

# Dmitri G. Roussinov, Ph.D.

---

## EXPERTISE SUMMARY

---

- **15+ years of R&D** on the topics of *business information systems, business analytics, text mining, and natural language processing*. **Co-authoring** publications in the top ranked journals and conferences with the leading experts in the fields of interest. **Supervising** doctoral, master's and undergraduate students. **Managing** research teams.
- **20+ years of professional and academic work in IT:** *software/systems design and implementation, data structures and algorithms (including parallel and distributed), object-oriented modeling, C#/C++/C, Java, Pascal, Basic and assembly languages (80x86 family), machine vision, computer graphics.*
- **15+ years of teaching on a variety of IT topics** in several highly acclaimed academic programs.

---

## EMPLOYMENT

---

**2008 – present**      **Senior Lecturer, Department of Computer and Information Sciences, University of Strathclyde**

- **Designed and taught courses on:** *information creation/retrieval/security, machine learning, business analytics*
- **Building a research group:** writing grant proposals, supervising *doctoral, masters' and undergraduate students.*
- **Maintained worldwide reputation** by presenting at *premier conferences* (SIGIR, CIKM, TREC, etc.), publishing in *the top ranked journals*

**2001 – 2008**      **Assistant Professor, Department of Information Systems, Arizona State University<sup>1</sup>**

- **Supervised research projects** studying applications of NLP (*automated question answering, information retrieval, text mining*) to the tasks of *business intelligence, knowledge management and security informatics*. Lead collaborative funding requests, hired and supervised research assistants to implement and test novel IT prototypes.
- **Attained and maintained worldwide reputation** by presenting at *premier conferences* (SIGIR, CIKM, TREC, etc.), publishing in *the top ranked journals* and through *media appearances*. (e.g. featured in "Information Week" in 2005)
- **Designed and taught courses** on *systems integration (middleware) and object oriented programming/design using Java, C# and .NET*

**1999 – 2001**      **Assistant Professor, School of Information Studies, Syracuse University<sup>2</sup>**

- **Researched** interactive *Web search: visual tools, user behavior and the role of a page genre*. Led collaborative projects resulting in funding requests and academic publications.
- **Designed and taught** master's and undergraduate courses in *databases and system design*.

**1995 – 1999**      **Graduate Research Associate, The University of Arizona<sup>3</sup>**

- **Designed/implemented/tested** an interactive *Web search* tool based on clustering and visualization using *C, C++ and Java*.
- **Designed algorithms** for fast and scalable creation of the term *co-occurrence space* and *Kohonen's maps*.

**1994 – 1996**      **Senior Software Engineer, Coextant Systems Co., Tucson, AZ, USA.**

**Designed and implemented** software for online content management involving Lotus Notes, Domino, C, C++, *Rogue Wave, and STL*. Transferred knowledge to junior software engineers upon completion of the project.

**1990 – 1993**      **Software Engineer, Nuclear Safety Institute, Moscow, Russia.**

**Designed and implemented** software in the areas of geographical information systems, computer graphics, machine vision and applied artificial intelligence using Turbo Pascal, C/C++ and 80x86 assembly languages.

**1993-current**      **Selected Part Time Consulting**

- **Kodak, Rochester NY.** Summer 2000. (<http://www.kodak.com>). Faculty Partner/Consultant. Supervising students involved in the interface development to launch the *Kodak Picture Kiosk* service.
- **Humanizing Technologies, Indianapolis, IN.** Summer, Fall 2001. (<http://www.htinc.com/>). Advised on *text clustering technologies* and *hiring software engineers* for their implementation.
- **Zhivoi Potok, Moscow, Russia** (<http://www.lsm.org/>), 1993. Translating books from English to Russian.

---

<sup>1</sup> Program ranked #11 in USA by U.S. News & World Report.

<sup>2</sup> Program ranked #1 in USA by U.S. News & World Report.

<sup>3</sup> Program ranked #5 in USA by U.S. News & World Report.

---

## EDUCATION

---

Degree/ year	Major (specialty)	Academic Institution	Its Ranking and Reputation
<b>Ph. D. in 1999</b>	Information Systems	The University of Arizona, Eller College of Management, USA.	Ranked #9 globally in IT by Financial Times and #5 in the US by US News World Report.
<b>M. A. in 1995</b>	Economics	Indiana University, Bloomington, USA.	Among top 20 programs in US according to US News World Report, Wall Street Journal, and Business Week.
<b>B. S. &amp; M. S., in 1991</b>	Computer Science, Physics	Moscow Institute of Physics and Technology, Former USSR.	Unofficially considered "MIT of Russia."

*Doctoral Dissertation Title: Information Foraging Through Clustering And Summarization: A Self-Organizing Approach. GPA in Major: 4.0 out of 4.0 Advisor: Dr. Hsinchun Chen. Minors: Computer Engineering, Economics. GPA in minors: 4.0 out of 4.0*

---

## PROFESSIONAL AND ACADEMIC IMPACT

---

- **Cited more than 500 times** in publications by other academics and practitioners, according to Google Scholar
- **Featured in "Information Week"** March 28, 2005 issue: Research on automated question answering on the Web mentioned as one of the most promising directions in "[Web] Search For Tomorrow."
- **Panelist for National Science Foundation (NSF):** reviewing research projects proposals, discussing suitability for funding by US government. (*Information Management, Information Technology Research, Cyber Trust, CAREER*)
- **Regular invited reviewer** for the top journal and conferences in the fields of expertise including *ACM SIGIR, IEEE and ACM transactions*, etc. Served as **Guest Editor** of special issues for well known journals (*International Journal of Internet and Enterprise Management, Information Research*).
- Served as **doctoral dissertation** chair (advisor) for Jose Robles-Flores (Arizona State University, Topic: "Web Question Answering Technology: An Empirical Test Of The Task-Technology Fit Model, defense scheduled for 2008) and for numerous master's and bachelor's level theses/dissertations/internships.
- **30+ Seminars Presented** by invitation in the universities and industry research groups.
- **Serving on committees in charge of well known conferences** including *ACM SIGIR, HICSS, IEEE ISI, AMCIS*, etc.: soliciting submissions, recruiting reviewers and deciding what papers to accept for presentation.

---

## SELECTED HIGH-IMPACT PUBLICATIONS

---

- Roussinov, D., Towards Semantic Category Verification with Arbitrary Precision. *Advances in Information Retrieval Theory (ICTIR)*, 2011.
- Roussinov, D., Aspect presence verification conditional on other aspects. *SIGIR 2010 (poster)*.
- Ozawa, S., Roy, A., Roussinov, D., Automated Task Recognition In Multi-Task Learning, *IEEE Transactions on Neural Networks*, 20(3), 2009.
- Roussinov, D., Fan, W., and Robles, J., Beyond Keywords: Automated Question Answering on the Web. *Communications of the ACM (CACM)*<sup>4</sup>, 51(9), 2008.
- Detecting Word Substitutions in Text, with S.W. Fong and D.B. Skillicorn. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*<sup>5</sup>, 20(8), 2008.
- Roussinov, D., and Chau, M., Combining Fact Seeking Services on the Web, *Journal of Association for Information Systems (JAIS)*<sup>6</sup>, special issue on "Securing and cultivating information supply chain," 9 (4), 2008.
- Roussinov, D., and Zhao, L., Automatic Discovery of Similarity Relationships through Web Mining, *Decision Support Systems (DSS)*, 35, 2003, pp. 149-166.
- Roussinov, D., and Chen, H., Information Navigation on the Web by Clustering and Summarizing Query Results, *Information Processing and Management (IP&M)*<sup>7</sup>, 37 (6), 2001, pp. 789-816.
- Roussinov D., and Chen, H., Document Clustering For Electronic Meetings: An Experimental Comparison Of Two Techniques, *Decision Support Systems (DSS)*, 27 (1-2), 1999, pp. 67-79.
- Roussinov D. and Chen H., A Scalable Self-organizing Map Algorithm for Textual Classification: A Neural Network

<sup>4</sup> *Communications of the ACM* – a premier journal for all computer related academics and professionals, "Science" of the ACM community, top ranked in many fields. Source: <http://www.acm.org/publications/cacm/>

<sup>5</sup> *IEEE Transactions on Knowledge and Data Engineering (TKDE)* – a premier (best) computer science journal on the topics of Database and Information Management. Source: <http://www.cs.iit.edu/~xli/CSJournalsRanking.htm>

<sup>6</sup> *Journal of Association for Information Systems (JAIS)* – a quickly gaining superior reputation journal. Source: <http://jais.aisnet.org/distribution.asp>

<sup>7</sup> *Information Processing and Management* – a premier (among top 5) journal in Information Science community.

Approach to Thesaurus Generation, *Communication and Cognition -- Artificial Intelligence (CCAI)*, 15 (1-2), 1998, pp. 81-112.

- Roussinov, D., and O. Turetken, Semantic Verification in an Online Fact Seeking Environment, *ACM Conference on Information and Knowledge Management*, 2007, pp. 71-78, Lisbon, Portugal.
- Roussinov, D., and Fan, W., Learning Ranking vs. Modeling Relevance, Hawaii International Conference on System Sciences (HICSS-38). (Nominated for best paper) January 3-6, 2006, Island of Hawaii.
- Roussinov, D., and Fan, W., Discretization Based Learning Approach to Information Retrieval. In proceedings of 2005 Conference on Human Language Technologies.
- Roussinov, D., Zhao, L., and Fan, W. Mining Context Specific Similarity Relationships Using The World Wide Web. In proceedings of 2005 Conference on Human Language Technologies.
- Roussinov, D., Chau, M., Filatova, E., Robles, J., Building on Redundancy: Factoid Question Answering, Robust Retrieval and the "Other." In proceedings of Text REtrieval Conference (TREC), Nov. 15-18, 2005, National Institute of Standards and Technology (NIST).
- N.J. Belkin, M. Cole, J. Gwizdka, Y.-L. Li, J.-J. Liu, G. Muresan, D. Roussinov, C.A. Smith, A. Taylor, X.-J. Yuan. Rutgers Information Interaction Lab at TREC 2005: Trying HARD. In the proceedings of Text REtrieval Conference (TREC), Nov. 15-18, 2005, National Institute of Standards and Technology (NIST).
- Cao, J., Roussinov, D., Robles, J., Nunamaker, J., Automated Question Answering From Videos: NLP vs. Pattern Matching, Hawaii International Conference on System Sciences (HICSS-38). January 3-6, 2005, Island of Hawaii.
- Roussinov, D., and Robles, J., Web Question Answering: Technology and Business Applications. In the proceedings of 2004 American Conference on Information Systems. August 6 – 8, New York, NY.
- Roussinov, D. and Robles, J., Ding, Y., Experiments with Web QA System and TREC2004 Questions. In the proceedings of Text REtrieval Conference (TREC). November 16-19, 2004, National Institute of Standards and Technology (NIST).
- Roussinov, D., Crowston, K., Nilan, M., Kwasnik, B., Cai, J. & Liu, X., Genre Based Navigation on the Web, proceedings of Hawaii International Conference on System Sciences (HICSS-34). January 4-7, 2001, Island of Maui.
- Crowston, K., Kwasnik, Liddy, L., B., Nilan, M., & Roussinov, D., Identifying Document Genre to Improve Web Search Effectiveness, American Society for Information Science and Technology, Annual Conference, November 11 - 16, 2000, Chicago, IL.
- Romano N.C., Roussinov D., Nunamaker J., and Chen H., Collaborative Information Retrieval Environment: Integration of Information Retrieval with Group Support Systems, Thirty-Second Annual Hawaii International Conference On System Sciences, January 5 - 8, 1999, Island of Maui.
- Roussinov D. and Ramsey M., Information Forage through Adaptive Visualization, The Third ACM Conference on Digital Libraries, pp. 303-304, June 23-26, 1998, Pittsburgh.

---

### EDUCATIONAL CONTRIBUTIONS

---

Taught various courses in highly ranked academic institutions on the topics of *enterprise application integration (middleware)*, *databases*, *system analysis and design*, *object-oriented analysis modeling and programming (visual basic, Pascal, java, c, c++, c#)*, *NLP (information retrieval, natural language processing, search engines)*, *data structures and algorithms*.

---

### SELECTED ADMINISTRATIVE EXPERIENCE

---

- **Member of Faculty of Science IT committee**, 2010-current: discussing and disseminating faculty level IT decisions.
- **Master thesis coordinator**, 2011- current: coordinating dissertations for 50+ students and 10+ supervisors
- **Chair of Web Content Committee**, 2004-2006: overseeing the material and structure of the 100+ page department web site containing program/faculty/research centers information, news highlights, jobs, internships, and other.
- **Member of the Undergraduate Curriculum Committee**, 2001-2007: deciding on the class material, admission standards, establishing contacts with the potential recruiters locally and nationwide.

---

### REFERENCES

---

- **Available upon request** from the current and past institutions of employment or studies.
- **Academic opinion letters** from the *external reviewers* (top scholars within the related fields who are familiar with my accomplishments and already commented on them in the past) can be provided by request. The list includes L. Giles, N. Belkin, R. Larson, A. Spink, G. Marchionini, R. Sprague, A. Winston, S. Madnick, S. March, F. Provost, R. Sharda, M. Bieber, L. Olfman, L. Giles, V. Vaishnavi, and other world renowned scholars.

---

### OTHER

---

- **Language Proficiency:** *English* fluent in writing and speaking. Native speaker of *Russian*. Some conversational and reading knowledge of *Spanish, French, Italian* and *Japanese*.