

# Dr. Bilal Al-Ahmad

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## PERSONAL INFORMATION

- Nationality: Jordanian
- Date of Birth: March 17, 1984

## EDUCTAION

- North Dakota State University (NDSU), United States of America  
Ph.D. in Software Engineering, 2015. [GPA: 4.0 out of 4.0]
- Yarmouk University, Jordan  
M.Sc. in Computer Information Systems, Concentration: UML Design, 2009. [GPA: 80.1]
- Jordan University of Science and Technology, Jordan  
B.Sc. in Computer Information Systems, 2006. [GPA: 76.4]
- General Secondary School, Jordan  
Scientific branch, 2002. [GPA 83.1]

## SCHOLARSHIPS

- Ph.D. Assistantship: including full tuition waiver offered from North Dakota State University, USA. [2012-2015]
- M.Sc. Assistantship: including partial tuition waiver at Yarmouk University, Irbid, Jordan. [2006-2009]
- B.Sc. Scholarship: including full tuition waiver offered from Jordanian Armed Forces at Jordan University of Science and Technology, Irbid, Jordan. [2002-2006]

## RESEARCH EXPERIENCE

- **Doctoral Research: PhD-Software Engineering, NDSU, 2012-2015**
  - **Inter-requirements traceability: Proposing a novel requirements traceability discovery approach to determine the dependency types between Security Requirements and Functional Requirements. This proposed tracing model called Security Functional Tracing Model (SFTM), the proposed solution is a hybrid approach which uses: syntactic parsing technique, domain ontology, and rule based system to build several detection rules that identify security requirements effects upon functional requirements.**
  - **Software requirements dependency graph: Developing a requirement diagram which is called Security Functional Requirements Diagram that shows the relationships types between security and functional requirements. This diagram has security requirement at the top and a node for each functional requirement. These nodes are color coded to indicate whether they are affected/ or not by the security requirement. Different types of effects should be indicated by different colors. A functional requirement that cooperates with security requirement is shown in green, a functional requirement that conflicts with security requirement is shown in red, and a functional requirement that is irrelevant to security requirement is shown in yellow.**

- **Software requirements dependencies tool: Developing a tool called Detection Rules Generator that will help to automate the construction process of detection rules as well as representing the Security Functional Requirement Diagram. The tool will automatically generate all the possible combinations for concepts and relations in both security and functional requirements. The user can construct several detection rules in order to find the effect type of the security requirements upon the functional requirements.**

## **PUBLICATIONS**

- **Bilal Al-Ahmad, Kenneth Magel, and Sameer Abufardeh. "Tool Support for Automatically Identifying Effect Types of Security Requirements upon Functional Requirements." Lecture Notes on Software Engineering 4 (3), 2016, pp. 205-210**
- **Bilal Al-Ahmad, Kenneth Magel, and Sameer Abufardeh. "A Domain Ontology Based Approach to Identify Effect Types of Security Requirements upon Functional Requirements." International Journal of Knowledge Engineering, 1 (1), 2015, pp. 24-29**
- **Nazeeh Ghatasheh, Ismail Al-Tahrawee, Bilal Al-Ahmad, Mua'ad Abu-Faraj. "Dead Sea Starvation: Towards Enhanced Monitoring of Water Resources by Modeling Meteorological Variables and Remote Sensing Data." Journal of Software Engineering and Applications, 9 (12), 2016, pp. 588-600**
- **Bilal Al-Ahmad, etc. "Measuring the correlation between software static metrics and testing coverage". To be submitted soon.**

## **TEACHING EXPERIENCE**

- **Assistant Professor**
  - **University of Jordan/Aqaba, Department of Computer Information Systems, Oct 2015-Now**
  - **Courses Taught: Software Engineering, Information Systems Applications, E-Government, Systems Analysis and design, Human Computer Interaction, Project Management, Database Design, Object Oriented Design, Introduction to information systems, and C++ programming.**
- **Visiting Professor**
  - **Philadelphia University, Jordan, Summer Semester 2016/2017**
  - **Courses Taught: Computer Networks Fundamentals, Database Design**
  - **Jordan University of Science and Technology, Jordan, Summer Semester 2017/2018**
  - **Courses Taught: Object Oriented Programming, Human Computer Interaction**
- **Full-Time Lecturer**
  - **University of Minnesota-Crookston, United States of America, Software Engineering Department, Aug 2015-Sep 2015.**
- **Teaching Assistant**
  - **North Dakota State University, United States of America, Jun 2012 – May 2015**
  - **Courses Taught: Introduction to Database Systems, Files for Database Systems, Data Structures, and Business Use of Computers.**

## **MEMBERSHIPS**

- **Internet Society**

## **PROFICIENCIES**

- **Programming Languages: Oracle 9i, C++, C#, Java**
- **Database management systems and tools: MySQL, SQL++**
- **Object Oriented tools: Rational Rose**
- **Software Analysis and Design tools: SmartDraw, Edraw Max, ERDPlus, ReqView**
- **Static code and metrics tools: Understand 4.0, BUGINFO**
- **Java Code coverage testing tools: COBERTURA, JUnit 4.12, EclEmma**
- **Programming IDEs: NetBeans, Eclipse, Visual Studio 2012**
- **Statistical computing tools: R language**
- **Multimedia and Visualization tools: Adobe Illustrator**
- **Microsoft Office packages: Word, Excel, Power Point, Access, Visio, Project**
- **Operating Systems: Microsoft Windows**
- **Online E-Learning tools: BlackBoard, Moodle.**

## **ACADEMIC SERVICES**

- **University of Jordan/Aqaba, Department of Computer Information Systems (CIS)**
  - **Dean Assistant for Quality and Development**
  - **Curriculum committee**
  - **Faculty committee**
  - **CIS department committee**
  - **Research committee**
  - **CIS program coordinator**
  - **Student advising committee**
  - **ABET committee**
  - **Courses evaluation committee**
  - **Quality assurance committee**

## **REFERENCES**

- **Available upon request**