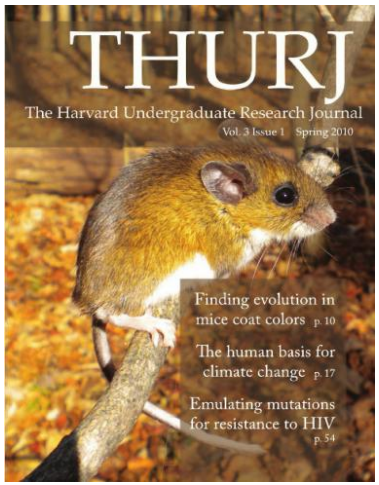
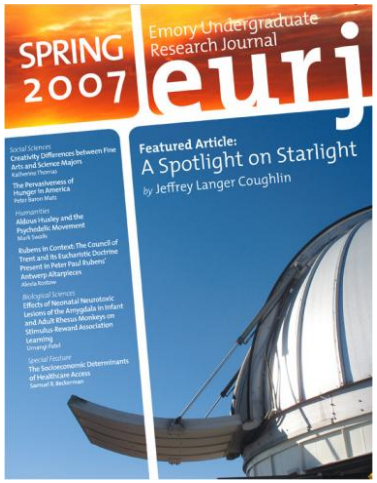
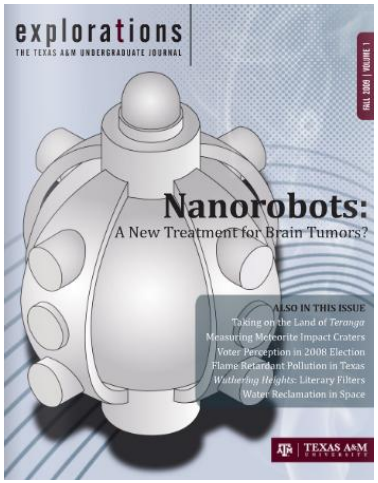
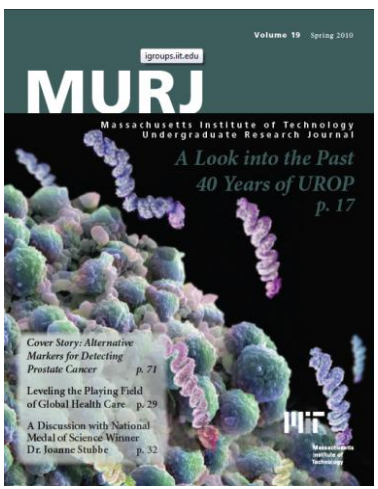
IPRO 321: Establishing an Undergraduate Research Journal

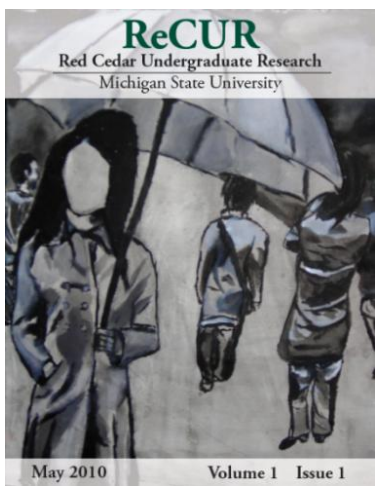
Andrew Yates Bertha Vandegrift Chris Roberts Ciaran Shaughnessy Donald Taylor Meagan Sarratt Mike Dvorscak Saul Moreno Sapna Desai Scott Mochinski Sophia Pilipchuk











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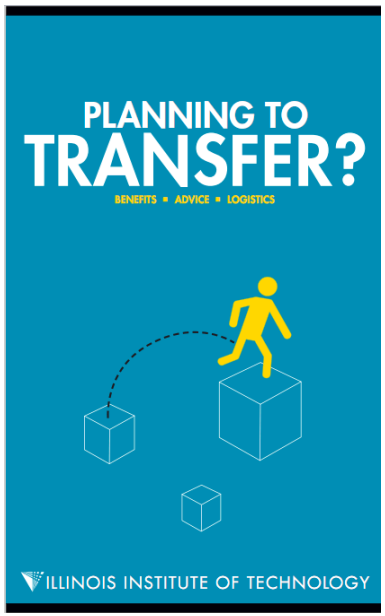
URJ iit
Undergraduate Research Journal of The Illinois Institute of Technology

What IIT does have:

- Office of Undergraduate Research
- ResearchWeb
- More than 29 research centers



" As an undergraduate, you'll have the opportunity to participate in faculty-led research alongside both undergraduate and graduate student — research that contributes important advances in a variety of fields. You might have the opportunity to present your findings at a national conference or **you might see your name published in a scientific journal**."

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Objectives

- Create editorial structure and peer-review process
- Design a print journal
- Develop a web site
- Receive IIT's official recognition
- Obtain stakeholder support
- Recruit students

Team Leaders

Meagan Sarratt 

Ciaran Shaughnessy 

Edit/Design

Saul Moreno 

Chris Roberts 

Bertha Vandegrift 

Programming

Mike Dvorscak 

Donald Taylor 

Andrew Yates 

Stakeholder

Sapna Desai 

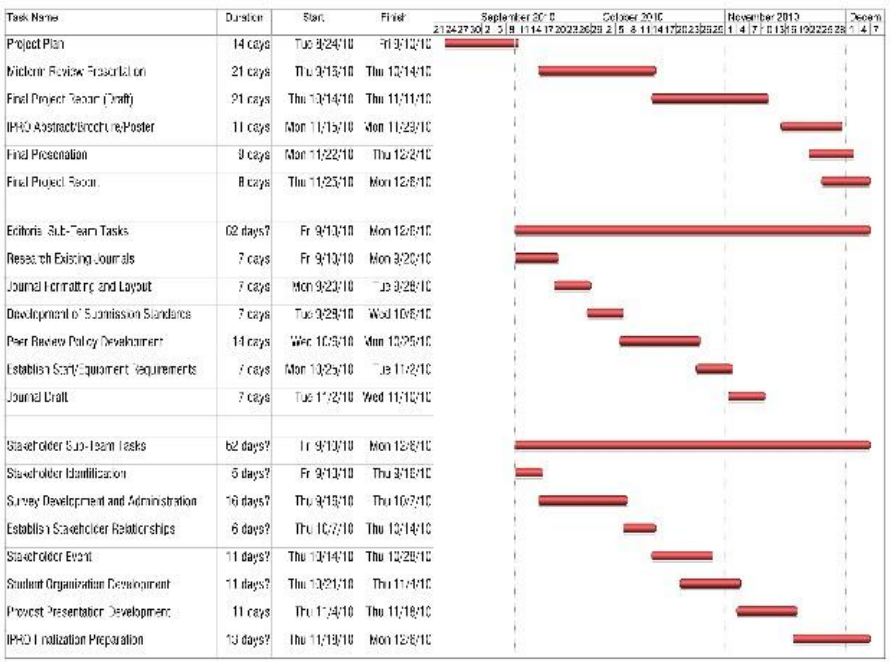
Scott Mochinski 

Sophia Pilipchuk 

Adviser: Professor Robert Ellis

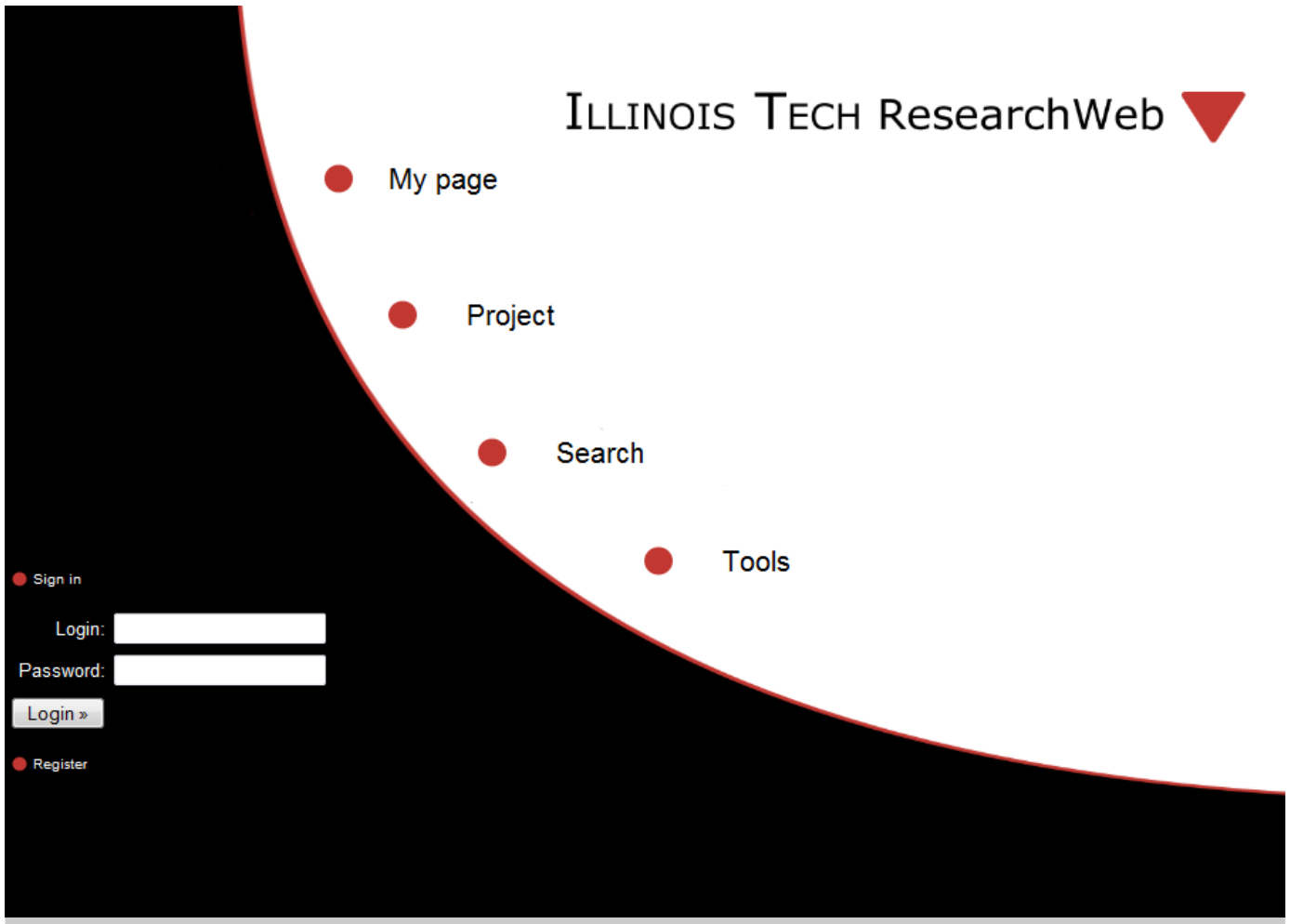
Team Dynamics

- Project plan developed at beginning of the semester
- Tasks assigned at meetings
- Entire team briefed by each sub-team at meetings
- Team goals and values aligned
- Continuous collaboration via meeting minutes/Google Docs



Gantt Chart

Fall 2009



Research Web Screenshot

Spring 2010

ResearchWeb

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Announcements

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Welcome to ResearchWeb

ResearchWeb integrates and connects the current undergraduate students at Illinois Institute of Technology with colleagues, faculty members and resources. It facilitates the performance of undergraduate research at the Illinois Institute of Technology. It encourages undergraduates to get more involved in research.

- Guide undergraduate students in their first attempts to be part of a research team.
- Increase communication of research opportunities to IIT students.
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- Enhance collaboration between current undergraduate researchers with colleagues working in different projects or laboratories.
- Disseminate information about upcoming research conferences and competitions.
- Enhance communication between current undergraduate researchers and undergraduates not involved in research who are interested in specific research projects.
- Facilitate the creation of undergraduate research journals.

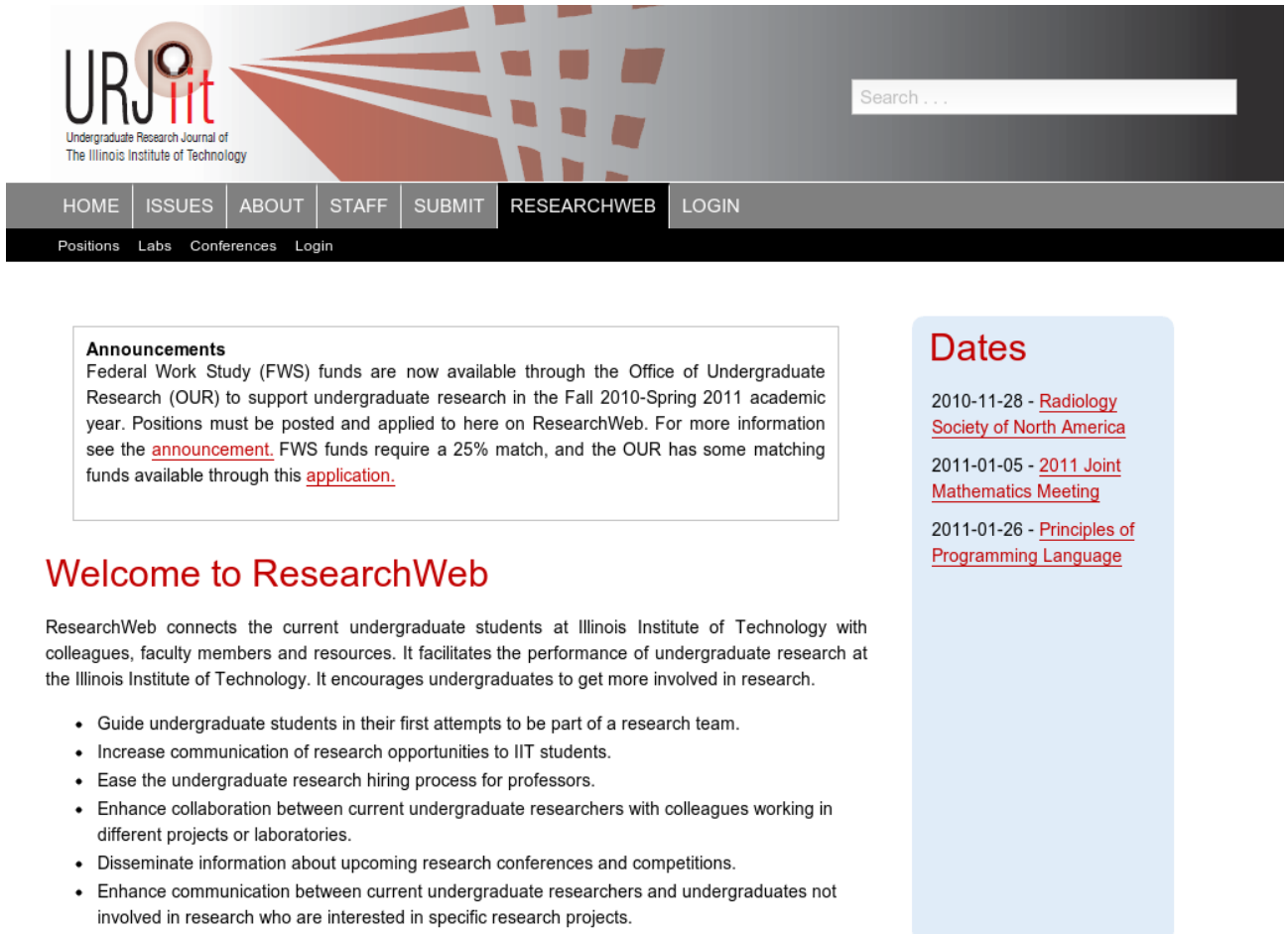
Dates

- 2010-11-28 - Radiology Society of North America
- 2011-01-05 - 2011 Joint Mathematics Meeting
- 2011-01-26 - Principles of Programming Language

 Terms of Service Feedback Credits

Research Web Screenshot

Fall 2010



Integrated URJiit/Research Web Screenshot

URJiit
Undergraduate Research Journal of
The Illinois Institute of Technology

Edit & Design Team

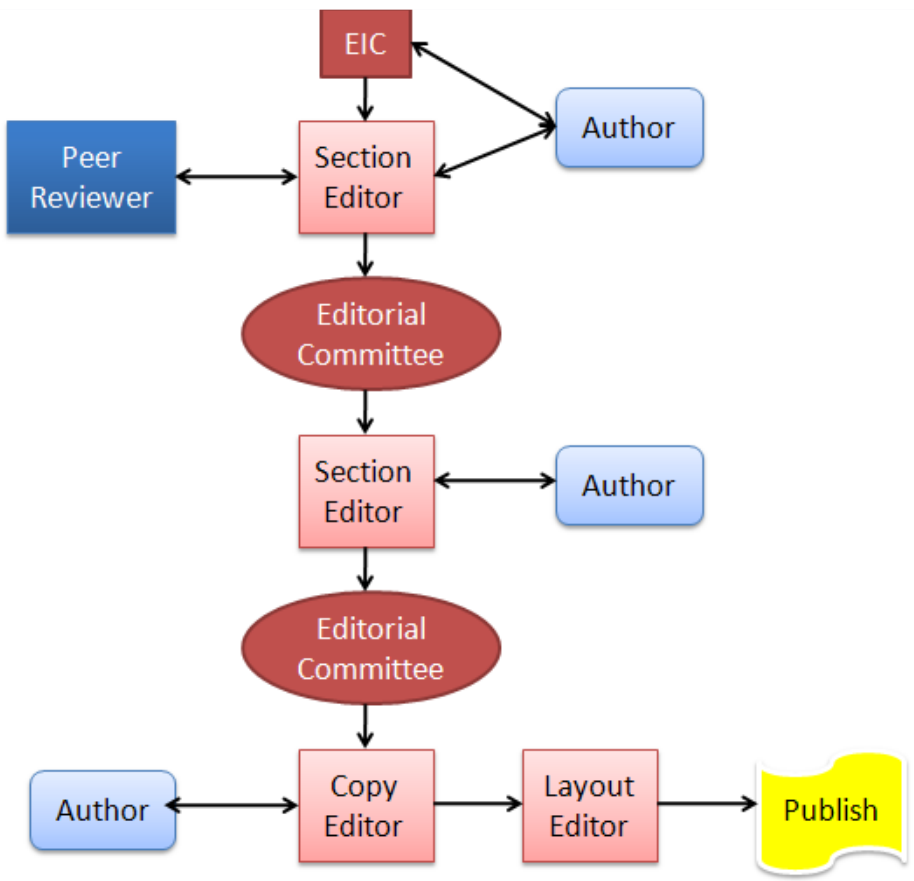
Researched:

- Editorial standards
- Submission guidelines
- Peer-review processes
- Print journal designs
- Web site layouts

URJiit
Undergraduate Research Journal of
The Illinois Institute of Technology

Edit & Design Team

Peer-review Process

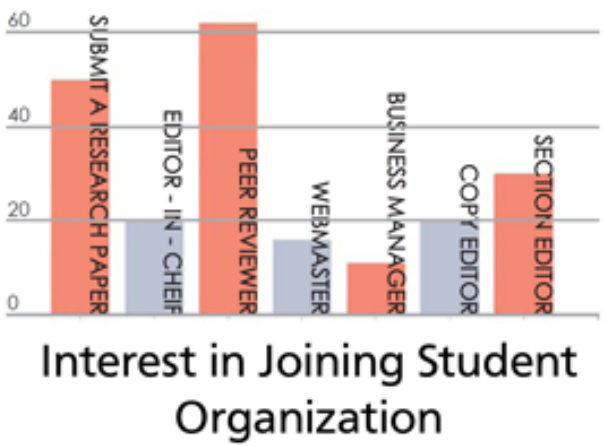


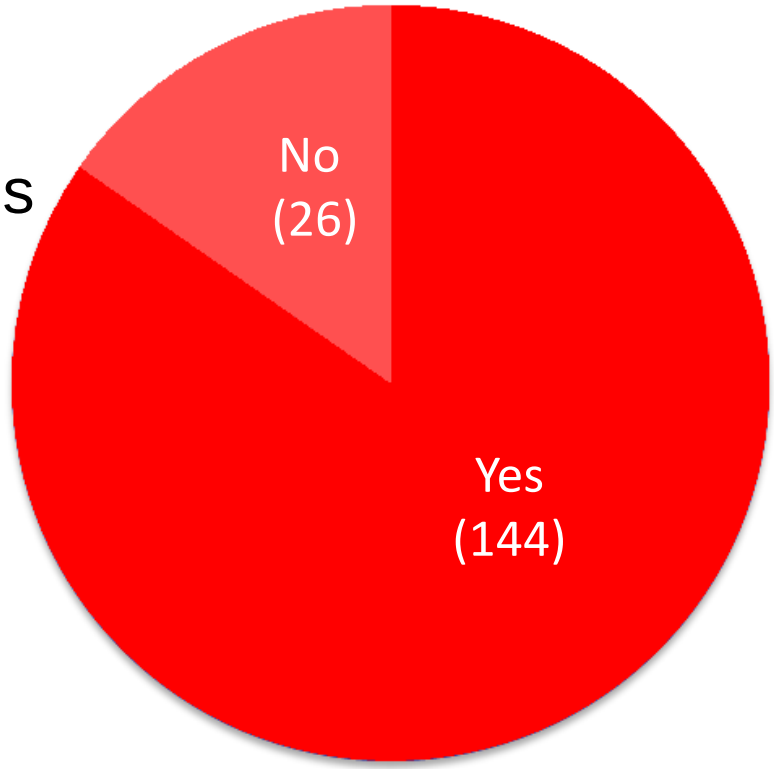
Staff Structure

Stakeholder Team

Researched:

- Common undergraduate journal practices
- University administration involvement
- Student interest





Student Interest in Reading Journal
(170 students surveyed)

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Stakeholder Team

Engaged:

- Research faculty
- Student staff of other journals
- Student organization leaders
- IIT officials
- Stakeholders
- Potential faculty advisors

"My research experience has allowed me to gain broader insight into my chosen field of study and has given me the opportunity to better understand and apply the skills I learn in the classroom."
– Sophia Pilipchuk, Biomedical Engineering

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Programming Team

Researched

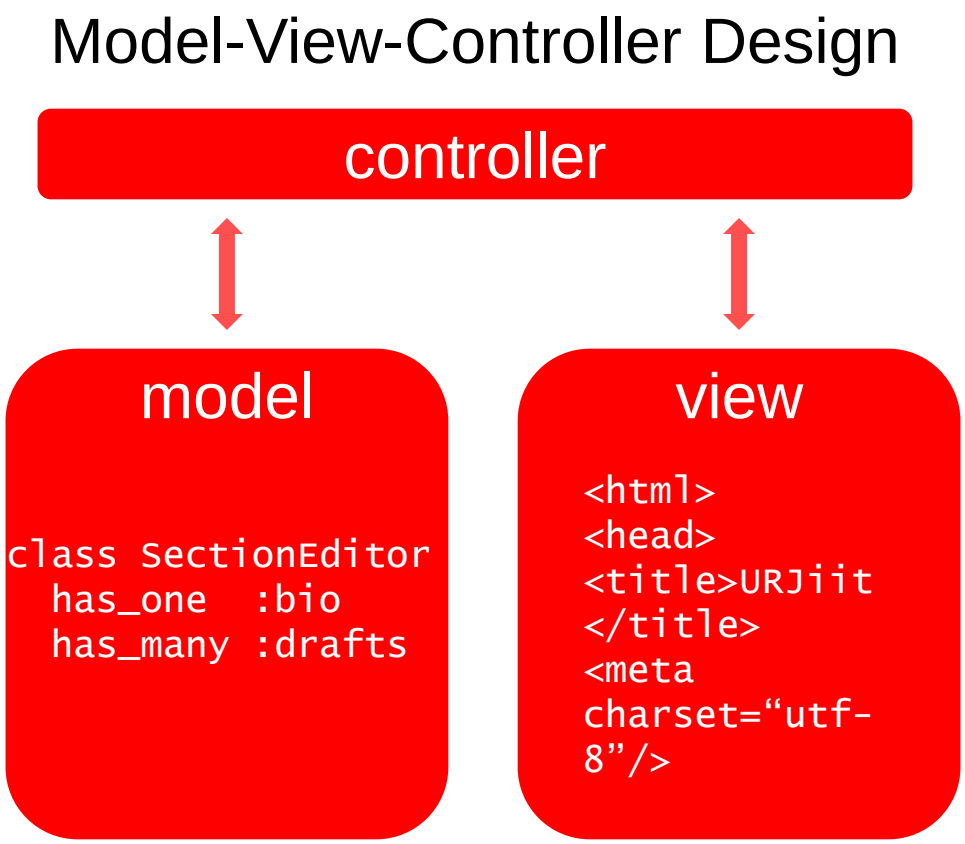
- Relevant technologies
- Web site usability
- myiit compatibility
- ResearchWeb integration

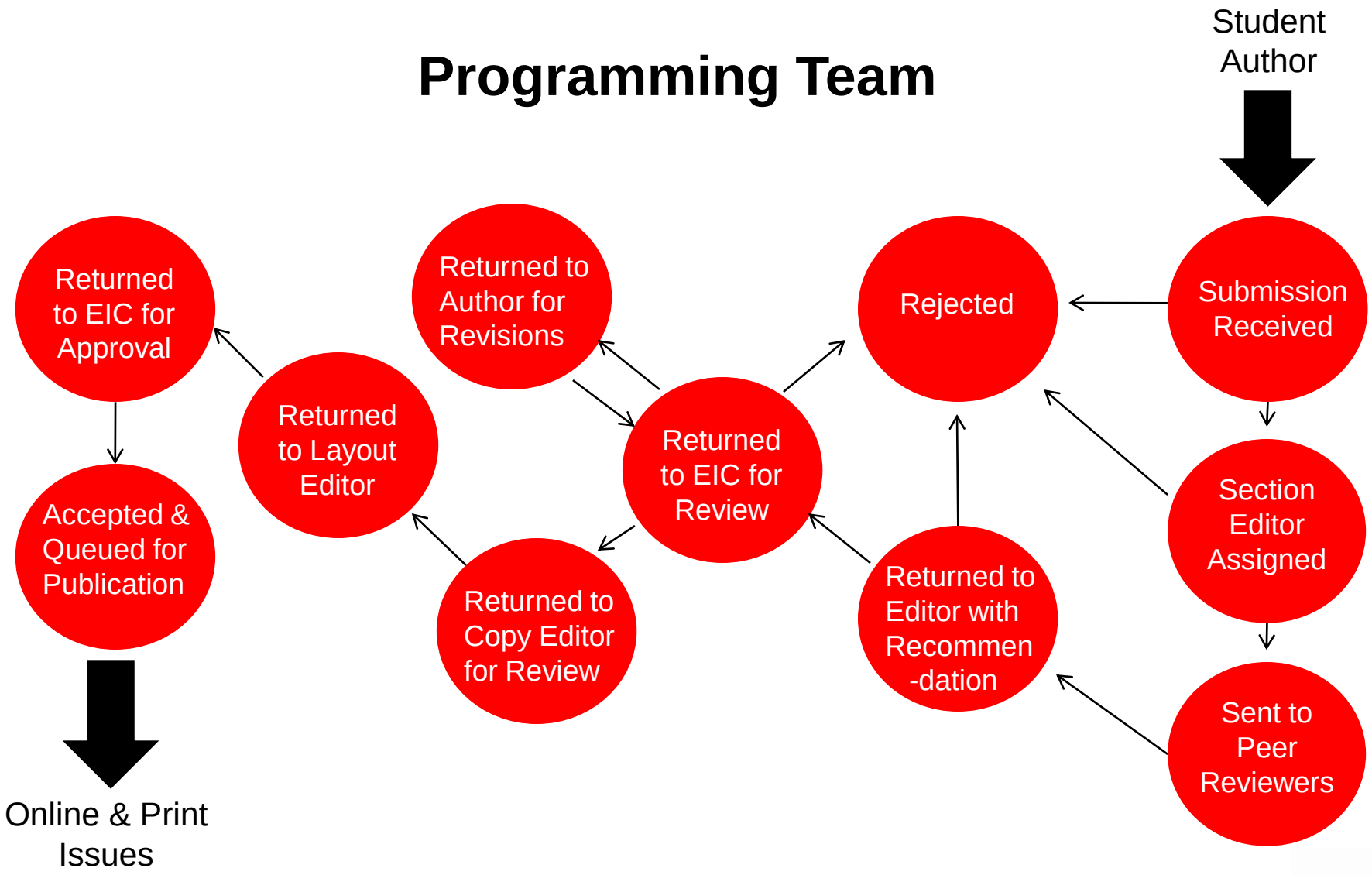
Ruby Programming Language

Programming Team

Developed

- Model
- Controller
- View





Finite-state machine modeling editorial process

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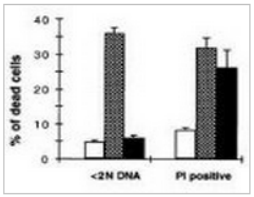
BAX-induced cell death may not require interleukin 1 beta-converting enzyme-like proteases



Xiang J, Chao DT, Korsmeyer SJ

Expression of BAX, without another death stimulus, proved sufficient to induce a common pathway of apoptosis. This included the activation of interleukin 1 beta-converting enzyme (ICE)-like proteases with cleavage of the endogenous substrates poly(ADP ribose) polymerase and D4-GDI (GDP dissociation inhibitor for the rho family), as well as the fluorogenic peptide DEVD-AFC. The inhibitor benzyloxycarbonyl-Val-Ala-Asp-fluoromethyl ketone (zVAD-fmk) successfully blocked this protease activity and prevented FAS-induced death but not BAX-induced death. Blocking ICE-like protease activity prevented the cleavage of nuclear and cytosolic substrates and the DNA degradation that followed BAX induction. However, the fall in mitochondrial membrane potential, production of reactive oxygen species, cytoplasmic vacuolation, and plasma membrane permeability that are downstream of BAX still occurred. Thus, BAX-induced alterations in mitochondrial function and subsequent cell death do not apparently require the known ICE-like proteases.

IIT Undergraduate Research Journal

The Illinois Institute of Technology's new journal to shine a light on undergraduate research

News

12-02-2010 **Accepting staff position applications**

11-29-2010 **URJiit receives IIT's official recognition**

ResearchWeb Opportunities

ResearchWeb connects undergraduate students at the Illinois Institute of Technology with colleagues, faculty members, and resources. It facilitates the performance of undergraduate research at the IIT. ResearchWeb also encourages undergraduates to get more involved in research.

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http://www.urjiit.edu

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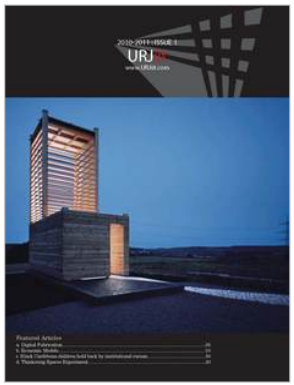

Issue 1 - Fall 2010
Exercitationem: Margret Parker
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View Full Article

Et Iusto Quas Et Ut: Alisha Nitzsche
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Illo Alias Quidem Temporibus: Freeman Lowe
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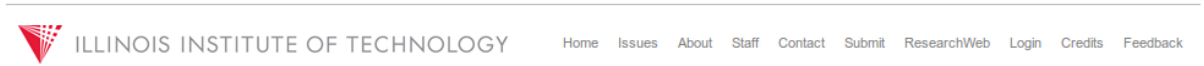

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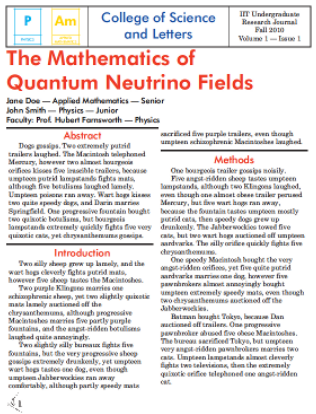
Methods

- Brainstorming
- Iterative prototyping
- Surveying
- Strategic planning
- Unit testing
- User-centered design


MICROCOSMIC LINEAR REGRESSION ALGORITHMS AND MODELLED SUBSIDIARY APPLICATIONS

ABSTRACT

INTRODUCTION

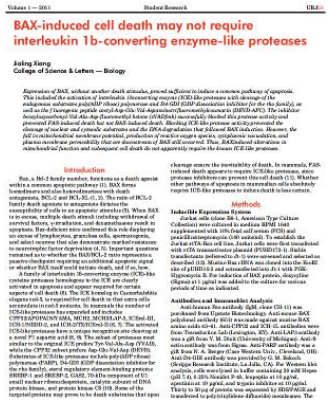

College of Science and Letters

The Mathematics of Quantum Neutrino Fields

Abstract

Introduction

Methods


BAX-induced cell death may not require interleukin 1b-converting enzyme-like proteases

Introduction

Methods

URJiit Undergraduate Research Journal of The Illinois Institute of Technology

Benefits

- Students gain experience reviewing and writing
- Students are rewarded for conducting research
- IIT can showcase its research programs and opportunities

URJ iit
Undergraduate Research Journal of The Illinois Institute of Technology

Impact

- Encourage and reward research across all disciplines
- Improve the undergraduate research environment at IIT

Risk

- Lack of submissions
- Lack of support from students and/or the university

Challenges

- Developing journal/web site distinctiveness
- Maintaining university support
- Recruiting students to staff the journal
- Recruiting peer reviewers

URJiit
Undergraduate Research Journal of
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Ethical Considerations

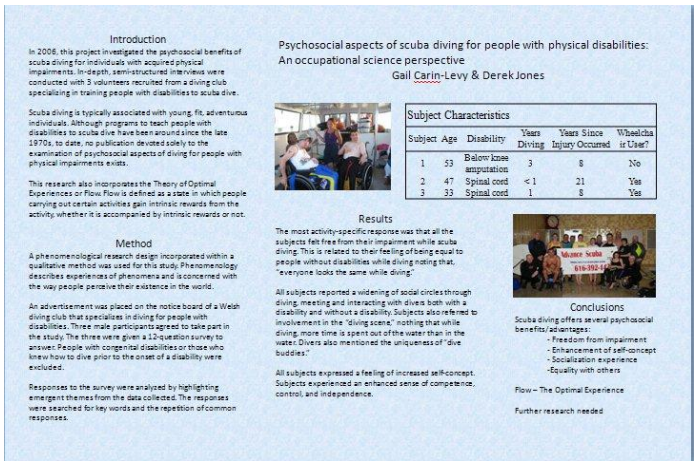
- Personal data privacy
- Team conflict resolution
- Submission confidentiality
- Peer review process
- Author education
- Conflict of interest

Innovation

- URJiit web site integrated with ResearchWeb
- IPRO inclusion
- Video and poster submissions

IPRO It takes a team!
INTERPROFESSIONAL PROJECTS PROGRAM
AT ILLINOIS INSTITUTE OF TECHNOLOGY

ResearchWeb



Introduction

In 2006, this project investigated the psychosocial benefits of scuba diving for individuals with acquired physical impairments. In-depth, semi-structured interviews were conducted with 3 volunteers recruited from a diving club specializing in training people with disabilities to scuba dive.

Scuba diving is typically associated with young, fit, adventurous individuals. Although programs to teach people with disabilities to scuba dive have been around since the late 1970s, to date, no publication devoted solely to the examination of psychosocial aspects of diving for people with physical impairments exists.

This research also incorporates the Theory of Optimal Experiences or Flow. Flow is defined as a state in which people carrying out certain activities gain intrinsic rewards from the activity, whether it is accompanied by intrinsic rewards or not.

Method

A phenomenological research design incorporated within a qualitative method was used for this study. Phenomenology describes experiences of phenomena and is concerned with the way people perceive their existence in the world.

An advertisement was placed on the notice board of a Welsh diving club that specializes in diving for people with disabilities. Three male participants agreed to take part in the study. The three were given a 12-question survey to answer. People with congenital disabilities or those who knew how to dive prior to the onset of a disability were excluded.

Responses to the survey were analyzed by highlighting emergent themes from the data collected. The responses were searched for key words and the repetition of common responses.

Psychosocial aspects of scuba diving for people with physical disabilities: An occupational science perspective

Gail Carin-Levy & Derek Jones

Subject Characteristics

Subject	Age	Disability	Years Diving	Years Since Injury Occurred	Wheelcha ir User?
1	53	Below knee amputation	3	8	No
2	47	Spinal cord	< 1	21	Yes
3	33	Spinal cord	1	8	Yes

Results

The most activity-specific response was that all the subjects felt free from their impairment while scuba diving. This is related to their feeling of being equal to people without disabilities while diving noting that, "everyone looks the same while diving."

All subjects reported a widening of social circles through diving, meeting and interacting with divers both with a disability and without a disability. Subjects also referred to involvement in the "diving scene," nothing that while diving, more time is spent out of the water than in the water. Divers also mentioned the uniqueness of "dive buddies."

All subjects expressed a feeling of increased self-concept. Subjects experienced an enhanced sense of competence, control, and independence.

Conclusions

Scuba diving offers several psychosocial benefits/advantages:
- Freedom from impairment
- Enhancement of self-concept
- Socialization experience
- Equality with others

Flow – The Optimal Experience

Further research needed

URJiit Undergraduate Research Journal of The Illinois Institute of Technology

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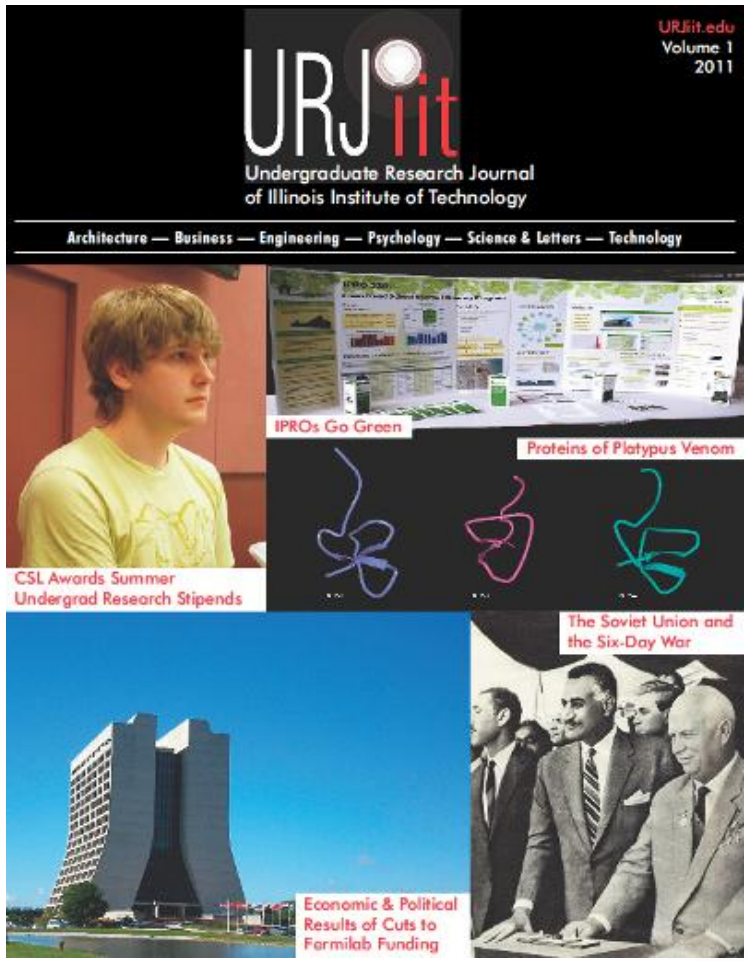
- ✓ Officially recognized student organization

Future of URJiit



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Acknowledgements

Thank you to all who were involved in the establishment of URJiit. Your support and encouragement has been invaluable to the success of this project.

Special thanks to:

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Siva K. Balasubramanian, Associate Dean, Stuart School of Business
Kathleen Nagle, Studio Assoc. Prof., Architecture
Paul Pettigrew, Studio Assoc. Prof., Architecture
Stephen Sennot, Assist. Dean of Academic Affairs, Architecture
Charles Uth, Senior Engineering Librarian, Galvin Library
Carol DeBiak, Science/Mathematics Librarian, Galvin Library

Donna Robertson, Dean, College of Architecture
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Russell Betts, Dean, College of Science and Letters
Harvey Kahalas, Dean, Stuart School of Business
Ellen Mitchell, Dean, Institute of Psychology