

### Faculty Member Contact Information

**Name:** Song Foh Chew

**Department:** Mathematics and Statistics

**E-mail Address:** schew@siue.edu

**Phone Number:** 618-650-3016

**Campus Box:** 1653

### Description of the URCA Assistant Position

This posting includes one funded position. In addition, the faculty member may be willing to mentor additional, unfunded students.


**How many unfunded students is this professor taking in addition to his/her one funded student?**   0  

(Students, if the faculty member will have both funded and unfunded students, he or she is free to select which student receives the funding. Funding cannot be split up between multiple students; only one student will receive it.)

**Which of the following apply to this position?**

This position is **only** open to students who have declared a major in this discipline. **M**

This project deals with social justice issues. 

This project deals with sustainability (green) issues. 

This project deals with human health and wellness issues. 

**How many hours per week will your student(s) be required to work in this position?**   9  

(Minimum is 6 hours per week; typical is 9.)

**Will it be possible for your student(s) to earn course credit?**  Yes  No

**If yes, in which course?** N/A

**If yes, for how many credit hours?** N/A

**Location of research/creative activities:** Computer Labs on campus

**Brief description of the nature of the research/creative activity:**

This research project is concerned with applying queueing theory to model and analyze terror plot detection.

**Brief description of student responsibilities:**

The student will do the following under my guidance:

1. Find tutorials and papers on queueing theory.
2. Write summary reports on queueing theory.
3. Review counterterrorism modeling and analysis.
4. Model terror plots.
5. Solve the model using queueing theory.
6. Collect data using MATLAB.

**URCA Assistant positions are designed to provide students with *research or creative activities* experience. As such, there should be measurable, appropriate outcome goals. What exactly should your student(s) have learned by the end of this experience?**

The student should have learnt how to do the following:

1. Use scholar.google.com to find papers.
2. Review papers and write reports.
3. Improve terror plot modeling and analysis.
4. Model a problem.
5. Solve a problem using queueing theory.
6. Write computer programs using MATLAB.

### Requirements of Students

**If the position(s) require students to be available at certain times each week (as opposed to them being able to set their own hours), please indicate all required days and times:**

The student is free to manage his/her seven hours of the nine hours, but I will have to meet with the student in my office from 12pm - 2pm on each Friday.

**If the location of the research/creative activities involves off campus work, must students provide their own transportation?**

N/A

**Must students have taken any prerequisite classes? Please list classes and preferred grades:**

The student should have taken statistics and/or operations research (STAT 480a and/or OR 441) with a "B" or better.

**Other requirements or notes to applicants:**

The student should have a fairly strong analytic background and be keen to pursue a graduate study.

This project is considered analytical in nature. I would prefer to work with a math, stat, or engineering major. The student is expected to have a class load of no more than fifteen credit hours for the spring semester so that he/she will be able to spend an adequate amount of time on this project. Although I will guide him/her through the whole process, I would expect the student to be fairly independent and self-motivated.