

# FLORIN RUSU

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## Research Interests

Databases in general, with a particular focus on large scale data management, data aggregation and approximation methods; data streaming; approximate query processing; online aggregation.

## Education

- May 2009     *Ph.D. (Computer Science)*  
University of Florida, USA  
Dissertation: *Sketches for Aggregate Estimations over Data Streams*  
Advisor: Alin Dobra
- August 2008   *M.Sc. (Computer Science)*  
University of Florida, USA  
GPA: 3.91/4
- June 2004     *B.Eng. (Computer Science)*  
Technical University of Cluj-Napoca, Romania (5 year curriculum)  
GPA: 9.85/10  
Thesis: *DICOM-Compliant Integrated System for Medical Structured Reporting*  
Advisor: Sergiu Nedevschi

## Publications

### Journal Publications

1. **Florin Rusu** and Alin Dobra. *Sketches for Size of Join Estimation*. ACM Transactions on Database Systems (TODS), Vol. 33, No. 3, September 2008.
2. **Florin Rusu** and Alin Dobra. *Pseudo-Random Number Generation for Sketch-Based Estimations*. ACM Transactions on Database Systems (TODS), Vol. 32, No. 2, June 2007. Accepted at first submission.

### Conference Publications

1. Alin Dobra, Chris Jermaine, **Florin Rusu**, and Fei Xu. *Turbo-Charging Estimate Convergence in DBO*. Proceedings of the 2009 VLDB Conference on Very Large Databases (VLDB 2009), Lyon, France, August 2009, pp. 419–430. Acceptance rate 16.7%.
2. **Florin Rusu** and Alin Dobra. *Sketching Sampled Data Streams*. Proceedings of the 2009 IEEE ICDE International Conference on Data Engineering (ICDE 2009), Shanghai, China, March 2009, pp. 381–392. Acceptance rate 17%.
3. **Florin Rusu**, Fei Xu, Ravi Jampani, Luis Perez, Mingxi Wu, Chris Jermaine, and Alin Dobra. *The DBO Database System*. Proceedings of the 2008 ACM SIGMOD International Conference on Management of Data (SIGMOD 2008), Vancouver, Canada, June 2008, pp. 1223–1226. Demo Track. Acceptance rate 31.9%.
4. **Florin Rusu** and Alin Dobra. *Statistical Analysis of Sketch Estimators*. Proceedings of the 2007 ACM SIGMOD International Conference on Management of Data (SIGMOD 2007), Beijing, China, June 2007, pp. 187–198. Acceptance rate 14.6%.

5. **Florin Rusu** and Alin Dobra. *Fast Range-Summable Random Variables for Efficient Aggregate Estimation*. Proceedings of the 2006 ACM SIGMOD International Conference on Management of Data (SIGMOD 2006), Chicago, Illinois, June 2006, pp. 193–204. Acceptance rate 13%.
6. Sergiu Nedeveschi, **Florin Rusu**, Iulian Popa, Alexandru Smeu, Dan Olinic, and Calin Homorodean. *Structured Reporting of Echocardiography Images in a DICOM Environment*. Proceedings of Computers in Cardiology 2004, Chicago, Illinois, September 2004, pp. 685–688.
7. Sergiu Nedeveschi, Dan Olinic, Radu Popovici, **Florin Rusu**, Alexandru Smeu, and Calin Homorodean. *DICOM Compliant Environment for Structured Reporting in Echocardiography*. Proceedings of Computers in Cardiology 2003, Thessaloniki, Greece, September 2003, pp. 29–32.

### Research Experience

University of Florida, CISE Department

January 2005–May 2009

Title: *Research Assistant*

- Performed research on different approximate query processing techniques with applications to databases and data streaming under the supervision of Alin Dobra and Christopher Jermaine.

IBM Almaden Research Center

May 2008–August 2008

Title: *Summer Intern*

- Designed and implemented algorithms for mining queries from a data warehouse under the supervision of Vijayshankar Raman, Lin Qiao, and Peter Haas.

Technical University of Cluj-Napoca, Computer Science Department

October 2002–June 2004

Title: *Junior Research Assistant*

- Worked on the design and implementation of a medical structured reporting system for electrocardiography images under the supervision of Sergiu Nedeveschi. Joint work with University of Medicine and Pharmacy *Iuliu Hatieganu* from Cluj-Napoca.

### Teaching Experience

University of Florida, CISE Department

Title: *Teaching Assistant*

- Course *Introduction to Computer Organization (Spring 2008)* taught by Seema Bandyopadhyay. Responsibilities included lecturing, holding office hours, and grading homeworks and exams.
- Course *Database Management Systems (Fall 2005)* taught by Alin Dobra. Responsibilities included holding office hours for the students and the design and grading of homeworks, exams, and projects.

### Work Experience

Innovative Scheduling, Inc.

June 2009–June 2010

Title: *Senior Software Engineer*

- Performed research, designed, and implemented scheduling algorithms for large scale transportation networks. Developed models for network optimization problems.

### Talks

- *Sketching Sampled Data Streams*  
– IEEE ICDE 2009 Conference, Shanghai, China, March 2009

- *Fast Randomized Algorithms for Data Streams*
  - Cornell University, DB Colloquium, Ithaca, New York, February 2009
- *Mining for Queries*
  - IBM Almaden Research Center, San Jose, California, August 2008
- *Statistical Analysis of Sketch Estimators*
  - ACM SIGMOD 2007 Conference, Beijing, China, June 2007
  - University of Florida, DB Seminar, Gainesville, Florida, January 2007
- *Fast Range-Summable Random Variables for Efficient Aggregate Estimation*
  - ACM SIGMOD 2006 Conference, Chicago, Illinois, June 2006
  - University of Florida, DB Seminar, Gainesville, Florida, February 2006

### Professional Service

#### Paper Refereeing

- *Conference Referee*: SIGMOD 2009, ICDE 2009, VLDB 2007, SIGMOD 2006, ICDE 2006

#### Professional Society Memberships

- Member of the ACM SIGMOD special interest group
- Member of IEEE

### Honors and Awards

- Recipient of UF CISE Travel Grant to participate at IEEE ICDE 2009 Conference (March 2009).
- Recipient of UF Student Government Travel Grant to participate at ACM SIGMOD 2008 Conference (June 2008).
- Recipient of EDBT scholarship to attend the 8<sup>th</sup> EDBT Summer School on database technology for novel applications in Bozen-Bolzano, Italy (September 2007).
- Recipient of UF CISE Travel Grant to participate at ACM SIGMOD 2006 Conference (June 2006).
- Recipient of Annual University Fellowship for academic excellence, Cluj-Napoca, Romania (1999–2004).

### Other Activities

- Treasurer of the UF Romanian Student Organization (RSA) (September 2006–May 2008).
- Vice-President of the UF CISE ASCIE graduate student organization (May 2007–May 2008).
- Student member of the UF CISE Industrial Advisory Board (IAB) (September 2006–May 2007).

### Personal Data

- Male, born in Cluj-Napoca, Romania (Romanian citizen), H1B visa US non-permanent resident.
- Languages spoken: *Romanian* (native), *English* (fluent), *French* (intermediate), *Italian*, *Spanish* (elementary).