What is the Researchers Initiative?

Established in 2007, the Researchers Initiative (RI) introduces undergraduate students residing in the four Urbana South living-learning communities to research by pairing them with faculty mentors. Living-learning communities are organized around themes and provide curricular and co-curricular programming for a designated group of students living in proximity to each other. Such communities are designed to foster students’ shared sense of purpose related to the themes of their communities, which, in turn, sustains their sense of belonging and academic persistence. The Researchers Initiative extends the notion of community to include a community of researchers.

Who can participate in the Researchers Initiative?

For 2018-2019, the Researchers Initiative is open to all students living in the Florida Avenue and Pennsylvania Avenue Residence Halls.

What are the goals of the Researchers Initiative?

When students are accepted into the Initiative, they work with faculty members on various projects broadly related to the theme of their specific living-learning community or to their majors. Faculty members mentor students, act as role models, prepare them for graduate school, teach them technical skills, and help them develop theoretical frameworks to create research questions and to interpret data. They also acquaint students with the process of research as a whole. The ideal is for students to continue working in the faculty members’ labs beyond the one semester afforded by the Initiative.

The Researchers Initiative is guided by the principle of providing information and access to research opportunities for a diverse student body. In addition to introducing undergraduate students to research, the Initiative facilitates access to faculty members early in their college career. It is also designed as a retention tool, as sophomores are given priority. Finally, the Initiative can serve to deepen the students’ involvement in their own disciplines or expose them to research topics and practices outside of their disciplines.

Application Links Available Fall 2018

* STUDENTS apply at GO.ILLINOIS.EDU/RI_STUDENT_AP
* FACULTY MEMBERS apply at GO.ILLINOIS.EDU/RI_FACULTY_AP

CONTACT INFORMATION
LYDIA KHURI, PSY.D., Program Director for the Global Crossroads, Health Professions, Intersections, and Women in Math, Science, and Engineering (WIMSE) Living-Learning Communities
(217) 265-6276 | mkhuri@illinois.edu | www.housing.illinois.edu/LLC
The 2017 Researchers Initiative (RI) saw a class of 42 students, the largest to date. The majority had not done research before and they were excited and committed to staying on top of their work. Seventeen faculty members participated and three were new to the RI.

Students presented their work at the Researchers Initiative Poster Symposium on April 22, and Dr. Helen Neville, professor of Educational Psychology and African American Studies, spoke. Dr. Neville set an uplifting and positive tone as she commended the students on their accomplishments and shared her own journey to research. Graduating senior and soon-to-be graduate student, Madeline Sponholtz, offered her insights and experiences in Dr. Yi Lu’s chemistry lab — where she started with the RI in 2016.

The Researchers Initiative received a grant from the Office of Undergraduate Research and additional funding from University Housing to double the cohort of students and faculty for 2018-2019. The RI will continue to support students from the Urbana South living-learning communities and will also be open to students in the Florida Avenue and Pennsylvania Avenue Residence Halls.

“[THE RI] ALLOWED ME TO GET MY FOOT IN THE DOOR. IT LED TO A SUMMER RESEARCH POSITION AT CORNELL FOR 10 WEEKS DEVELOPING NEW TECHNIQUES FOR OPTICAL IMAGING OF THE BRAIN.” –Anna Alvarez, Mechanical Engineering, WIMSE

2017–2018 RESEARCHERS INITIATIVE STUDENT PARTICIPANTS

Anna Alvarez, Velimira Asenova, Cary Brandolino, Rachel Bullock, Cruz Castillo, Christina Chen, Hanna Chen, Megan Coleman, Rohan Dalmia, Nidhi Dholaria, Emily Frieburger, Srushti Ghone, Shehani Gunawardena, Jada Holland, Jiayi Huang, Amaris Hill (not pictured), Jan Jiang, Apoorva Josyula, Kaitlin Kanthik, Nicole Kauffman, Gwendolyn Kramer, William McConnell (not pictured), Richard Moraga, Tanvi Nagarkar, Carlos Oliva, Ashish Pabba, Elizabeth Ramos, Benjamin Ray, Maria Repiscek, Bryanna Rivera, Grace Ruxlow, Tanveer Sandhu, Juhi Shah, Justin Shen, Karan Srivastava, Zoe Tian, Jesty Varghese, Daksh Varshney, Krishna Vepachedu, Madelyn Wagner, Elizabeth Zalenka. (Names are in alphabetical order and do not correspond to picture.)
Global Crossroads (2000)
Global Crossroads, located in the Pennsylvania Avenue Residence Halls (PAR), is designed to challenge and motivate students whose interests, experiences, and aspirations have a strong international component. Both academic and co-curricular programs support the students’ sustained engagement across cultural differences. The community of 120 students has about equal numbers of international and domestic students. Just over 50 percent of the students have majors in the College of Liberal Arts and Sciences, followed by 22 percent from Engineering. Another five percent each come from the Gies College of Business, Fine and Applied Arts, and Agricultural, Consumer and Environmental Sciences (ACES).

“The RI] ALLOWED ME TO TAKE THAT FIRST STEP THAT FRESHMEN ARE OFTEN SCARED TO TAKE.”
–Benjamin Ray, Biology, Health Professions

Health Professions (2007)
Health Professions brings together undergraduate students who are preparing for careers in the health fields. It provides relevant academic courses and support, career development opportunities, and skill-building programs for students to consider working with underserved populations. Health Professions houses approximately 110 students and is located on two floors of Oglesby Hall in the Florida Avenue Residence Halls (FAR). 67 percent come from the College of Liberal Arts and Sciences, with biology and chemistry most heavily represented. 10 percent of the students come from Applied Health Sciences. There are also students with majors in the College of Agricultural, Consumer and Environmental Sciences (ACES), as well as Engineering and other colleges.

Intersections (2004)
Intersections introduces undergraduate students to diversity issues in the United States through the experience of living in a multicultural community and opportunities for academic engagement. Its purpose is to foster interpersonal and intellectual skills and knowledge to live and work in a multicultural society. Intersections houses approximately 110 students and is located in the Pennsylvania Avenue Residence Halls (PAR). Since its inception, over half of the students have come from the College of Liberal Arts and Sciences, while about 20 percent come from Engineering. Another seven percent come from the Gies College of Business and five percent from the College of Agricultural, Consumer and Environmental Sciences (ACES).

Women in Math, Science, and Engineering (WIMSE) is designed to foster community among women who major in traditionally male-dominated fields of study. Research shows that women benefit from a supportive network of fellow students who share similar academic interests. Academic courses and support, along with social programs, provide 135 women majoring in mathematics, science, and engineering with the resources to build a positive foundation for a future career. Nearly 50 percent of the women are enrolled in the College of Liberal Arts and Sciences, while about 40 percent are from Engineering. WIMSE occupies three floors of Trelease Hall, located in the Florida Avenue Residence Halls (FAR).
The Researchers Initiative is administered by the program director for the Urbana South living-learning communities.

Who can apply?
Students residing in the Urbana South living-learning communities and all students in Florida Avenue Residence Halls and Pennsylvania Avenue Residence Halls are eligible to apply. Any faculty member of the University who can supervise undergraduate students in research endeavors may participate.

How to apply?
The student application form is available in the fall. Students rank and provide explanations as to why they wish to work with particular faculty members. The faculty information form is available in the summer.

How are students and faculty matched?
In mid-fall, the program director reviews applications and matches students with faculty members based on these factors:

- Clarity and cogency of students’ responses
- Students’ ability to meet faculty requirements regarding meeting times, etc.
- Giving as many students as possible their top choices
- Priority to sophomores
- Relative balance of number of students from each of the four communities
- Faculty preferences for particular students

After students and faculty members are notified of their matches, students are required to meet in person with the faculty member. Faculty members have the final say in whether or not they will accept a particular student in their labs.

How many hours can students work?
Students can work up to 75 hours for the semester, which averages about five hours a week, but must work a minimum of 35 hours. How the hours are broken down depends on the faculty member’s needs and the student’s schedule.

How are students compensated?
Students can work for pay or for independent study credit. They cannot do both. In either case, they must be enrolled in courses for the spring semester. The processing to get on the Housing Payroll is done with the program director and the Payroll Office. Students wishing to get credit must work that out with the faculty member.

How is the initiative funded?
For 2018-2019, funds will come from the Urbana South living-learning communities program fees, University Housing, and a development grant from the Office of Undergraduate Research.
Students and Faculty Involvement

Student Participation

_Students must:_

- Apply and be accepted to participate in the Research Initiative.
- Rank their preferences for the faculty members with whom they wish to work.
- Confirm with the program director that they have met with their preferred faculty member.
- Provide proper documentation for the I-9 form if desiring to work for pay.
- Attend an orientation on expectations for participation and how to use library resources.
- Attend two check-in meetings with LLC program staff.
- Participate in the RI Poster Symposium on April 21, 2019 at 4 p.m. to present a poster of their work.
- Participate in an exit interview with the program director at the end of the semester.
- Meet faculty members’ expectations for attendance at meetings/events, work hours, and quality of work.
- Work at least 35 but no more than 75 hours.

Faculty Participation

_Faculty members are asked to commit to the following:_

- Fill out one-page faculty interest form.
- Review student applications (not required).
- Confirm in fall semester that you and the student have met in person and agreed to work together.
- Engage in consistent in-person contact with the student such as one-on-one or research team meetings.
- Explain to student if a graduate student is primary mentor.
- Give clear expectations regarding type and quality of work.
- Provide verbal feedback to student on quality of student’s work.
- If comfortable, share more personal stories related to own academic and career path.
- Suggest events on campus that would augment the student’s learning.
- Where appropriate, introduce the student to others to facilitate the student’s academic career.
- Attend RI Poster Symposium on April 21, 2019 at 4 p.m.

Assessment

Students meet one-on-one with the program director throughout the spring to discuss their progress and they participate in an exit interview at the end of the semester. New faculty meet individually with the program director at end of the semester to provide feedback on the program. Returning faculty meet as needed.

"[I LEARNED] HOW TO PRESENT THE PRODUCT OF RESEARCH TO USERS, WHICH IS VERY IMPORTANT."

-Megan Coleman, Computer Engineering, WIMSE
Student Outcomes

To date, a diverse group of 256 students have completed the Researchers Initiative.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Student Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Intersections</td>
</tr>
<tr>
<td>2007</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>9</td>
</tr>
<tr>
<td>2010</td>
<td>14</td>
</tr>
<tr>
<td>2011</td>
<td>10</td>
</tr>
<tr>
<td>2012</td>
<td>10</td>
</tr>
<tr>
<td>2013</td>
<td>6</td>
</tr>
<tr>
<td>2014</td>
<td>5</td>
</tr>
<tr>
<td>2015</td>
<td>4</td>
</tr>
<tr>
<td>2016</td>
<td>5</td>
</tr>
<tr>
<td>2017</td>
<td>8</td>
</tr>
<tr>
<td>2018</td>
<td>5</td>
</tr>
</tbody>
</table>

*Two students participated in research but did not complete poster.

This past year, all students indicated that they became familiar with the research process as a whole, noting that research takes a great deal of time, accuracy in work, and commitment. They all stated they had learned about topics that were new to them even if they were familiar in a general way with the subject.

All found participating in the Poster Symposium beneficial. First, they had to take the time to understand the overall project. Then they had to communicate to a general audience. Most students shared that they enjoyed getting to know their mentors — whether faculty members, post-docs, or graduate students.

Ten (24 percent) of the 42 students reported they will continue to work with the faculty member, either during the summer or the next academic year. Two of those ten sophomores reported securing positions in their faculty member’s lab until they graduate and starting to think about their senior thesis. Twenty-five of the 42 students (60 percent) will pursue other research opportunities within their fields. Five students attributed securing new research opportunities as a result of experience in the RI. Four students were selected by the Office of Undergraduate Research to be “Capitol Scholars” and present their posters of research relevant to state of Illinois concerns at the state Capitol. Finally, two students stated they would not pursue research in the future.

“I LIKED THAT [THE RESEARCHERS INITIATIVE] GAVE ME THE BASICS OF WHAT RESEARCHERS DO.”

– Rachel Bullock, Undeclared, Health Professions
Student Outcomes

<table>
<thead>
<tr>
<th>Technical Skills</th>
<th>Content</th>
<th>Communication &amp; Organization</th>
<th>Ethics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(bench work; software; machines; protocols; data collection, analysis and organization; literature review and organization)</td>
<td>(current theories; past studies; specific research questions related to research projects)</td>
<td>(interpersonal; language particular to field; time management; sequencing of tasks)</td>
<td>(working with human subjects, animal subjects, and human tissue; safety; accuracy of data)</td>
</tr>
</tbody>
</table>

How students learned:

- Through conversation with faculty member and/or graduate assistant
- By reviewing scholarly articles
- By having to read about technique and then explain to lab
- By asking questions
- By reviewing manual/written instructions
- By following an existing example
- Through trial and error
- By observation, demonstration, or others performing task
- By performing task while being observed by person instructing
- By being a part of a team
- By having to work with peers on research poster
- By observing the culture of the lab
- By asking questions
- By looking at data
- By Googling topic
- By attending lab meetings
- Through transcribing materials, e.g., interviews
- Through conversation with faculty member and/or graduate assistant
- By online training
- Through lab training
### What Students Learned About the Research Process

<table>
<thead>
<tr>
<th><strong>TYPES OF WORK</strong></th>
<th><strong>QUALITY OF WORK</strong></th>
<th><strong>APPROACH TO WORK</strong></th>
<th><strong>SENSE OF PURPOSE/MOTIVATION</strong></th>
<th><strong>INTERPERSONAL ASPECTS</strong></th>
</tr>
</thead>
</table>
| • Research involves technical work  
  - Importance of preparatory work, e.g., setting up lab procedures | • Research is complicated  
  - Can be daunting — so much to do  
  - Research is time-consuming  
  - Tedious aspects  
  - Slow-going | • Research requires flexibility  
  - Importance of looking at project through lenses of different disciplines  
  - Acknowledge and learn from mistakes  
  - Not having evidence is part of the process  
  - Focus of the research can shift over time  
  - Have to be adaptable to handle failure | • Research requires a sense of purpose  
  - Have to keep the big picture in mind  
  - Takes dedication  
  - Originality of ideas is not immediate | • Research requires the work of many people  
  - Interdependence of researchers  
  - Role of participant incentives  
  - Importance of explaining your work to co-workers |
| • Research involves intellectual work  
  - Research questions and methods may need to be revised based on data  
  - Scientific method: developing questions; determining method; analyzing data  
  - Different types of research questions require different methods  
  - Familiarity with the literature; how to read research articles | • Research requires accuracy  
  - Detailed-oriented  
  - Small tasks build to the goal | • Research requires effort and discipline  
  - Requires lots of practice  
  - Depends on organization  
  - Requires patience  
  - Requires repetition and iteration  
  - Involves trial and error | | |
Justin Shen, Civil Engineering
Lining up research, academics, and career

Justin was a member of Global Crossroads Living-Learning Community this past year. He worked in the lab of Professor Rafael Tinoco in the Department of Civil and Environmental Engineering. Justin and his research partner, Elizabeth Ramos (Industrial Engineering), traveled to Springfield, Ill., in April to present their research poster at the state Capitol. A group of undergraduate researchers from the three universities in the University of Illinois System were selected for this opportunity; which also came with a $100 award.

Why did you apply to the Researchers Initiative?
I thought that it would be a great opportunity to learn about the process of creating a research poster, explore possible interests in my field, and begin building connections in my department.

What was the benefit of doing this research? What other opportunities do you believe it led to?
This research will hopefully act as a bright spot on my resume and a stepping stone for further research opportunities with other faculty in my department.

What was most surprising about doing research?
The amount of freedom and responsibility that Dr. Tinoco gave me was surprising; it helped me gain a better understanding of the research process as a whole.

What skills did you gain that you can apply to your major(s) or minor(s)?
During my research, I was introduced to a variety of technology and computer programs that can potentially be useful to me in the future, such as MATLAB.

What leadership skills did you gain by your experience?
I learned to schedule my time better, since RI was one of my top priorities this past semester. I also improved at communicating with faculty through email, which is a skill that is integral to succeeding in college.

What was your relationship with your faculty mentor?
Dr. Tinoco was very understanding when it came to making sure that I knew the techniques required in our lab. He always answered my questions quickly and was extremely helpful throughout the whole research process, from gathering data to creating the poster.

In what ways can you see your research experience as helpful to your future career?
My experience in RI helped me determine my interest in an area of my major. I learned about some of the latest questions that researchers in my area of study are trying to answer, as well as the techniques being used to answer them.

What advice do you have for other undergraduates who want to get involved in research?
Definitely jump at every opportunity you get, since you miss 100 percent of the shots you don’t take. Don’t be afraid to try new things, and make sure to have fun!
Philosophical, practical, and affective reasons motivated faculty to participate in the Researchers Initiative. Some reasons benefitted the faculty member directly and others reflected an orientation that benefitted students.

<table>
<thead>
<tr>
<th>Faculty Motivation for Participating in the Researchers Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BENEFIT TO</strong></td>
</tr>
<tr>
<td><strong>FACULTY</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>UNDERGRADUATE STUDENTS</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>GRADUATE STUDENTS</strong></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

“[I LIKED] WORKING IN A GROUP — HAVING UNDERGRADUATES, GRADUATE STUDENTS, AND DR. NEVILLE. IT WAS COOL TO BRAINSTORM WITH THEM; I LEARNED A LOT.” –Juhi Shah, Undeclared, Global Crossroads
2018
Projects, Students & Faculty Mentors

IN THIS ISSUE

1 The Researchers Initiative
   Goals
   Contact Information

2 A Note from the Program Director

3 The Living-Learning Communities

4 Program Administration

5 Students and Faculty Involvement

6-8 Student Outcomes

9 Student Perspective

10 Faculty Perspective

11-13 Projects, Students, & Faculty Mentors

14 Researchers Initiative Poster Symposium

15 Student Thoughts

URBANA SOUTH LIVING-LEARNING COMMUNITIES

Global Crossroads

Health Professions

Intersections

Women in Math, Science & Engineering (WIMSE)

COMPARING LOGIT-REGRESSIONS TO ANOVAS IN ANALYZING BINARY PSYCHOLINGUISTIC DATA
Christina Chen, Sophomore, Systems Engineering
Rohan Dalma, Junior, Statistics
Professor Kiel Christianson, Educational Psychology

FEMALE REPRODUCTIVE HORMONAL VARIATION
Kaitlin Kanthak, Freshman, Mathematics
Professor Kathryn Clancy, Anthropology

ETHNIC IDENTITY IN ADOLESCENT GIRLS
Bryanna Rivera, Freshman, Biology
Professor Kathryn Clancy, Anthropology

HOW DOES PRESCRIBED FIRE AFFECT THE ROOT DISTRIBUTION OF A NON-NATIVE INVASIVE GRASS?
Cary Brandolino, Freshman, Biology
Professor Jennifer Fraterrigo, Natural Resources and Environmental Sciences

HOW DOES PRESCRIBED FIRE AFFECT ROOT BIOMASS IN SHAWNEE NATIONAL FOREST?
Jiayi Huang, Freshman, Biology
Benjamin Ray, Freshman, Biology
Professor Jennifer Fraterrigo, Natural Resources and Environmental Sciences

“HE’LL GO OUT OF HIS WAY TO HELP”: LATINO FAMILY MEMBERS’ ROLE IN CHILDREN’S SCHOOL READINESS
Amaris Hill, Freshman, Agricultural and Consumer Economics
Carlos Oliva, Freshman, Actuarial Science
Jesty Varghese, Sophomore, Molecular and Cellular Biology
Professor Robin Jarrett, Human Development and Family Studies

THE LINK BETWEEN CONTACT WITH NATURE AND MILDNESS OF ATTENTION DEFICIT/HYPERACTIVITY DISORDER SYMPTOMS: TESTING FOR URBAN/RURAL DIFFERENCES
Ashish Pabba, Freshman, Electrical Engineering
Krishna Vepachedu, Freshman, Physics
Professor Frances Kuo, Natural Resources and Environmental Sciences

USING SOCIAL MEDIA DATA TO CHARACTERIZE WIND DAMAGE
Gwendolyn Kramer, Freshman, Civil Engineering
Professor Frank Lombardo, Civil and Environmental Engineering

Professors pictured.
Projects, Students, & Faculty Mentors

INVESTIGATING THE ROLE OF HEME-COPPER OXIDASE STRUCTURE IN CATALYTIC CELLULAR ACTIVITY VIA MUTAGENESIS OF MYOGLOBIN-BASED ENZYME MODELS

Shehani Gunawardena, Freshman, Biology
Professor Yi Lu, Chemistry

EVALUATING HABitat QUALITY FOR SHRUBLAND BIRDS, ARthropods, AND BEE COMMUNITIES IN HUMAN-DOMINATED LANDSCAPES

Maria Repiscak, Sophomore, Integrative Biology
Professor James Miller, Natural Resources and Environmental Sciences

CAUGHT ON CAMERA: DOCUMENTING THE NESTLING DIET OF A GRASSLAND BIRD OF CONSERVATION CONCERN

Madelyn Wagner, Freshman, Integrative Biology
Professor James Miller, Natural Resources and Environmental Sciences

ASSOCIATION BETWEEN COLOR-BLIND RACIAL IDEOLOGY AND ENGAGEMENT IN DIVERSITY EDUCATION AMONG POLICE RECRUITS

Jada Holland, Freshman, Psychology
Richard Moraga, Molecular and Cell Biology
Juhi Shah, Undeclared, Department of General Studies
Professor Helen Neville, Educational Psychology and African American Studies

CONSTRUCTION AND VALIDATION OF THE RACE-RELATED MOTIVATED REASONING SCALE

Elizabth Zelenka, Freshman, Department of General Studies
Professor Helen Neville, African American Studies

DOES SUBCHONDRAL BONE THICKNESS CHANGE IN RESPONSE TO EXERCISE AND POSTURAL DIFFERENCES?

Anna Alvarez, Freshman, Mechanical Engineering
Professor John Polk, Anthropology

CALIBRATION OF AN IMU-BASED WEARABLE MOTION ANALYSIS SYSTEM

Apoorva Josyula, Freshman, Computer Engineering
Professor John Polk, Anthropology

CONSEQUENCES OF BODY SIZE ON EQUINE LIMB CROSS-SECTIONAL PROPERTIES

Nicole Kauffman, Freshman, Animal Science
Professor John Polk, Anthropology

SCREENING OF E. COLI MUTANTS THAT ARE DEFECTIVE IN GROWING UNDER GLUCOSE PHOSPHATE STRESS CONDITION

Velimira Asenova, Sophomore, Molecular and Cellular Biology
Tanveer Sandhu, Sophomore, Molecular and Cellular Biology
Professor Cari Vanderpool, Microbiology

Professors pictured.
Projects, Students, & Faculty Mentors

DAPHNIA POPULATION DYNAMICS WITH VARYING GENOTYPES, TWO FOOD SOURCES, AND PARASITES
Cruz Castillo, Junior, Mathematics
Professor Zoi Rapti, Mathematics

STATISTICAL ANALYSIS AND MATHEMATICAL MODELING OF HOST-PARASITE GENOTYPE INTERACTIONS
Karan Srivastava, Sophomore, Mathematics
Professor Zoi Rapti, Mathematics

VALIDATION OF A FALL PREVENTION PROGRAM AMONG NON-AMBULATORY WHEELED MOBILITY DEVICE USERS WITH MULTIPLE SCLEROSIS
Grace Ruxlow, Freshman, Biology
Professor Laura Rice, Kinesiology and Community Health

VICARIOUS RACISM IN THE WORLD OF SOCIAL MEDIA
Emily Freiburger, Junior, Global Studies
William McConnell, Junior, Molecular and Cellular Biology
Professor Shardé Smith, Human Development and Family Studies

INVESTIGATING METABOLITES WITHIN SINGLE BRAIN CELLS WITH MALDI-MS AND IMMUNOFLUORESCENCE
Rachel Bullock, Freshman, Department of General Studies
Srushti Ghone, Freshman, Chemical Engineering
Professor Jonathan Sweedler, Chemistry

METABOLITE AND PEPTIDE PROFILES OF SINGLE CELLS WITHIN THE PEDAL GANGLIA OF APLYSIA CALIFORNICIA
Tanvi Nagarkar, Freshman, Chemical Engineering
Huiying Tian, Freshman, Specialized Chemistry
Professor Jonathan Sweedler, Chemistry

EXPERIMENTAL INVESTIGATION OF THE IMPACT OF AQUATIC VEGETATION ON EROSION AND DEPOSITION IN RIVERS
Elizabeth Ramos, Freshman, Industrial Engineering
Justin Shen, Freshman, Civil Engineering
Professor Rafael Tinoco, Civil and Environmental Engineering

EXPLORING DISSCO: A GUIDE FOR DIGITAL SOUND SYNTHESIS AND COMPOSITION
Hanna Chen, Freshman, Systems and Design Engineering
Megan Coleman, Junior, Computer Engineering
Nidhi Dholaria, Freshman, Computer Science
Jiang Han, Freshman, Computer Science and Mathematics
Gauransh Tandon, Sophomore, Mathematics and Computer Science
Daksh Varshney, Freshman, Computer Engineering
Professor Sever Tipei, Music

Professors pictured.
The Researchers Initiative Poster Symposium is part of Illinois’ Undergraduate Research Week. At the end of April, students present posters of their work that address the nature and goals of their project, the specific tasks completed, and results and conclusions that they were able to draw. Students are also asked to reflect upon what they learned and what value their research may have for the wider society. The Symposium includes a faculty speaker and a brief presentation by a student who previously completed the Researchers Initiative and continued with research.

FROM SUBSTRATE TO SURFACE: THE EFFECT OF AQUATIC VEGETATION ON SEDIMENT AND GAS TRANSFER DYNAMICS IN RIVERS

Elizabeth Ramos, Freshman, Industrial Engineering
Justin Shen, Freshman, Civil and Environmental Engineering
Professor Rafael Tinoco, Civil and Environmental Engineering

“I feel like I learned a lot, including how much goes on in designing your experience. I also met a lot of cool people: Dr. Tinoco, my research partner, and graduate research assistants.”

– Elizabeth Ramos

“I liked the opportunity to conduct research as a freshman. It made me more curious about my own field, which is cool!”

– Justin Shen

“He’ll go out of his way to help”:

Amaris Hill, Freshman, Agricultural and Consumer Economics
Carlos Oliva, Freshman, Actuarial Science
Jesty Varghese, Sophomore, Molecular and Cellular Biology
Professor Robin Jarrett, Human Development and Family Studies

“I liked just being able to say you’re a part of undergraduate research when you’re a freshman. And, I liked the opportunity to go to Springfield [as part of the Capitol Scholars] and to become friends with upperclassmen who also went.”

– Carlos Oliva
Student Thoughts

“THE WHOLE [RESEARCHERS INITIATIVE] INTRODUCES RESEARCH IN A USER-FRIENDLY WAY, RATHER THAN HAVING TO SEND EMAILS [TO PROFESSORS] AND PRAY YOU GET A RESPONSE.”
- Madelyn Wagner, Integrative Biology, Global Crossroads

- Emily Freiburger, Global Studies, Global Crossroads

“IN MATH IT IS SO HARD TO GET RESEARCH EXPERIENCE WHEN YOU DON’T HAVE HIGH-LEVEL MATH CLASSES BEHIND YOU. [THE RI] WAS A FOOT IN THE DOOR.”
- Karan Srivastava, Mathematics, Intersections

“[I LIKED] WORKING WITH DR. RAPTI — SHE EXPLAINED STUFF REALLY WELL AND KNEW HOW TO MENTOR.”
- Cruz Castillo, Mathematics, Intersections

“[I LIKED] THE CHANCE TO WORK WITH A PROFESSOR AND GRADUATE STUDENTS AND TO ASK [THEM] — HOW DID YOU END UP HERE? HOW DID YOU PREPARE FOR THE GRE?”
- Maria Repiscak, Integrative Biology, WIMSE

“[I LIKED] MEETING NEW PEOPLE AND GETTING THEIR PERSPECTIVES ON RACE AND LIKED THAT THERE WERE OTHER PEOPLE OF COLOR IN THE LAB.”
- Jada Holland, Psychology, WIMSE

APPLY TO THE RESEARCHERS INITIATIVE

The Researchers Initiative is open to students residing in either of the Urbana South residence halls and students in the Global Crossroads, Health Professions, Intersections, and Women in Math, Science, and Engineering Living-Learning Communities.

Application Links available Fall 2018

**STUDENTS** apply at GO.ILLINOIS.EDU/RI_STUDENT_AP
**FACULTY MEMBERS** apply at GO.ILLINOIS.EDU/RI_FACULTY_AP