

RAGHAVENDRA G S

PRESENT ADDRESS

Graphics Visualization and Computing Laboratory
International Institute of Information Technology Bangalore,
Electronic City,
Bangalore.

PERMANENT ADDRESS

#1305, Ground Floor, 11th Main,
Vijayanagar,
Bangalore-560040.

CONTACT

Mobile: +919986382353
E-mail: gs.raghavendra@iiitb.ac.in



EDUCATION

M.Sc (Engg.), (2008-2013), Computer Science and Automation,
University: Indian Institute of Science, Bangalore.
Thesis: Identification and Quantification of Important Voids and Pockets in Proteins.
Advisor: Dr. Vijay Natarajan.
C.G.P.A: 6.33/8.0.
Courses: Discrete Structures, Automata Theory and Computability,
Design and Analysis of Algorithms.

B.E., 2006, Information Technology,
University: National Institute of Technology Karnataka, Surathkal,
Percentage: 76.34% (First Class with Distinction).

RESEARCH INTERESTS

Topology-based methods in Visualization, Scientific Visualization, Computational Topology, Computer Graphics.

RESEARCH SYNOPSIS

Many methods of analyzing both the physical and chemical behavior of proteins require information about its structure and stability. Also various other parameters such as energy function, solvation, hydrophobic/hydrophilic effects, surface area and volumes too play an important part in such analysis. The contribution of cavities to these parameters are very important. Existing methods to compute and measure cavities are limited by the inherent inaccuracies in the method of acquisition of data through x-ray crystallography and uncertainties in computation of radii of atoms. We present a topological framework that enables robust computation and visualization of these structures and minimize if not eliminate the inaccuracies.

PUBLICATIONS

Journals/Book Chapters

- Raghavendra Sridharamurthy, Talha Bin Masood, Harish Doraiswamy, Siddharth Patel, Raghavan Varadarajan and Vijay Natarajan. Extraction of Robust Voids and Pockets in Proteins.

In Visualization in Medicine and Life Sciences III. Linsen, L., Hamann, B. and Hege, H.-C., (Eds). Springer-Verlag, Mathematics and Visualization Series, Conditionally accepted.

Conference Proceedings

- Raghavendra Sridharamurthy, Harish Doraiswamy, Siddharth Patel, Raghavan Varadarajan and Vijay Natarajan. Extraction of Robust Voids and Pockets in Proteins. *EuroVis 2013: Eurographics Conference on Visualization (short paper), 2013.*

Technical Reports

- Raghavendra Sridharamurthy, Harish Doraiswamy, Siddharth Patel, Raghavan Varadarajan and Vijay Natarajan. Extraction of Robust Voids and Pockets in Proteins. *Tech. Rep. IISC-CSA-TR-2013-3, Department of Computer Science and Automation, Indian Institute of Science 2013.* <http://www.csa.iisc.ernet.in/TR/2013/3/>.

COMPUTING SKILL SET

Languages: C, C++, C#(limited proficiency).
Libraries: OpenGL, QT.

EMPLOYMENT

July 2015-Present

Senior Research Fellow
Graphics, Visualization and Computing Lab (GVCL),
International Institute of Information Technology, Bangalore (IIITB)
Bangalore.

Jan 2014-May 2015

Temporary Faculty
Dept. of Information Technology
National Institute of Technology Karnataka, Surathkal
Mangalore.

Courses Handled

- Jan 2015-May 2015
 - Design and Analysis of Algorithms
 - Computer Graphics (Jointly with Mr.Rathina Raja. J)
- July 2014-December 2014
 - Parallel Computing
 - Data Structures and Algorithms (Jointly with Mr.Ashwin T.S.)
- Jan 2014-May 2014
 - Computer Graphics
 - Artificial Intelligence (Jointly with Mr.Ashwin T.S.)

Aug 2013-Dec 2013

Junior Research Fellow
Visualization and Graphics Lab,
Computer Science and Automation Dept.,
Indian Institute of Science,
Bangalore.

Summary of work done in VGL:

- Was part of a group which worked on designing *RobustCavities* a webserver which implements and extends the work published in EuroVis 2013 as a Short Paper.
- *RobustCavities* is a webserver which can be used to extract robust cavities from proteins and visualize them using a python script provided along with the webserver. Can be accessed at (<http://vgl.serc.iisc.ernet.in/robustCavities/>).

Aug 2006-July 2008

Software Engineer II
Mobile Software Division
Infineon Technologies Pvt. Ltd.
Bangalore.

Summary of work done in Infineon Technologies:

- Was part of a team which developed and maintained software for SimTK Module of Proprietary Middleware which was awarded **LG incentive awards for best products**.
- Was part of a team which developed and maintained drivers for a family of security chips used in mobile communication devices.

OTHERS

- Awarded MHRD Scholarship by the Government of India.
- Secured 139th rank in GATE 2008 (Computer Science).
- Secured 133rd Rank in Karnataka CET 2002 (Engineering Stream).
- Secured a GRE score of 1420/1600 (old format).

REFERENCES

Dr. Vijay Natarajan,
Associate Professor,
Department of Computer Science and Automation, &
Supercomputing Education and Research Centre,
Indian Institute of Science,
Bangalore.

Prof. Ananthanarayana V.S,
Professor and Head of the Department,
Department of Information Technology,
National Institute of Technology Karnataka (NITK), Surathkal
Srinivasanagar, Mangalore