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## EDUCATION

### Washington University in St. Louis

St Louis, MO

Candidate for Ph.D. in *Computer Science*, May 2010 (expected)

2006 - 2010

- **Research:** Computer graphics, computational geometry and applications in biomedical imaging
- **Product:** Gorgon – An interactive molecular modeling system

M.Sc. in *Computer Science*, May 2007

2005 - 2007

- **Thesis:** Determining  $\alpha$ -helix correspondence for protein structure prediction from Cryo-EM density maps
- **GPA:** 4.0

### Manchester Metropolitan University

Manchester, UK

B.Sc. (Honors) in *Information Systems*, September 2004

1999 - 2004

- Awarded the Gold Medal for excellence
- Ranked #1 (in a class of 220)
- First class honors (*summa cum laude*)
- **Thesis:** Three-dimensional motion tracking using stereo vision

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## EXPERIENCE

### Washington University in St. Louis

St. Louis, MO

#### Graduate Research Assistant

2006 - Present

- **Research:** Investigated the development of computational tools for understanding bio-medical images by analyzing their geometric properties.
- **Product Development:** Developed Gorgon, an interactive molecular modeling system for protein structure prediction with users in 19 countries.
- **Publication and Presentation:** Published and presented research results at journals and conferences, such as the Visual Computer, Computer Aided Design, ACM Siggraph, etc.
- **Collaboration:** Collaboration with researchers at the University of Washington, Baylor College of Medicine and the Washington University – Medical School.

### IFS Research and Development

Colombo, Sri Lanka

Headquartered in Sweden with a presence in 54 countries, IFS is among the world's leading providers of lifecycle management and ERP software. Their largest R&D office is located in Colombo and is the base for its research operations.

Linköping, Sweden

Oslo, Norway

1999 - 2005

#### Framework Architect

2004 - 2005

- **Innovation:** Pioneered the use of cutting-edge HCI techniques in business software, effectively increasing the user experience by orders of magnitude.
- **Framework Design:** Designed and developed a storage independent ERP framework.

#### Technical Coordinator

2003 - 2004

- **Product Development:** Guided the integration of R&D discoveries into the core products, ensuring their effectiveness, efficiency and long-term maintainability.
- **Personnel Development:** Championed interest groups, provided internal consultation, and conducted employee training sessions to increase technology awareness.

#### Team Leader, Senior Software Engineer and Software Engineer

1999 - 2003

- **Leadership & Project Management:** Lead the team that integrated repair-order functionality into the IFS Supply-Chain-Management solution, Analyzed business requirements and performed resource allocation, project planning, scheduling and risk mitigation.
- **Customer Collaboration:** Collaborated with representatives from BAE Systems and testers from six countries to perform satisfactory system tests and releases.
- **System Design:** Designed a solution for business-to-business electronic data interchange using the AECMA protocol for British Aerospace (BAE Systems).

## Informatics Institute of Technology (IIT)

Colombo, Sri Lanka

As Sri Lanka's largest private university, IIT provides higher education in collaboration with University of London, Manchester Metropolitan University, University of Westminster and Keele University.

2004 - 2005

### Lecturer

- **Teaching:** Taught Data Engineering to a class of 96 college seniors.
- **Evaluation:** Performed student assessments by means of examinations and assignments.

## Information and Communication Technology Agency of Sri Lanka (ICTA)

Colombo, Sri Lanka

The ICTA is responsible for the utilization and deployment of Information Technology within Sri Lanka, and also selects and trains the national teams for the International Olympiad in Informatics.

2001 - 2005

### Team Trainer

- **Coaching:** Trained the Sri Lankan national teams which won two gold medals, two silver medals and seven bronze medals at the International Olympiad in Informatics.

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## PUBLICATIONS

### Refereed Journal Publications

- Abeyasinghe S.S., Ju T., "Interactive skeletonization of intensity volumes", *The Visual Computer*, 25 (5-7), 627-635, 2009. 2009
- Abeyasinghe S.S., Ju T., Baker M., Chiu W., "Shape modeling and matching in identifying 3D protein structures", *Computer Aided Design*, 40(6), 708-720, 2008. 2008

### Peer-Reviewed Conference Publications

- Abeyasinghe S.S., Ju T., "Interactive skeletonization of intensity volumes", *Proceedings of the 2009 Computer Graphics International Conference*, 627-635, 2009. 2009
- Abeyasinghe S.S., Baker M., Chiu W., Ju T., "Segmentation-free skeletonization of grayscale volumes for shape understanding", *Proceedings of the IEEE International conference on Shape Modeling and Applications*, 63-71, 2008. 2008
- Abeyasinghe S.S., Ju T., Baker M., Chiu W., "Shape modeling and matching in identifying protein structure from low-resolution images", *Proceedings of the 2007 ACM symposium on Solid and physical modeling*, 223-232, 2007. 2007
- Abeyasinghe S.S., Krishanthan L., "Motrack3D: Three-Dimensional motion tracking using stereo vision", *Proceedings of the 11<sup>th</sup> annual sessions of the IEE - Sri Lanka*, 2004. 2004

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## FURTHER INFORMATION

### Awards

- Gold Award at the National Best Quality Software Awards. 2004
- Gamini Wickramasinghe Award (Gold Medal) for excellence. 2004
- Academic Excellence award for Best Final Year Project. 2004
- Gold Award at the Sri Lanka National Informatics Olympiad. 1998
- Dr. Anandatissa de Alwis Challenge Trophy for the most outstanding student. 1995

### Achievements

- Represented Sri Lanka and competed at the 4<sup>th</sup>(Hong Kong) Asia Pacific Information and Communications Technology Awards. 2004
- Represented Sri Lanka and competed at the 10<sup>th</sup>(Portugal), 11<sup>th</sup>(Turkey), and 12<sup>th</sup>(China) International Olympiad in Informatics (IOI). 1998 - 2000
- Captained the Sri Lankan Team that was 2<sup>nd</sup> runner up at the 9<sup>th</sup>(India) SEARCC International Schools Software Competition. 1997

### Technical Competencies

- **Languages:** C/C++, Python, C#, Delphi, Pascal, VB, VB.net, Java, JSP, PHP, Scheme, SQL, PLSQL
- **Databases:** Oracle, MySQL, SQL Server
- **Scientific Computation:** Mathematica, Matlab
- **Application Design:** UML & Rational Rose
- **Molecular Modeling:** Gorgon, UCSF Chimera, EMAN2, Rosetta