

Hamzeh Eyal Salman

Curriculum Vitae

Personal Information

- **Nationality:** Jordanian
- **Marital Status:** Married
- **Gender:** Male
- **Religion:** Islam
- **Date of Birth:** July 12, 1984
- **Place of Birth:** Al Tafila / Jordan
- **E-mail:** hamzehmu@mutah.edu.jo or hamzehahu@gmail.com
- **Phone:** +962 (0)7 91 40 76 52
- **Address:** Amman, Jordan

Education

- **University of Montpellier 2 for Sciences and Technology** France, On
Ph.D. Computer Science / Specialization Software Engineering 2011 - 2014
 - **Thesis Title:** Recovering Traceability Links between Artifacts of Software Variants in the Context of Software Product Line Engineering
 - **Supervisors:** [Prof.Christoph Dony](#) and [Dr.Abdelhak-Djamel Seriai](#)
- **University of Jordan** Jordan, On
M.Sc. Computer Science / Specialization Software Engineering 2007 - 2010
 - **Thesis Title:** Using Genetic Algorithms in Test Data Generation for ORACLE Named Block
 - **Supervisors:** [Dr.Mohammad Alshraideh](#) and [Dr.Basel Mahafzah](#)
 - **Graduated with GPA (3.50 out of 4.0)**
 - **Rating:** Very Good
- **University of Al-Hussein Bin Talal** Jordan, On
B.Sc. Computer Information Systems 2002 - 2006
 - **Undergraduate Project:** TOEFL On-line Exam using ORACLE 9i
 - **Graduated with honours and GPA 86.81%**
 - **Rating:** Excellent
- **Bsaira High School for Boys** Jordan, On
The General Secondary Education Certificate Examination 2002/2003
 - **Scientific Stream**
 - **Graduated with a 79.70% average**
 - **Rating:** Very Good

Research Experience

- **Doctoral Research**

University of Montpellier 2/ LIRMM Lab-France.

2011 - 2014

Supporting reverse engineering software product variants into software product line. This includes solutions for the following research problems::

- Understanding source code of a collection of product variants by locating features implementation.
- Feature-Level change impact analysis.
- Supporting reverse engineering of software product line architecture from Product Variants and Feature to Architecture Traceability

- **Master Research**

University of Jordan-Jordan

2009 - 2010

Generating test data to coverage named block in ORACLE by using genetic algorithms (GAs) according to branch criteria. Experimental results show that the GAs give promising results once it is used as test data generator to test named block in ORACLE; such that the test target in all programs under test is reached.

- **Research Interest**

- Software reuse, understanding and maintenance.
- Reengineering, reverse engineering and refactoring.
- Program analysis; static and dynamic.
- Software product lines.
- Feature location and identification.
- Change impact analysis
- Software architectures and components.
- Software Testing.
- APIs and software libraries reusability and usability.

Teaching Experience

- **Full Time Lecturer**

Mutah University-Jordan

2014-Present

- Software Engineering
- Systems Analysis and Design
- Data Structures
- Database Management Systems
- Object-Oriented Programming

- **Teaching the practical part of the following courses**

Tafila Technical University-Jordan

2008 - 2011

- Object-Oriented Programming

- C++ Programming
- SQL Programming
- Visual Basic Programming
- HTML Programming
- Computer Skills

- **Teacher at High School**

Jordanian Education Ministry

2006 - 2008

Honours

- A full degree Erasmus Mundus Ph.D. scholarship, University of Montpellier, France, September 2011 to July 2014.
- Ranked 1st in Bachelor degree in Computer Information System, University of Al-Hussein Bin Talal, Jordan, 2006.
- Outstanding student scholarship, Ministry of Higher Education and Scientific Research, Jordan, September 2003 to June 2006.

Personal Skills & Training

- Technical Skills
 - Excellent in program analysis; static and dynamic analyses.
 - Deploying Formal Concept Analysis (FCA) for software analysis.
 - Deploying Information Retrieval (IR) for software understanding.
 - Deploying multiple machine learning techniques to solve different research problems
 - Familiar with Eclipse.
- Programming Languages
 - **Intermediate:** C++, JAVA, Visual Basic 6, ORACLE 9i, ORACLE 10g, HTML, ASP.Net, MATLAB, SQL PLUS
- Application Software
 - **Expert:** MS Access, MS Excel, MS Word and MS Power Point,
 - **Intermediate:** Rational Rose, Visual Paradigms for UML, KERMETA, ERCA, Smart Draw, Packet Tracer.
- System Software
 - **Expert:** Windows XP, Windows Vista, Windows 7
 - **Intermediate:** Windows server 2003
- Languages
 - **Arabic:** Native
 - **English:** Proficient

- **French:** Basic Knowledge
- Training
 - LaTeX: 20 Credit Hours
 - Writing a scientific paper step by step: 20 Credit Hours
 - Preparing a research project and taking notes on scientific literature: 20 Credit Hours
 - ICDL certificate, Syllabus Version 4.0
 - CCNA course
 - MCP course
 - ERFKE certificate: 48 Credit Hours

Attended Conferences

- MODELS 2012 conference/ September. 30th - October. 5th, 2012 - Innsbruck, AUSTRIA
- CAL conference/ May 30-31, 2012 - Montpellier, France
- CSMR 2013 conference/ March 5-8, 2013 - Genova, Italy
- IRI 2013 conference/ August 14-16, 2013 - San Francisco, USA
- Co-located conferences ECOOP, ECSA, ECMFA/ July 1-5, 2013 - Montpellier, France
- Organization Committee Member
 - CAL Conference 2012
 - Co-located conferences ECOOP/ECSA/ECMFA 2013

Publications

- Journals
 - **Hamzeh Eyal Salman** *Identification multi-level frequent usage patterns from APIs*. Journal of Systems and Software, JSS, 2017, 130, pp.42-56.
 - **Hamzeh Eyal Salman** *API Library-Based Identification and Documentation of Frequent Usage Patterns*. International Journal of Computer Applications in Technology, IJCAT, 2017, to appear in (Vol. 58, No. 1)
 - **Hamzeh Eyal Salman**, Abdelhak-Djamel Seriai, Mustafa Hammad, *Quality-driven feature identification and documentation from source code*. Journal of Theoretical and Applied Information Technology, JATIT, 2016, 84 (2), pp.183-195.
 - **Hamzeh Eyal Salman**, Abdelhak-Djamel Seriai, Christophe Dony, *Feature-Level Change Impact Analysis Using Formal Concept Analysis*. International Journal of Software Engineering and Knowledge Engineering 25(1): 69-92, 2015.
 - M. Alshraideh, B. Mahafzah, **H. Eyal-Salman** and I. Salah, *Using Genetic Algorithm as Test Data Generator for Stored PL/SQL Program Units*, Journal of Software Engineering and Applications, Vol. 6 No. 2, 2013, pp. 65-73.
- International Conferences

- **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai and Christophe Dony. *Feature-to-Code Traceability in Legacy Software variants*. 39th Euromicro Conference on Software Engineering and Advanced Applications, SEAA 2013, Santander, Spai, September 4-6, 2013. IEEE Computer Society 2013.
 - **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai and Christophe Dony. *Feature-to-Code Traceability in a Collection of Software Variants: Combining Formal Concept Analysis and Information Retrieval*. IEEE 14th International Conference on Information Reuse & Integration, IRI 2013, Las Vegas, NV, USA, August 14-16, 2013.
 - **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai and Christophe Dony. *Feature-Level Change Impact Analysis Using Formal Concept Analysis*. Software Engineering and Knowledge Engineering (SEKE'26), 2014 (to appear).
 - **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai and Christophe Dony. *Feature Location in a Collection of Product Variants: Combining Information Retrieval and Hierarchical Clustering*. Software Engineering and Knowledge Engineering (SEKE'26), 2014 (to appear).
 - AL-MSIEDEEN R., SERIAI A. D., HUCHARD M., URTADO C., VAUTTIER S., **SALMAN H. E.**, *Mining Features from the Object-Oriented Source Code of a Collection of Software Variants Using Formal Concept Analysis and Latent Semantic Indexing*, Proceedings of the The 25th International Conference on Software Engineering and Knowledge Engineering, USA, 2013.
 - AL-MSIEDEEN R., SERIAI A. D., HUCHARD M., URTADO C., VAUTTIER S., **SALMAN H. E.**, *Feature location in a collection of software product variants using formal concept analysis*, Proceedings of the 13th International Conference on Software Reuse - Safe and Secure Reuse", ICSR 2013, Springer, Italy.
- International Workshops
 - **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai, Christophe Dony and Ra'Fat Al-Msie'Deen. *Identifying Traceability Links between Product Variants and Their Features*. 1st International Workshop on Reverse Variability Engineering (REVE 2013), CSMR 2013 , 5th March 2013 , 2013 - Genova, Italy
 - **Hamzeh Eyal-Salman**, Abdelhak-Djamal Seriai, Christophe Dony and Ra'Fat Al-Msie'Deen. *Recovering Traceability links between Feature Models and Source Code of Product Variants*. ACM VARY Workshop (VARY: VARIability for You), MODELS 2012, Sept. 30th - Oct. 5th, 2012 - Innsbruck, Austria.
 - National Conferences
 - **Hamzeh Eyal-Salman**, Abdelhak Seriai, Christophe Dony and Ra'Fat Al-Msie'Deen. *Genetic Algorithms as Recovering Traceability Links Method between Feature Models and Source Code of Product Variants*. Lille - France, 6 novembre 2012. Product Line Day, 2012.
 - **Hamzeh Eyal-Salman**, Abdelhak Seriai, Christophe Dony and Ra'Fat Al-Msie'Deen *Identifying Traceability between Feature Model and Source Code in a Collection of Product Variants*. Workday Group RIMEL LPG Nmes, December 17, 2012.
 - Ra'Fat Al-Msie'Deen, Abdelhak Seriai, Marianne Huchard, Christelle Urtado, Sylvain Vauttier and **Hamzeh Eyal Salman**. *An approach to recover feature models from object-oriented source code*. Lille - France, 6 novembre 2012. Product Line Day, 2012.
 - Doctoral Symposium
 - **Hamzeh Eyal-Salman**. *Toward Reengineering Legacy Software Variants into Software Product Line: Feature-to-Code Traceability*, ECOOP conference 2013, France, Montpellier

References

- Prof. Christoph Dony at University of Montpellier II, France (Dony@lirmm.fr)
- Prof. Abdelhak-Djamel Seriai at University of Montpellier II, France (seriai@lirmm.fr)
- Prof. Marianne Huchard at University of Montpellier II, France (huchard@lirmm.fr)
- Prof. Mohammad Alshraideh at University of Jordan, Jordan (mshridah@ju.edu.jo)
- Prof. Basel Mahafzah at University of Jordan, Jordan (b.mahafzah@ju.edu.jo)