Job Candidate Jobseeker

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Software Architect ~ Systems Design ~ Project Management ~ Information Systems Research

SUMMARY

Accomplished IT professional with experience in Systems Design and Implementation. Highly knowledgeable in software architecture, information systems research, and IT security systems. Expertise in legacy systems analysis, network infrastructure design and assessment, access control, secure XML, real-time and data acquisition systems, simulators, data inference, and optical networks. Background in algorithm design, programming theory, computer architecture, databases, networks, and distributed systems. Award-winning research scientist with multiple publications. Familiarity with systems strategy. Excellent presentation and communication skills. Multiple advanced degrees, including Ph.D.

EDUCATION

University of South Carolina, Columbia, SC
Ph.D. in Computer Science and Engineering (anticipated Fall, 2003)
Thesis: Integrated Security Framework for Semi-Structured Data

M.S. in Computer Science (2000)
Thesis: Algorithm for Dynamic Wavelength Assignment in Wavelength Routed All-Optical Networks

Polytechnica University of Bucharest, Romania
B.S. in Computer Science (1997)

Seminars and training courses in Financial Markets and Computer Network Engineering

PROFESSIONAL EXPERIENCE

University of South Carolina, Columbia, SC 1999 – 2007
Research Assistant (2000 – Present)

- Planned and established Information Security Laboratory. Designed research plan, directed and conducted research and development in multiple areas, including access control, secure XML, and ontology-based information security.
- Conducted research on correlated data inference, focusing on undesired inference attacks from distributed public XML documents. Proposed framework to detect and prevent these attacks. Developed algorithm for correlated data inference and ontology-guided XML security engine Oxsegin. System used ontological class hierarchy to identify data that can contribute to security violations.
- Carried out studies using Oxsegin security engine to detect illegal data inference and replicated information under different security classifications and formats.
- Performed research into techniques of translating existing access control specifications to logic-based language. Developed methods to automatically translate discretionary and mandatory access control models into Authorization Specification Language (ASL) statements. Created algorithms to automate the translation process while preserving access control requirements of original system.
- Developed techniques to produce single-level DTDs for partial views, designed within context of DTD-based multi-level security classification, to generate partial view for secure XML documents within a semantic rich framework.
- Conducted research into optical networks. Proposed innovative algorithm for dynamic wavelength assignment. Designed and analyzed optical networks software simulator to test algorithm.
- Prepared and delivered presentations for security seminars, collaborative research projects, and scientific conferences. Multiple publications. Assisted with development of grant proposals.
- Presently involved in collaborative research project with ATI and Auburn University on Information Security. White paper in progress.