patients’. *Medical Education Rounds Webinar, Division of Medical Education, Dalhousie University*. Apr. 7, 2015. Halifax, NS, Canada
- 2014 ‘D-WISE: Diabetes Web-Centric Information and Support Environment’. *CIHR Institute of Nutrition, Metabolism and Diabetes (INMD) Institute Advisory Board Poster Session/ Meet & Greet Event, Dalhousie University*. Oct. 28, 2014. Halifax, NS, Canada

- 2011 ‘Empowering Physicians to Handle Co-Morbidities: Evidence based Clinical Decision Support Systems’. July 24, 2011. Agha Khan Medical University, Karachi, Pakistan.
- 2011 ‘Health Informatics: Research Landscape & Opportunities’. July 8, 2011. School of Computer Science, Universiti Sains Malaysia, Penang, Malaysia.
- 2011 ‘Towards Usability Evaluation of Family Physicians Interaction with COMET: Comorbidity Ontological Modelling & ExecuTion System’. *Health Informatics Seminar Series. Faculty of Medicine, Dalhousie University*. Oct. 21, 2011. Halifax, NS, Canada
- 2011 Thinking Clinical Workflows: Designing & Implementing Electronic Clinical Workflows. (workshop). May 30, 2011. *E-Health 2011*. Toronto, ON, Canada
- 2009 ‘Ontology Modelling for Handling Comorbid Diseases in Decision Support Systems’. *Health Informatics Seminar Series. Faculty of Medicine, Dalhousie University*. Nov. 3, 2009. Halifax, NS, Canada
- 2007 ‘Ontology-based Modelling of Breast Cancer Follow-up Clinical Practice Guideline for providing Clinical Decision Informatics’. *Health Informatics Seminar Series. Faculty of Medicine, Dalhousie University*. Nov. 21, 2007. Halifax, NS, Canada

**PROMOTIONAL PRESENTATIONS**

- 2009 NICHE - kNowledge Intensive Computing for Healthcare Enterprises. (research exhibited). *CAPHC - Canadian Association of Pediatrics Health Centres, 2009 Annual Meeting*, Oct. 18-21, 2009. Halifax, NS Canada

**TEACHING ACTIVITIES**

**COURSES TAUGHT - DALHOUSIE UNIVERSITY**

**Graduate Courses: Master of Health Informatics Program - Faculties of Medicine and Computer Science**

- 2010 - present HINF 6110 – Health Information Systems and Issues
- 2012 - present HINF 6020 – Research Methods

**Undergraduate Courses: Bachelor of Informatics Program (Health Informatics Major) Faculty of Computer Science**

- 2007-2010 HINF 2501 - Clinical Processes and Decision Making I
- 2010 HINF 4100 - Health Enterprise Information System

**ELECTIVE COURSES TAUGHT TO MEDICAL RESIDENTS - DALHOUSIE UNIVERSITY**

**Annual Medical Education Elective for Residents - Faculty of Medicine**

- 2017 Point of Care Medical Education: Using Informatics to Enhance Trainee’s Knowledge and Practice
- 2016 Medical Education and Practice in Information Society: Role of Medical Informatics. *Co-Presenter: Stewart S*
- 2015 Supporting Practice Beyond the Clinical Encounter: Healthcare in the Information Society
- 2014 Bridging the Knowledge Gap Through Informatics: Art of the Possible



2013 Medical Informatics: Enabling Acquisition, Storage, Retrieval and Use of Information in Healthcare

## **COURSES DESIGNED - DALHOUSIE UNIVERSITY**

### **Graduate Courses: Master of Health Informatics Program, Faculties of Medicine and Computer Science**

2013 HINF 6020 - Research Methods

2010 HINF 6110 - 2. Health Information Systems and Issue

### **Undergraduate Courses: Bachelor of Informatics Program (Health Informatics Major), Faculty of Computer Science**

2010 HINF 4100 - Health Enterprise Information System

2007 HINF 2501 - Clinical Processes and Decision Making I

2007 HINF 2502 - Clinical Processes and Decision Making II

## **TEACHING RELATED ADMINISTRATION WORK - DALHOUSIE UNIVERSITY**

### **Undergraduate Medical Education, Faculty of Medicine**

2013- Unit Research in Medicine (RIM) Unit within MD program at Dalhousie  
present Director University

**My Responsibilities:** Govern RIM unit with other unit directors to ensure that all objectives are met, align students with appropriate mentors, assist in research planning and design, approve proposal and annual reports and help resolve research-related issues between RIM mentees and mentors.

2013- Chair RIM Committee for Evaluation of Student Learning  
present

**My Responsibilities:** Design and implement effective strategy to assess RIM students' learning of Research Methods related concepts and activities. Work with the RIM office and UGME to review, format and approve RIM final exam, exam marking and grading plan.

2013- Member RIM Curriculum and Administrative Working Group  
present

**My Responsibilities:** Help develop and iteratively revise the curriculum of the RIM Program, which is optimally integrated with the research-related curricula of other undergraduate medical education components.

### **Inter-professional Health Education**

2012- Supervisor Health Mentors Program  
2016

**My Responsibilities:** To facilitate learning processes and discussions during meetings with student teams about health challenges faced by team's Health Mentor (an adult volunteer with one or more chronic conditions or disabilities) and about the Health Mentor's privacy and confidentially. Provide feedback on team and individual assignments.

## ACTIVITIES UNDERTAKEN TO IMPROVE TEACHING AND LEARNING

2008 University Teaching and Learning Certificate Program  
*Institution:* Centre for Learning and Teaching, Dalhousie University  
*Achievements:* Developed two bachelor-level Medical Informatics courses

## POST-DOCTORAL/GRADUATE STUDENT/MD STUDENT SUPERVISION

### HEALTH INFORMATICS POST-DOCTORAL FELLOWS – DALHOUSIE UNIVERSITY

2015-On going	Co-Supervisor (Primary Supervisor: Abidi R)	Enayat Rajabi. Project Topic: Mobile interfaces for D-WISE app and patient monitoring system
Nov. 2013-Ongoing	Co-Supervisor (Primary Supervisor: Abidi R)	William Van Woensel Project Topic: ENGAGE: A Mobile health framework for patient engagement and delivery of self-management interventions
Sept. 2013-Ongoing	Co-Supervisor (Primary Supervisor: Abidi R)	Patrice Roy Project Topic: Smart environments for remote patient monitoring in the context of assisted ambient living
2014- 2015	Primary Supervisor	Samuel Stewart. <i>Project Topic:</i> Implementation of DWISE (Diabetes Web-Centric Information and Support Environment) Mobile App.
2014- 2015	Co-Supervisor (Primary Supervisor: Abidi R)	Borna Jafarpour. <i>Project Topic:</i> Incorporating execution-time clinical guideline integration for handling comorbidities in a clinical decision support system.
2013- 2014	Primary Supervisor	Greg Lee. <i>Project Topic:</i> Implementation and Design of Database and User Interface for DWISE Framework.

### INTERDISCIPLINARY PHD (HEALTH INFORMATICS) – DALHOUSIE UNIVERSITY

2016-present	Primary Supervisor	Amina Russell. <i>PhD Topic:</i> Application of the Sendai Framework for Disaster Risk Reduction Using Health Informatics Methods and Geographical Information Systems to Dynamically Inform, Reduce and Manage Risk Due to Multi-Hazard Global Disasters.
2014-present	Primary Supervisor	Ghdeer Tashkandi. <i>PhD Topic:</i> Computer-based Pre-Anesthesia Patient Education Platform for Saudi Patients
2015-2017	Member	Calvino Cheng. <i>PhD Topic:</i> Process Mining to Abstract Clinical Pathways from Laboratory Information Data.

2013	Member	Samuel Stewart. <i>PhD Topic:</i> Knowledge Translation in Online Communities of Practice: Utilizing Social Network and Semantic Content Analyses to Link Healthcare Practitioners to the “Right” Knowledge Source.
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**COMPUTER SCIENCE PHD – DALHOUSIE UNIVERSITY**

2016-present	Member	Ali Nasri Nazif. PhD Topic: Open health data analysis using semantic web based linked data approaches
2014-present	Member	Hossein Mohammadhassanzadeh. <i>PhD Topic:</i> A Semantic Web-based Approach to Plausible Reasoning for Improving Knowledge Engineering.
2013	Member	Borna Jafarpour. <i>PhD Topic:</i> Ontology Merging Using Semantically- Defined Merge Criteria and OWL Reasoning Services: Towards Execution-Time Merging of Multiple Clinical Workflows to Handle Comorbidities.

**MASTER OF HEALTH INFORMATICS (MHI) THESES –DALHOUSIE UNIVERSITY**

2016	Primary Supervisor	Eseohen Imouokhome. <i>MHI Thesis Topic:</i> Theory-Based Health Educational Mobile App Design for Elderly and Care-givers to Manage Falls.
2016-present	Co-Supervisor. (Primary Supervisor: Abidi R)	Ali Daowd. <i>MHI Thesis Topic:</i> Citizen Health Dashboard: A Digital Health-based Framework to Monitor Risk of Chronic Diseases and Comorbidities.
2015	Primary Supervisor	Wasif Baig. <i>MHI Thesis Topic:</i> Behavior Modeling: Developing a Behavior Change Theories based Knowledge Model for Personalized Lifestyle Interventions in Chronic Disease Management.
2015	Primary Supervisor	Amina Russell. <i>MHI Thesis Topic:</i> A Theory-based Computerized Framework to Support Shared Decision Making, Personalized Health Education and Self-management in Patients with Hypertension.  <i>Amina won 2015 COACH (Canada’s Health Informatics Association) Steven Huesing Award. The award is granted to the top Canadian health informatics graduate student.</i>
2014	Co-Supervisor (Primary Supervisor: Abidi R)	Hani Mufti. <i>MHI Thesis Topic:</i> Using a Predictive Model to Identify Worst Possible Outcomes in Patients who are 70 Years or More and are Going for Heart Surgery.

2014	Member	Ehsan Maghsoudlou. <i>MHI Thesis Topic</i> : Knowledge-Centric Electronic Referral System for Spine Injury.
2013	Examiner	Nelofar Kureshi. <i>MHI Thesis Topic</i> : Development of a Predictive Model for Personalized Therapeutic Interventions.
2012	Member	Syed Ali Haider Zaidi. <i>MHI Thesis Topic</i> : An OWL Ontology for Modeling HL-7 Compliant Electronic Patient Records for Chronic Disease Management.
2012	Examiner	Ghdeer Tashkandi. <i>MHI Thesis Topic</i> : Standardization of Predictive Factors of Chronic Low Back Pain: A Pilot Study.
2012	Member	Shireen Sharif. <i>MHI Thesis Topic</i> : From paper based care plans to Care Plan Ontology: A Knowledge Management Approach to Computerized Care Plans for Chronic Disease Management.
2011	Member	Mustafa Omaish. <i>MHI Thesis Topic</i> : Ontology-based Knowledge Model for an ACS Management Clinical Guideline: Handling Updates and Institutional Priorities.

**RESEARCH IN MEDICINE (RIM) UNIT, MD PROGRAM – DALHOUSIE UNIVERSITY**

2015-present	Primary Supervisor	Tyler Wheeler. <i>RIM Project Topic</i> : Feasibility and Usability of an Ontology-based Mobile Intervention for Patients with Hypertension.
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**MASTER OF HEALTH INFORMATICS (MHI) PROGRAM PROJECT – DALHOUSIE UNIVERSITY**

2016	Primary Supervisor	Hanan Alyafei. <i>MHI Project Topic</i> : Using BPML to Map Process Flow for the Perinatal Follow-up Program at IWK with the Focus on the Data Entry System.
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**MASTER OF COMPUTER SCIENCE THESIS AND APPLIED COMPUTER SCIENCE PROJECT – DALHOUSIE UNIVERSITY**

2016	Examiner	Suria Kala Subbu. <i>MS Computer Science Thesis Topic</i> : Mapping Relational Data to RDF and Then Perform Semantic Analytics to Abstract New Relationships/Correlations from the Data Using SPARQL (Thesis).
2015	Primary Supervisor	Perez Whitfield. <i>MACS Project Topic</i> : A Computerized Special Authorization Decision Support System for Novel Oral Anticoagulation Therapy (MACS Project).

## **ADMINISTRATIVE CONTRIBUTION AND COMMITTEE WORK**

### **DIVISION LEVEL (DIVISION OF MEDICAL EDUCATION, FACULTY OF MEDICINE) (2012-2017)**

- |      |               |  |
|------|---------------|--|
| 2017 | Chair         | 18 <sup>th</sup> Division of Medical Education Annual Symposium on Medical/Health Education Research and Interprofessional Learning. DME, Dalhousie University. Jun. (TBD), 2017.  |
| 2016 | Chair         | 17 <sup>th</sup> Division of Medical Education Annual Symposium on Medical/Health Education Research and Interprofessional Learning. DME, Dalhousie University. Jun. 9-10, 2016.   |
| 2015 | Session Chair | ‘Learner’s Focused Projects’ session in 16 <sup>th</sup> Annual Symposium on Medical/Health Professions Education Research and Interprofessional Education, DME, Dalhousie University.                                     |
| 2015 | Member        | Abstract Review Committee meeting for 16 <sup>th</sup> Annual Symposium on Medical/Health Professions Education Research and Interprofessional Education, DME, Dalhousie University.                                       |
| 2014 | Facilitator   | “Works in Progress Discussion” at Medical Education Research Retreat<br><i>Description:</i> of Medical Education (DME) retreat to help build faculty and staff’s capacity in medical education. DME, Dalhousie University. |

### **FACULTY LEVEL (FACULTY OF MEDICINE, DALHOUSIE UNIVERSITY)**

- |      |        |  |
|------|--------|--|
| 2015 | Member | Medical Research Advisory Committee. Faculty of Medicine, Dalhousie University.  |
| 2014 | Member | Committee to review Dalhousie University’s Faculty of Medicine nominations for the CAME Certificate of Merit awards<br><i>Description:</i> This award to given to medical educators who have made a significant contribution in medical education at Dalhousie university. |

### **UNIVERSITY LEVEL (DALHOUSIE UNIVERSITY)**

- |      |             |   |
|------|-------------|---|
| 2015 | Member      | Health Informatics Executive Committee, Faculties of Medicine and Computer Science, Dalhousie University.   |
| 2012 | Facilitator | Health Mentors’ Information Session for Health Mentor Program<br><i>Description:</i> Information session for prospective health mentors, i.e. patient with chronic disease. Dalhousie University. |

### **NATIONAL LEVEL**

- |       |        |  |
|-------|--------|--|
| 2016- | Member | AFMC-Infoway Physician in Training eHealth Subgroup (responsible for developing physician in training eHealth curriculum). |
|-------|--------|--|

- 2015 Assessor Poster sessions (3): ‘Simulation’, DME’ and ‘International Education/Diversity/Global Health’ at Canadian Conference on Medical Education (CCME) 2015.
- 2012- Dalhousie AFMC (Association of Faculties of Medicine in Canada) Informatics  
Faculty of Resource Group (IRG)  
Medicine *Description:* I am the Faculty of Medicine, Dalhousie University’s  
Representative official resource person for AFMC IRG.
- 2011 Facilitator Health Informatics workshop titled ‘Thinking Clinical Workflows:  
Designing and Implementing Electronic Clinical Workflows’  
*Description:* This was a half-day Workshop at E-Health 2011. May  
29 2011. Toronto, Canada.

### **INTERNATIONAL LEVEL**

- 2014 Advisor International Inter-Disciplinary Peer-review and Advisory Panel  
(IIPAP). *Description:* IIPAP is an advisory body of academics for  
any advice regarding the publication of the book and results/analyses  
with the view of publishing the International Journal of  
Interdisciplinary Education, Research and Practice in the future.

### **NATIONAL AND INTERNATIONAL CONFERENCE PROGRAM AND PLANNING COMMITTEE**

- 2017 17th International Conference on Current and Future Trends of Information and  
Communication Technologies in Healthcare (ICTH'17). Sept. 18-20, 2017. Lund,  
Sweden  
16th World Congress on Medical and Health Informatics (Medinfo 2017). Aug. 21- 25,  
2017. Xiamen, China  
The 2017 IEEE International Conference on Informatics, Health & Technology  
(ICIHT). Feb. 21-23, 2017. Riyadh, KSA.
- 2016 The 2016 International Conference on Brain Informatics and Health (BIH 2016). Oct.  
13-16, 2016. Omaha, Nebraska, USA.  
6<sup>th</sup> International Conference on Current and Future Trends of Information and  
Communication Technologies in Healthcare (ICTH 2016). Sept. 19-22, 2016. London,  
UK.
- 2015 5<sup>th</sup> International Conference on Current and Future Trends of Information and  
Communication Technologies in Healthcare (ICTH-2015). Sept. 27-30, 2015. Berlin,  
Germany.
- 2014 The International Workshop on Intelligent Technologies for HealthCare (ITCare-14).  
Sept. 22-25, 2014. Halifax, Canada.  
The 4<sup>th</sup> International Conference on Current and Future Trends of Information and  
Communication Technologies in Healthcare (ITCH). Sept. 22-25, 2014. Halifax, NS,  
Canada.  
2014 International Conference on Brain Informatics and Health (BIH 2014). Aug. 11-  
14, 2014. Warsaw, Poland.  
6th International Workshop on Knowledge Representation for Health Care (KR4HC  
2014). July 21, 2014. Vienna, Austria.
- 2013 The 3rd International Conference on Current and Future Trends of Information and  
Communication Technologies in Healthcare (ICTH 2013). Oct. 21-24, 2013. Niagara  
Falls, Canada.

16th International Symposium on Health Information Management Research (ISHIMR 2013). June 26-28, 2013. Halifax, Canada.

## **PEER-REVIEW ACTIVITIES**

### **JOURNAL/CONFERENCE (NO. OF PAPERS REVIEWED)**

2017	2017 International Conferences on Brain Informatics – BI 2017. Nov. 16-18. 2017. Beijing, China. (4)
	International Journal of Medical Informatics (1)
	Canadian Journal of Diabetes (1)
2016	International Journal of Medical Informatics (3)
	Applied Clinical Informatics Journal (2)
	Health – Exploring Complexity: An Interdisciplinary System Approach (HEC 2016). GDMS & DGEpi & IEA-EEF annual meeting, Medical Informatics Europe – MIE 2016. Aug. 28 – Sept. 2 2016. Munich, Germany (3)
	The 2016 International Conference on Brain Informatics and Health (BIH 2016). Oct. 2016. Omaha, Nebraska, USA (3)
	The IMIA (International Medical Informatics Association) Yearbook of Medical Informatics 2016 (5)
	6 <sup>th</sup> International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare (ICTH 2016). Sept. 2016. London, UK (5)
2015	Applied Clinical Informatics Journal (1)
	Clinical Epidemiology Journal (1)
	The 5th International Conference on Current and Future Trends of Information and Communication Technologies in Healthcare (ICTH 2015). Sept. 2015, Berlin, Germany (3)
	IEEE Journal of Biomedical and Health Informatics (1)
	International Journal of Medical Informatics (3)
	Computer Methods and Programs in Biomedicine (1)
	Canadian Conference on Medical Education (CCME 2015). Apr. 2015. Vancouver, Canada (20)
	Journal of Personal and Ubiquitous Computing under the theme: Ubiquitous Computing for Improved Clinical Practice (UCICP) (1)
	15th World Congress on Health and Biomedical Informatics (MEDINFO 2015). Aug. 2015. Sao Paulo, Brazil (3)
	26th Medical Informatics Europe Conference, MIE2015. May 2015. Madrid, Spain (5)
	The IMIA (International Medical Informatics Association) Yearbook of Medical Informatics 2015 (5)
2014	International Journal of Medical Informatics (8)
	International Journal of Environmental Research and Public Health (IJERPH) (1)
	Canadian Conference on Medical Education (CCME 2014). Apr. 2014. Ottawa, Canada (15)
	Canadian Diabetes Journal (1)
	6th International Workshop on Knowledge Representation for Health Care (KR4HC 2014). Jul. 2014. Vienna, Austria (3)
	The 2014 International Conference on Brain Informatics & Health (BIH'14) Aug. 2014, Warsaw, Poland (2)

- 25th European Medical Informatics Conference (MIE 2014). Aug. 2014. Istanbul, Turkey (1)
- The IMIA (International Medical Informatics Association) Yearbook of Medical Informatics 2014 (5)
- 2013 Computer Methods and Programs in Biomedicine (Journal) (1)
- International Journal of Medical Informatics (6)
- International Journal of Environmental Research and Public Health (1)
- 16th International Symposium on Health Information Management Research 2013 (ISHIMR 2013). Jun. 2013. Halifax, Canada (3)
- Information Technology and Communications in Health (ITCH 2013). Feb. 2013. Victoria, Canada (3)
- The 2013 International Conference on Brain and Health Informatics Conference (BHI 2013). Oct. 2013. Maebashi, Japan (3)
- International Review of Social Research (IRSR) (Journal) (1)
- 2012 International Journal of Medical Informatics (3)
- Dalhousie Medical Journal (1)
- Medical Informatics Europe (MIE 2012). Aug. 2012. Pisa, Italy (1)
- 2<sup>nd</sup> ACM SIGHIT International Health Informatics Symposium. Jan. 2012. Miami, USA (3)
- 2011 International Journal of Medical Informatics (1)
- User Modeling and User-Adapted Interaction: The Journal of Personalization Research (1)
- 23rd International Conference of EFMI - the European Federation for Medical Informatics (MIE 2011). Aug. 2011. Oslo, Norway (5)
- 24<sup>th</sup> IEEE International Symposium on Computer-Based Medical Systems (CBMS 2011). Jun. 2011. Bristol, UK (3)
- IEEE Canadian Conference on Electrical and Computer Engineering. May 2011. Niagara Falls, Canada (2)
- ACM SIGHIT International Health Informatics Symposium. Nov. 2010. Miami, USA (3)
- 2010 2<sup>nd</sup> Workshop on Knowledge Representation for Health-Care (KR4HC 2010) at 16<sup>th</sup> European Conference on Artificial Intelligence. Aug. 17, 2010. Lisbon, Portugal (3)
- Workshop on Knowledge Representation for Health-Care: Data, Processes and Guidelines at Artificial Intelligence in Medicine. July 18-22, 2009. Verona, Italy (1)
- 20th IEEE International Symposium on Computer-Based Medical Systems (CBMS 07). June 20-22, 2007. Maribor, Slovenia (3)

## RESEARCH GRANTS REVIEWED

- 2015 A Smartphone-Based Task-Sharing Approach to Breast and Cervical Cancer Control in Tanzania: mPowering Women to Save Lives.  
*PI:* Yeates K, Ginsburg O. *Institution/Organization:* MobileODT (Israel). *Granting Agency:* CIHR Grand Challenges Canada – Stars in Global Health Transition to Scale – Phase II.
- 2015 Motorcycle Accident Prevention in Kenya.  
*PI:* Muthuuri P. *Institution/Organization:* Reward N' Conquer (Kenya). *Granting Agency:* CIHR Grand Challenges Canada – Stars in Global Health Transition to Scale – Phase II.
- 2014 Scaling Maternal Wristbands and Non-Invasive Glucometer and Hemoglobin Monitors for Improving Health of the Population.



*PI: Khoja S. Institution/Organization: Janacare Solutions Private Limited (India).  
Granting Agency: CIHR Grand Challenges Canada – Stars in Global Health Transition to Scale – Phase I.*

- 2014 DXPhone - Mobile Diagnostic Platform for Diabetes.  
*PI: Jena S, Depa M. Institution/Organization: Janacare Solutions Private Limited (India).  
Granting Agency: CIHR Grand Challenges Canada – Stars in Global Health Transition to Scale – Phase II.*
- 2013 Rapid Learning for Individualized Lung Cancer Treatment.  
*PI: Name unknown - Double blind review. Granting Agency: Netherlands Organization for Scientific Research (NWO): Innovational Research Incentives Scheme Vidi 2013 STW.*
- 2013 Improving the Impact of Guidelines on Clinical Decision-Making: First do no Harm.  
*PI: Name unknown - Double blind review. Granting Agency: PSI (Physician Services Incorporated) Foundation. Ontario, Canada.*
- 2008 Using the Internet to Help Chinese Patients with Diabetes to Improve Self-Management: A China-Canada Comparison and Joint Partnership.  
*PI: Ho K. Institution/Organization: UBC. Granting Agency: CIHR- China-Canada Joint Health Research Initiative - Grants Program (RFA), (Competition: March 2008).*

### **PROFESSIONAL DEVELOPMENT**

- 2008 University Teaching and Learning Certificate program  
*Institution: Centre for Learning and Teaching, Dalhousie University.  
Achievements: Developed 2 Bachelor level Medical Informatics Courses.*
- 2007 CIHR Health Informatics PhD/Postdoc Strategic Training Program (CHIPSTP)  
*Institution: Dalhousie University.  
Project: Web Based Parents Education Intervention for Minor Head Injury in Children.*
- 1992 Certificate of Medical Registration (Certified 1992)  
*Institution: Pakistan Medical and Dental Council, Islamabad, Pakistan.*

### **PROFESSIONAL MEMBERSHIPS**

- NS-PIHCI Nova Scotia Primary and Integrated Health Care Innovations Network (a part of CIHR's Strategy for Patient Oriented Research. This network identifies, supports and scales-up innovative approaches to primary and integrated health care.)
- AFMC Association of Faculties of Medicine in Canada. Faculty of Medicine, (I am Dalhousie University's official resource person for the AFMC's Informatics Resource Group.)
- CAME Canadian Association for Medical Education.
- CHEC Canadian Health Education Commons.

COACH      Canada's Health Informatics Association.

NIHI        National Institute of Health Informatics.