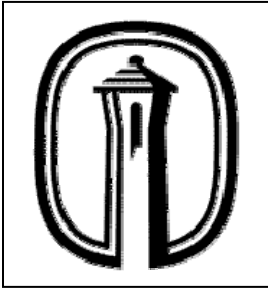


STUDENT APPLICATION PACKAGE FOR PARTICIPATION IN



NSF REU 2009

Laboratory for Distributed Intelligent Agent Systems
Trinity University
<http://www.cs.trinity.edu/~yzhang/reu/reu.html>

Program Dates: May 25 – July 31, 2009
Application Deadline: March 6, 2009

1. Basic Information

1.1 Eligibility

Funding is limited to United States citizens or US permanent residents. Women and minorities are particularly encouraged to apply.

1.2 Technical Skill

You are expected to be a computer science or related major with at least one year of courses taken within your program of study. You are also expected to know at least one programming language among Java, C, or C++.

1.3 Commitment

Your application constitutes commitment that, if selected, you will be available to participate in the REU site during the program date (May 25 – July 31, 2008). This means that you will live on the Trinity campus and work full time on the research project for the entire duration of the project.

2. Application

To be considered, you must submit all the application materials by the deadline (March 6, 2009). They include the following:

- **The application form included in this package.** You can send this through *email only*. See below for contact information. A recommendation form is provided at <http://www.cs.trinity.edu/~yzhang/reu/apply.html>.
- **A transcript from your current institution.** While official transcripts are preferred, unofficial ones are accepted. We will also accept an electronic version of the transcript. When an unofficial or electronic transcript is sent, we expect that, if selected you or your university will forward us an official transcript by March 31, 2009.
- **A recommendation letter supporting the application.** This letter should be sent by the faculty directly to us in either email, mail or fax. A recommendation letter form is provided at <http://www.cs.trinity.edu/~yzhang/reu/apply.html>.

Contact Information

Email

yzhang@cs.trinity.edu

Mail

Dr. Yu Zhang
Department of Computer Science
Trinity University
San Antonio, TX 78212

Fax

(210) 999-7477, ATTN: Yu Zhang

Inquiries

Phone: (210) 999-7399

Fax: (210) 999-7477

Email: yzhang@cs.trinity.edu

3. Projects

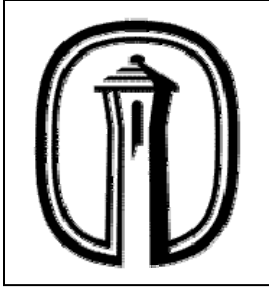
If selected, you will collaboratively work on one of the four projects with 1 or 2 other students. In the application form, you are asked to give a preference to two projects that interest you the most. To help you make the decision, this section briefly describes each project. More details about the projects are provided at <http://www.cs.trinity.edu/~yzhang/reu/projects.html>.

Project 1: Cognitive Agents for Social Environments (CASE). This project will develop a multi-agent architecture, CASE (Cognitive Agents for Social Environments), for simulating human social interaction. CASE will include two parts: (1) a “meso-level” multi-agent interaction model by capturing both the macro-level societal influence and the micro-level individual agent autonomy, and (2) a computational descriptive decision model of intuitive and deliberative decision-making.

Project 2: CASESim. CASESim is a multi-agent simulation for the CASE agents and will provide various services to researchers who will use the simulation to manage, analyze and visualize their data. (1) We will develop an integrated modeling environment with a simple interface through which researchers can easily set up different testing domains. (2) We will develop a rich charting package called MASVis (Multi-Agent Systems Visualization) that will represent and visualize large sets of data of varying types (continuous, discrete, 2D, 3D, GIS or network data).

Project 3: High Performance Computing in Parallel and Distributed Multi-Agent Systems. For a multi-agent system to be effective at dealing with the large number of agents required for social research, it has to be highly distributed both in processing as well as memory. This project will investigate various advanced data structures and algorithms to ensure high performance and effective load balancing for the CASE agent system.

Project 4: Simulating Urban Dynamics with Multi-Agent Systems. This project will use the CASE agent system to model the mortgage foreclosure crisis currently reported on in the national news. We will use CASE agents to create a simplified model of mortgage and foreclosure processes, seeding our simulation with existing data about home prices, foreclosures and other sociodemographic information from San Antonio and Bexar County records offices.



Student Application Form

NSF REU 2009

Laboratory for Distributed Intelligent Agent Systems

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Program Dates: May 25 – July 31, 2009

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Complete all the fields. If needed, you can attach supplemental documents or extend any of the table cells.

Student Information

Student Name	First	Middle	Last
E-mail Address			
Permanent Mailing Address			
Current School Address			
Home Phone	()	School Phone	()
		Cell Phone (if any)	()
College/University Name/City/State			
Major		Minor (if any)	
Cumulative GPA		GPA in the major	
Expected Graduation Date			
Citizen Status	<input type="checkbox"/> US citizen <input type="checkbox"/> US Permanent Resident		
Gender	<input type="checkbox"/> Male <input type="checkbox"/> Female		
Race (optional)	<input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> White		
How did you hear about this REU?			

Academic Information

List all the Math courses you have already completed or are currently taking.

List all the Computing and IT courses you have already completed or are currently taking.

Check the programming languages that you are proficient in.

- Java Other (list below)
 C++
 C
 Matlab

List the courses you are taking in the Spring 09 that are **not** listed on your transcript, using both course number and title.

List the honorary and professional societies of which you are a member, indicating offices held, as well as any extracurricular activities/organizations in which you participate.

List any industrial or project experience.

Provide a statement of professional goals. If you need additional space, you can choose to attach the statement as a separate document. This statement should include:

- Description of your interest in participating in this REU site in Multi-Agent Systems at Trinity University.
- Description of your general career goals and professional accomplishments. Indicate if you have previously participated in any other research projects.

Project Preference

Your preference for one project or another does not play any role in the selection process and it is likely that, if admitted, you will be assigned one not in your preference list. However, we will try take in consideration your preferences if possible. Please select two that interest you the most. Write the project title here:

- 1.
- 2.

Reference Information

List one faculty member who will be submitting a letter of recommendation for your application in this program. The letter should be sent directly to us in either printed or electronic form.

Faculty Name	
Title	
Department	
Institution	
Office Phone	
E-mail Address	

Acknowledgement

We acknowledge and appreciate Dr. Stefan Robila at Montclair State University sharing his application materials.