10th Annual
Illinois Louis Stokes
Alliance for Minority Participation
Student Research Symposium in
Science * Technology * Engineering * Mathematics

Celebrating the past
embracing the future

Call for Abstracts, Registration Forms and Guidelines
Friday, October 12 – Saturday, October 13, 2007
Featuring student research presentations in
Mathematics, Engineering, Science Education,
and in the Biological, Computer and Physical Sciences
Wyndham Glenview Suites
1400 Milwaukee Avenue
Glenview, Illinois
10th Annual Illinois LS-AMP Student Research Symposium
Friday, October 12, 2007– Saturday, October 13, 2007
Registration Deadline: Postmarked by Friday, September 14, 2007
Late Registration Fees Apply: Saturday, September 15, 2007

Name:
Address: University:
Major: Home Telephone:  (      )

FEES
Registration
If paid on or before September 14, 2007 $60.00 fee includes all meals, materials and workshops
(Make all checks payable to: Illinois LS-AMP – Chicago State University)

Late Registration
On or after Saturday, September 15, 2007 $75.00 fee includes all meals, materials and workshops.
(Make all checks payable to: Illinois LS-AMP – Chicago State University)

Please Check: Student Faculty Speaker Guest

Meals: Seating is limited; Register before the deadline.

Please indicate the meals for which you will be present.

<table>
<thead>
<tr>
<th></th>
<th>Friday, October 12th</th>
<th>Saturday, October 13th</th>
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<tbody>
<tr>
<td>Dinner</td>
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<td>Continental Breakfast</td>
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<tr>
<td>Lunch</td>
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</table>

Workshops

Please check the workshop you plan to attend.

<table>
<thead>
<tr>
<th>Workshop</th>
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<tbody>
<tr>
<td>Celebrating The Past * Embracing the Future</td>
</tr>
<tr>
<td>Through Research, Partnerships and Collaborations</td>
</tr>
<tr>
<td>Keys to Academic Success</td>
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<tr>
<td>Graduate Studies * Concerns</td>
</tr>
</tbody>
</table>

Avoid late registration fees – Return all forms and fees by Friday, September 14, 2007
For more information contact: LSAMP - 773-995-3296; Hotel – 847-803-9800

Three Registration Methods

Mail Registration Materials & Fees
Lezlie J. Thompson; ILSAMP
*Chicago State University*
Wm Sci. Building RM 101A
9501 S. King Drive
Chicago, Illinois 60628

Email
ilsampconf2007@aol.com

Facsimile Forms
Atten:
Lezlie Thompson
708-995-2966
# Abstract Registration Form

**10th Annual Illinois LS-AMP Student Research Symposium**  
Friday, October 12, 2007– Saturday, October 13, 2007  
Avoid Late Registration Fees * Submit by Friday, September 14, 2007

This form must accompany all abstracts

Presentations are invited from students and/or groups of students in the areas of mathematics, engineering, science education and the biological, computer, and physical sciences.

Please send Abstracts from your institution together as one unit to ilsampconf2007@aol.com.

Please Type or Print Below

<table>
<thead>
<tr>
<th>Student Name:</th>
<th>E-Mail:</th>
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<tbody>
<tr>
<td>University:</td>
<td>Home Telephone:</td>
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<td>Major:</td>
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<td>Faculty Advisor:</td>
<td>E-Mail:</td>
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<td>Telephone:</td>
<td>Fax:</td>
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</tbody>
</table>

**Title of Presentation:**

**Presentation Summary:**

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**E-MAIL**  
Atten: Lezlie J. Thompson  
ilsampconf2007@aol.com
10th Annual Illinois LS-AMP Student Research Symposium
Friday, October 12, 2007– Saturday, October 13, 2007
Registration Deadline: Friday, September 14, 2007

Because of time limitations it may not be possible to schedule all requested podium presentations. Each institution should assign each requested podium presentation with a priority number (#1 being the highest) indicating their order of preference for podium talks. Scheduling of presentations will be done in such a way as to give balance to each institution and to as many subject areas as possible. Those authors not scheduled for podium presentations will be contacted and given the option of presenting their work as a poster.

Illinois LS-AMP will provide as much audio/visual and technical support for student presentations as possible. Participants will be notified in their confirmation letters if a certain request cannot be satisfied.

<table>
<thead>
<tr>
<th>Presentation Format Request:</th>
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<tbody>
<tr>
<td>Title of Presentation</td>
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<tr>
<td>Student Name</td>
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<tr>
<td>Oral Presentation</td>
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<td>(15 Minutes)</td>
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<td>List audio/visual needs in detail (i.e., computers, electrical equipment, overhead projectors, screens, etc.)</td>
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| Priority # |

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<tr>
<th>Group Project Presentation</th>
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<tbody>
<tr>
<td>This can be either an oral or poster presentation. Please complete the relevant section depending on category.</td>
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<tr>
<th>Poster Presentation (6’w x 5’h – see attached guidelines)</th>
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<tbody>
<tr>
<td>________ Yes, I would like Illinois LS-AMP to provide a poster board.</td>
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<td>________ No, I will provide my own board.</td>
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<tr>
<td>List audio/visual needs in detail (i.e., computers, electrical equipment, overhead projectors, screens, etc.)</td>
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<th>No Preference</th>
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<td>Please complete all relevant sections above.</td>
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Registration forms and check to:
Lezlie J. Thompson; ILSAMP *Chicago State University
* Wm Sci. Building RM 101A * 9501 S. King Drive *
Chicago, Illinois 60628

Registration & Abstract Registration Materials
Atten: Lezlie J. Thompson
ilsampconf2007@aol.com
Conference Hotel Reservation Information

WYNDHAM
GLENVIEW SUITES
1400 Milwaukee Avenue
Glenview, IL 60025
(847) 803-9800

◊ Hotel Reservation Deadline to obtain the Conference Rates:
   September 14, 2007

◊ Hotel Rates: Single- Quad: $105.00 (add 11% room tax)

◊ Deposits, payment arrangements and room specifics should be discussed and
  arranged directly with the hotel.

◊ In order to get the preferred rates inform the hotel that you are participating in the
  Illinois LS-AMP Student Research Symposium and request the Chicago State
  Rate.

◊ Shuttle Service From O’Hare is available - $20.00 per person each way.
  Use Courtesy phones at airport.

Register early - Space is limited
10th Annual Illinois LS-AMP Student Research Symposium
Friday, October 12, 2007 – Saturday, October 13, 2007
Registration Deadline: Friday, September 14, 2007

* Required to calculate hotel total occupancy.

<table>
<thead>
<tr>
<th>NAME (Indicate roommate on same line, if applicable)</th>
<th>Single * Double</th>
<th>Triple</th>
<th>Quad</th>
<th>ARRIVAL DATE</th>
<th>DEPART DATE</th>
<th>VIP OR SPECIAL REQUESTS</th>
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DO NOT send hotel deposits or payments with this form. Deposits, payment arrangements and room specifics should be discussed and arranged directly with the hotel. Please inform the hotel that you are participating in the Illinois LS-AMP Student Research Symposium and request the Chicago State Rate.

Hotel reservation deadline: September 14, 2007

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Registration forms and check to:
Lezlie J. Thompson; ILSAMP *Chicago State University * Wm Sci. Building RM 101A * 9501 S. King Drive * Chicago, Illinois 60628

Registration & Abstract Registration Materials
Atten: Lezlie J. Thompson
ilsampconf2007@aol.com
To participate in the Illinois LS-AMP conference, you must complete the registration forms enclosed and submit them to Chicago State University by Friday, September 14, 2007. In addition, when constructing your poster, you must comply with the following guidelines.

The goal for your scientific poster is to have an organized and attractively displayed presentation of your research findings. Posters should be self-explanatory and readable within five minutes.

**Required Elements**

1. **Title**
   At the top of your poster you should have a title that is both short, and very descriptive of your project. For empirical studies, the title should also mention the organism(s) studied. As a rule, the title should be easily readable at a distance of about 4-5 feet away (words are approximately 1.5 - 2.5 cm in height).

2. **Name and Affiliation**
   Directly under the title, you should have your name, your faculty sponsor's name, and your University's name. The name and affiliation section is usually about 20-30% smaller than the title.

3. **The Body of the Poster:**

   A. **Abstract**
      The abstract is a brief synopsis of the entire work described in the poster. Most abstracts are one or two paragraphs in length. The abstract should be understandable without reading the entire poster and the reader should be able to decide if she or he would like to read the entire poster based on what they read in the abstract. The abstract should contain the following elements: the purpose of the study; a brief statement about what you did; a concise statement of the major findings; and the major conclusions. Do not include details of the methods.
B. Introduction
The purpose of the introduction is to present the question being explored by your research and to place it in the context of current knowledge about the topic. It often works well to start with the general context and work your way down to the specifics, ending with a precise statement of the question or hypothesis being addressed by your study. The introduction should convince the reader of the significance of your study. To do this well in a poster is a challenging requirement. Be brief, but include the important points to make sure the reader sees the relevance of your work.

C. Methods
In this section you should describe all procedures that you performed. Describe your methods in sufficient detail to allow a reader who works in your field to understand what you did to collect your data. Illustrations are appropriate for complex experimental design.

D. Results
The purpose of this section is to summarize the data. Report the results of any statistical test here. Present all of your results, whether positive or negative. A table or figure may substitute for a written summary as long as each table or figure has a legend that explains the graphic clearly.

E. Discussion
In this section you should interpret the meaning of your results with respect to the original question. You should interpret your results without repeating them. The discussion must include your conclusions about the answers to the questions that motivated your research that you described in your introduction. If appropriate, mention any alternative explanations for your results and mention possible explanations for unexpected results.

F. Literature Cited
This section is optional in the poster, unless citations are used in the text; you may use a unit smaller than 17.5 cm by 20.5 cm. Include only those papers cited in the text. Do not cite a paper unless you have read it yourself. Cite all of your references in the text and list them in the literature cited section using a format from a journal within your disciple.

4. Graphics, Tables, Photos and Others
Illustrations, tables, figures, photographs and diagrams need to have unique identification numbers and legends. In the text use the numbers to refer to specific graphics or pictures. In your legends, include a full explanation and where appropriate, include color keys, scale, etc.
5. **Sample Layouts**

Numbered units correspond to the above numbered sections.

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<table>
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<th>1</th>
<th>2</th>
<th>3a</th>
<th>3c,d</th>
<th>3b</th>
<th>3e</th>
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<td>3c,d</td>
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* - Poster board must be in the 3-fold format

There are an endless number of ways to put a poster together, above are but two examples. Remember; try to create a strong visual impact, but avoid making the poster look crowded. It is important to provide some indication of the flow of the poster (top to bottom, left to right). Some posters have numbered sections (units) to indicate the reading order. Remember that these are just examples, your poster may look different.

**Specific Guidelines**

One entire poster should take up a space no larger than 6 feet wide by 5 feet wide high and be of the 3-fold format. All posters will be affixed to and displayed on a vertical surface (most likely poster- or cork-board). You should determine how to secure your poster to such a surface and bring whatever materials you will need to do this. You may build your poster upon a single piece of poster-board or it may be made up of several individual components that can be secured to the display surface. We encourage you to be imaginative and creative, so long as you follow the guidelines in this document. Remember that the purpose of the poster is to convey information from your work. Use care that the display does not overpower the scientific content. Also, check your text and legends for accuracy. Be sure to italicize Latin works, label graphs and tables, and have several people proofread your poster!

If you decide to make each of the above components of the poster a single unit, the smallest unit should be no smaller than 17.5 cm by 20.5 cm (approximately 7” by 8”) -- except for the Literature Cited and for the Title and Name sections that are, by necessity, linear in orientation. It is fine to group more than one required element on a single unit as long as your poster is clear and readable and does not look cluttered. Unless otherwise directed in the above sections, the text font size is to be no smaller than about 3-4 mm in height for an upper case letter (for example, 12-point font in Helvetica/Times New Roman/Arial).

**Poster Board Set-up**

Each poster will be on display all day of the conference. Set up time for the poster session will be Friday, 3:00p.m. – 5:30p.m. The formal poster presentation sessions are on Friday from 5:30 p.m. to 7:00p.m., during which time authors are to be present at their posters to answer questions and receive feedback during the sessions.
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TITLE OF PRESENTATION ON THIS LINE (ALL CAPS)

Names of Authors, underline name of speaker

Department name in which work was done
Name of University
(Street address if necessary)
City, State Zip

Abstract

A two hundred to two hundred fifty word abstract of the work to be presented must be included. Both poster and podium presentations will use the same style abstract. Please provide enough detail to enable the program committee to evaluate the work for placement on the program.

Abstracts must be submitted via email ilsampconf2007@aol.com (using Microsoft Word as a file attachment.) The abstracts must be clean, camera-ready copy and will not be re-typed. All abstracts should be typed in a 12 pt. Times New Roman font (see attached copy). Abstracts may also be sent by including a disk with the abstract in Microsoft Word. The margins will allow binding into a booklet, which will serve as the Program for the meeting and also serve as a record of your presentation. Type the abstract page within both left and right margins at 1.25" to allow for back-to-back binding. Top and bottom margins should also be at 1.25".

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<table>
<thead>
<tr>
<th>Registration forms and check to:</th>
<th>Registration &amp; Abstract Registration Materials</th>
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</thead>
<tbody>
<tr>
<td>Lezlie J. Thompson; ILSAMP *Chicago State University * Wm Sci. Building RM 101A * 9501 S. King Drive * Chicago, Illinois 60628</td>
<td>Atten: Lezlie J. Thompson <a href="mailto:ilsampconf2007@aol.com">ilsampconf2007@aol.com</a></td>
</tr>
</tbody>
</table>
EFFECTS OF ZINC TOLERANCE IN THE NATIVE, FLOOD PLAIN SPECIES

Marian Smith¹, Suparna Biswas², and J.L.J. Houpis²

¹Department of Biological Sciences
²Department of Environmental Studies
Southern Illinois University-Edwardsville
Edwardsville, Illinois 62026

Excess levels of heavy metals (e.g. cadmium, lead, nickel, mercury and zinc) have been shown to cause adverse human health effects ranging from nausea and anemia (zinc) to hypertension, renal damage and osteomalacia (cadmium). An increase in emissions of heavy metals from anthropogenic activities has led to a growing concern to reduce the concentrations of these metals in the environment. Phytoremediation (the use of plants to remove, sequester or degrade environmental contamination from soil, water and atmosphere) is an innovative and expensive approach to clean up the environment. Previous studies in phytoremediation have been successful using herbaceous species; however, woody species have a higher capacity for metal uptake due to their greater biomass. Present research in the field of phytoremediation is focused on developing screening tools for identifying and selecting indigenous woody species that have high growth rate, low maintenance requirements, long life span, and a high proportion of heavy metal allocations to woody tissue. The objective of this study was to determine the effects of zinc on several physiological characteristics (chlorophyll content, stomatal conductance, transpiration, and chlorophyll fluorescence) that could be used to assess the potential of an indigenous woody species, Populus deltoids Marsh (Cottonwood), for use in phytoremediation projects. Results show a decreasing trend in stomatal conductance and fluorescence with increasing zinc concentrations.
To all Illinois LS-AMP Program Directors/Coordinators: Please submit the following advertisement into you local campus media (newspaper, radio, website, college newsletter, etc...)

Celebrating the Past * Embracing the Future

Public Service Announcement

Illinois Louis Stokes Alliance for Minority Participation
(Illinois LS-AMP)

Contact: Lezlie J. Thompson, Illinois LS-AMP Office, Chicago State University, 773.995.3296

Illinois LS-AMP to Hold Tenth Annual Student Research Symposium

CHICAGO, IL, September 1, 2007. The Illinois Louis Stokes Alliance for Minority Participation (Illinois LS-AMP) Program will host its Tenth Annual Student Research Symposium in Science, Technology, Engineering and Mathematics on October 12 – 13, 2007 at the WYNDHAM Hotels and Resorts in Glenview, Illinois. All science, technology, engineering and mathematics students, faculty and staff are encouraged to attend. This year’s conference theme is “Celebrating the Past, Embracing the Future.”

To register, please contact your campus Illinois LS-AMP Representative.

For more information regarding the Illinois LS-AMP program, contact Lezlie J. Thompson at 773.995.3296.

The ILLINOIS LS-AMP is part of a nation-wide consortium of colleges and universities located in the United Sates and Puerto Rico. The specific goal of the program is to significantly increase the number of undergraduate and graduate degrees awarded to underrepresented minorities in Science, Technology, Engineering and Mathematics (STEM).