

Curriculum Vitae

Gyan Ranjan

Email: granjan [at] cs.umn.edu

CURRENT POSITION

- PhD student, Dept. of Comp. Science and Eng., Univ. of Minnesota, Twin Cities.
- Research Assistant, Spring '09 - Ongoing.

CURRENT PROJECTS

- Design of robust infrastructure networks, Defense Threat Reduction Agency (DTRA) grant.
- Geo-localization and mapping of the base-station infrastructure for a 3G cellular services provider.

RESEARCH INTERESTS

- Structural analysis of complex networks using algebraic graph theory.
- Machine learning based approach to mobile/cellular network data analysis, user mobility patterns, geo-localization and anomaly detection.
- Internet address space characterization.

EDUCATION

- Master of Science (2010), Comp. Science and Eng., Univ. of Minnesota, GPA 4.0.
- Bachelor of Technology (Honors) (2006), Comp. Science and Eng., Indian Institute of Information Technology, Hyderabad (India).

PUBLICATIONS

- "On random eccentricity in complex networks" – Unifying random walks and spanning forests of a complex network to characterize node vulnerability/immunity to random failures. *Tech. report version* available now.
- "Commuter times for a directed graph using an asymmetric laplacian" – Under submission (March, 2010), *Linear algebra and its applications, Elsevier*.
- "Generalized laplacians and first transit times for directed graphs" - *SIAM conference on applied linear algebra*, October 2009.
- "A natural disasters management system based on location aware distributed sensor networks", *IEEE Mobile Ad hoc and Sensor Systems conference (MASS '05)*, 2005.

TEACHING EXPERIENCE

- Teaching Assistant (Operating Systems and Computer Networks), Dept. of Comp. Science and Eng., Univ. of Minnesota, Fall '07, Spring '08 and Fall '08.

WORK EXPERIENCE

- Junior Research Associate, Software Engineering Technology Labs, Infosys Technologies Ltd, Bangalore, India.
 - Period of Employment: July '06 – July '07.
 - Responsibilities: Business intelligence, process and program management.

PREVIOUS INTERNSHIPS

- Research assistant, Dept. of Science and Technology, Govt. of India. Deployment and evaluation of mobile wireless sensor networks, March '06 – June '06.
- Research assistant, National Institute for Smart Government, Hyderabad, India. Field study and system evaluation of E-Procurement systems in the state of Andhra Pradesh, India, March '05 – June '05.

TECHNICAL SKILLS

- Programming languages: C, C++, Visual Basic, MATLAB.
- Operating Systems: Unix (Solaris, BSD, Linux), Win 32/NT.
- Programming platforms/ Frameworks: Visual studio, KDevelop, Gnome.

REFERENCES

- Dr. Zhi-Li Zhang, Professor, Dept. of Comp. Science and Eng., Univ. of Minnesota.
 - Email: zhzhang [at] cs.umn.edu
- Dr. Daniel Boley, Professor, Dept. of Comp. Science and Eng., Univ. of Minnesota.
 - Email: boley [at] cs.umn.edu