

Aimée Vargas Estrada

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Education

MSc in Computer Science, December 2005.
Parasol Laboratory, Algorithms & Applications Group
Texas A&M University
Thesis: "Visualization Tools for Moving Objects"
Advisor: Dr. Nancy M. Amato.
GPA: 3.718

B.S. in Computer Engineering, August 1996.
Universidad Nacional Autónoma de México (U.N.A.M.)
Thesis: "Design, Construction, and Control of a Manipulator Vehicle with Autonomous Navigation for Piece Transfer"

Research Interests:

Computer-Human Interaction, Intelligent User Interfaces, Robotics, Computer Graphics

Research Projects

Development of visualization tools:

- *VIZMO++*: Design and implementation of a 3D visualization/authoring tool for moving objects (rigid and articulated), motion planning environments, problem instances, and their solutions. This was the topic of my thesis.

Campus Navigator: Designed and implemented the user web-based interface to compute and visualize path planning (<http://parasol.tamu.edu/groups/amatogroup/research/campus-nav/>). The Campus Navigator uses motion planning techniques and the visualization and authoring tool for 3D motion planning problems and environments (*VIZMO++*) to help users find their way across the Texas A&M campus.

Computing Experience

Programming Languages and Tools: C++, JavaScript, SQL, Unix, PHP, OpenGL, Qt
Operating Systems: Linux, Windows
Database Systems: Oracle, MySQL

Professional Experience

Research Associate

Parasol Laboratory, Texas A&M University

January 2006 - April 2006

Contribution as team member in the design and implementation of a software architecture to expand the capabilities of the current visualization and authoring tool for 3D motion planning problems and environments (*VIZMO++*), for visualizing and editing geometric objects. This tool will be used as a GUI front end to support scientific applications such as particle transport and seismic ray tracing.

System Developer

Mexico City

Intracom Consultores

May 1999 - July 2000

Development of software for the stock market:

- VALMEX (<http://www.valmex.com.mx/>)

- Developed systems to process client transactions to enable them to access their portfolio from the Internet.
- Developed systems to support technical analysis and generation of daily, historical, and weekly reports.

- Implemented components of indexes and statistics of the Mexican stock market that were included in their main web page.
- Database design.

- Grupo Financiero Interacciones (<https://www.gfinter.com>)

- Developed systems that generate statistical analysis of daily information of the Mexican stock market.
- Designed and implemented database triggers in Oracle

Lecturer

Universidad Tecnológica Fidel Velázquez

Estado de México

January 1996 - May 1999

Taught Unix, Database Systems, Programming Languages (C, C++). I also participated in the design of a system to support academic and staff procedures.

Honors and Awards

Consejo Nacional de Ciencia y Tecnología (CONACYT), México.
Scholarship for Masters studies, August 2001 - 2003

Texas A&M University Scholarship to attend Grace Hopper Conference 2004, Chicago, October 6-9.

Tapia Conference Scholarship to attend the Richard Tapia Celebration of Diversity in Computing Conference 2005 , Albuquerque, October 19-22.

Service and Activities

Computer Science Graduate Student Association (CSGSA), Social Officer, May 2003 - May 2004

Aggie Women in Computer Science (AWICS), Distinguished Lecturer Officer, April 2003 - November 2004

Memberships

Association for Computing Machinery (ACM), 2002 - present

Institute of Electrical and Electronics Engineers (IEEE) Robotics and Automation Society, 2005 - present

Publications in Refereed Conferences

- Aimée Vargas, Jyh-Ming Lien, Nancy M. Amato, "VIZMO++: a Visualization, Authoring, and Educational Tool for Motion Planning", To appear in Proceedings of the IEEE International Conference on Robotics and Automation (ICRA), Orlando, May 2006.

Tech. Reports

- Aimée Vargas, Jyh-Ming Lien, Marco A. Morales A., Samuel Rodriguez, Nancy M. Amato, "User-Guided Path Planning," Technical Report, TR05-011, Parasol Laboratory, Department of Computer Science, Texas A&M University, Sept. 2005.

- Aimée Vargas, Jyh-Ming Lien, Nancy M. Amato, "VIZMO++: a Visualization, Authoring, and Educational Tool for Motion Planning", Technical Report, TR05-014, Parasol Laboratory, Department of Computer Science, Texas A&M University, Sept. 2005.

References

Available upon request.

April, 2006