

# RADU LITIU

---

## SUMMARY

Experienced information technology professional with 10+ years software design and development experience. Highly proficient in researching, architecting, designing, and implementing large scale distributed applications and services. Innovative, driven individual with solid problem-solving and interpersonal communications skills applicable across development and technology operation teams and at all levels of the organization. Team player: works well in teams or individually to achieve goals and objectives.

## EDUCATION

### **Ph.D., Computer Science and Engineering**

University of Michigan, Ann Arbor, MI

Dissertation Title: "Providing Flexibility in Distributed Applications Using a Mobile Component Framework".

**September 2001**

### **M.S., Computer Science**

Politehnica University, Bucharest, Romania

Thesis Title: "Synchronization in Distributed Systems".

**August 1995**

### **B.S., Computer Science**

Politehnica University, Bucharest, Romania

**July 1994**

## PROFESSIONAL EXPERIENCE

### **Microsoft Corp., Redmond, WA**

**Senior Software Engineer**, Advertiser and Publisher Solutions

**Senior Software Engineer III** at aQuantive Inc. until its acquisition by Microsoft

Developed applications and services for search advertising campaign management and ad performance reporting. Architected and built high volume services for serving search ads and tracking ad usage, advertising spending, and return on advertising investment. Scaled out the systems to process millions of search advertising clicks per day to enable engaging larger enterprise clients and top tier global agencies. Developed a continuous integration build/deployment/test development environment. Coordinated interactions with operations to deploy and maintain production systems across multiple data centers. Led various team initiatives. Mentored junior engineers.

**Jun. 2007 – Jul. 2009**

### **Amazon.com, Seattle, WA**

**Senior Software Development Engineer**, *World Wide Supply Chain Operations*

Designed and implemented algorithms for optimizing fulfillment planning across the Amazon network, a worldwide network with tens of fulfillment centers, millions of unique products, and thousands of suppliers. Engineered fulfillment planning to operate reliably and within the timeline constraints 24x7, even in the presence of systems or node failures. Drove innovation in inventory management optimization. Built a set of applications that continuously monitor inventory levels and make optimal decisions for disposing surplus inventory. Managed relationships with tens of retail teams across four countries in North America and Europe. Increased automated inventory management adoption by inventory owners.

**Aug. 2005 – Apr. 2007**

### **Microsoft Corp., Redmond, WA**

**Software Design Engineer in Test**

Member of the XML Messaging Stress and Reliability and Core Messaging test teams, part of the XML Web Services product group (WCF). Ensured that the Microsoft messaging platform is highly reliable and it performs well under heavy load. Identified limitations and weaknesses, defined test plans, and implement automated test code. Developed test automation tools. Defined reliability metrics and performed appropriate performance analysis to identify and recommend fixes for stress and reliability issues.

**Jul. 2003 – Jun. 2005**

**Rutgers University, New Brunswick, NJ**

**Jan. 2003 – Jun. 2003**

**Visiting Research Assistant Professor**, Center for Advanced Information Processing (CAIP)

Performed research in the area of utility-based adaptation in mobile computing environments. Successfully championed the adoption of a game theoretic approach for building adaptive mobile applications in a multidisciplinary team comprised of researchers from two academic departments and from industry. Advised graduate student research.

**Valaran Corp., Princeton, NJ**

**Oct. 2001 – Dec. 2002**

**Software Engineer**

Contributed to defining the architecture of the Valaran Software Suite, a Jini-based dynamic business framework for enterprise application integration (EAI). Handled issues such as persistence of distributed data objects and event framework design and scalability. Integrated mobile devices into a secure collaborative environment using the Jini Surrogate Architecture. Led the design and implementation of performance benchmarks for the Valaran Software Suite.

**University of Michigan, Ann Arbor, MI**

**Jun. 1996 – Sep. 2001**

**Research Assistant**, Department of Electrical Engineering and Computer Science

Performed research in the areas of adaptive component-based distributed systems, group communication services and middleware support for collaborative systems, mobile computing, and application-level quality of service. Designed and developed a component-based framework for building adaptive distributed applications (DACIA). Designed and developed a toolkit for building groupware applications (DistView).

**Netscape Communications Corp., Mountain View, CA**

**May 1997 – Aug. 1997**

**Software Engineer**

Developed replication features for the Netscape Directory Server, based on the LDAP protocol.

## **TECHNICAL SKILLS**

Operating systems: Linux, FreeBSD, Solaris, Windows XP/Win2k3/Vista/Win2k8

Languages: C, C++, C#, Java, Perl, UNIX shells, PowerShell, HTML, XML

Databases: SQL, T-SQL, PL/SQL, Berkeley DB

Platforms/enterprise solutions: .NET, J2EE, Web Services, WSDL, SOAP, LDAP, Jini

Development tools: Visual Studio, Eclipse, (N)Ant, (N)Hibernate, NUnit, JUnit, Cruise Control

## **PUBLICATIONS**

- Radu Litiu, and Amgad Zeitoun, "Infrastructure Support for Mobile Collaboration", Proceedings of the Thirty-Seventh Hawaii International Conference on System Sciences (HICSS-37), Big Island, Hawaii, Jan. 2004.
- Radu Litiu, and Atul Prakash, "Persistent Connectivity and Reliable Message Delivery in Component-based Mobile Applications", Proceedings of the Fifth IEEE International Conference on Mobile and Wireless Communications Networks (MWCN 2003), Singapore, Oct. 2003.
- Radu Litiu, "Providing Flexibility in Distributed Applications Using a Mobile Component Framework", Ph.D. dissertation, University of Michigan, Electrical Engineering and Computer Science, Sep. 2001.
- Radu Litiu, and Atul Prakash, "Developing Adaptive Groupware Applications Using a Mobile Component Framework", Proceedings of the ACM 2000 Conference on Computer Supported Cooperative Work (CSCW 2000), Philadelphia, PA, Dec. 2000.
- Radu Litiu, and Atul Prakash, "Challenges in Using a Mobile Component Framework to Develop Adaptive Groupware Applications", Proceedings of CBG 2000, the CSCW 2000 Workshop on Component-based Groupware, Philadelphia, PA, Dec. 2000.
- Radu Litiu, and Atul Prakash, "DACIA: A Mobile Component Framework for Building Adaptive Distributed Applications", Principles of Distributed Computing (PODC) 2000 Middleware Symposium, Portland, OR, July 2000. Also appeared in ACM SIGOPS Operating Systems Review, Volume 35, Issue 2, (April 2001), Pages: 31 – 42, ISSN:0163-5980, ACM Press. Also appeared as Technical Report CSE-TR-416-99, Department of EECS, University of Michigan, Dec. 1999.

- Radu Litiu, and Atul Prakash, "Stateful Group Communication Services", Proceedings of the 19th IEEE International Conference on Distributed Computing Systems (ICDCS '99), Austin, TX, June 1999.
- Radu Litiu, and Atul Prakash, "Adaptive Group Communication Services for Groupware Systems", Proceedings of the Second International Enterprise Distributed Object Computing Workshop (EDOC'98), San Diego, CA, Nov. 1998.
- Radu Litiu, and Dionysios I. Kountanis, "Visibility Line in a Direction for a Set of Parallel Line Segments", Proceedings of the 20th International Conference on Information Technology Interfaces, (ITI '98), Pula, Croatia, June 1998.
- Radu Litiu, and Atul Prakash, "Individual and Group QoS Issues in Communication Services for Groupware Systems", CSE-TR-352-97, Department of EECS, University of Michigan, Nov. 1997.
- H. S. Shim, R. Hall, R. Litiu, and A. Prakash, "Stateful Multicast Services for Supporting Collaborative Applications", CSE-TR-351-97, Department of EECS, University of Michigan, Nov. 1997.
- Radu Litiu, and Dionysios I. Kountanis, "Closest Pair for Two Separated Sets of Points", Twenty-Eighth Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL, March 1997.

## AWARDS AND HONORS

- National Institute of Standards and Technology ATP grant obtained by Valaran Corp **Jun. 2003 – Jun. 2006**  
"Software Infrastructure to Support Impromptu Collaboration Among Multiple Mobile Device Users"
- National Science Foundation ITR Award **Sep. 2000 – Sep. 2003**  
The project with title "A Mobile Component Framework for Building Adaptive Distributed Applications" was centered on my Ph.D. dissertation.
- The Smithsonian ComputerWorld Innovation Awards Program **1998**  
Inclusion of the UARC project in the permanent archives of the Smithsonian Institution in the Science category.
- Electrical Engineering and Computer Science Research Fellowship **Summer 1998**
- Electrical Engineering and Computer Science Research Fellowship **Summer 1997**
- Coach of Western Michigan University's team for the ACM contest **Fall 1995**
- Second place – Scientific Communications Session **Jun. 1994**  
Politehnica University Bucharest, Computer Science Department  
Project Title: "Real-Time Kernel for Local Networks Applications"
- Scholarship offered by ICL England **Dec. 1993**
- Third place – Traian Lalescu Contest, Electrical Engineering **Oct. 1993**  
Politehnica University Bucharest, Computer Science Department

## PROFESSIONAL SERVICES

- Reviewer, IEEE Transactions on Software Engineering, SE for Secure Computing, April 2007
- Technical program committee member, 2<sup>nd</sup> International Symposium on Wireless Communication Systems (ISWCS 2005)
- Technical program committee member, 1<sup>st</sup> International Symposium on Wireless Communication Systems (ISWCS 2004)
- Reviewer, Second ACM International Conference on Mobile Systems, Applications, and Services (Mobisys 2004)
- Reviewer, Thirty-Seventh Hawaii International Conference on System Sciences (HICSS-37, 2004)
- Reviewer, the 2003 ACM/IFIP/USENIX International Middleware Conference (Middleware 2003).
- Reviewer, the ACM 2002 Conference on Computer Supported Cooperative Work (CSCW 2002).
- Reviewer, the Twenty-First ACM Symposium on Principles of Distributed Computing (PODC 2002).

## AFFILIATIONS

- Association for Computing Machinery (ACM)
- ACM Special Interest Group on Mobility of Systems Users, Data, and Computing (SIGMOBILE)

- The Institute of Electrical and Electronics Engineers (IEEE)

## **LANGUAGES**

English – fluent, Romanian – native, French – good.

## **VISA STATUS**

Green card holder.

## **REFERENCES**

Available upon request.