
Honors Opportunities

Newsletter

**School of Computing, Informatics, and Decision Systems Engineering
Computer Science, Computer Systems Engineering, and Informatics**

The School of Computing, Informatics, and Decision Systems Engineering and the Barrett Honors College work together to provide their students academic advising, research and internship opportunities, scholarship information and access to distinguished lectures and other special events.

By taking CSE/CPI courses under an honors designation, honors students work on special projects that provide them an expanded understanding of the course subject matter. Often, these courses have a lower student-to-faculty ratio, allowing the students to work on exciting research with faculty members. Such experiences distinguish honors students from other students and help them gain an entrance to graduate programs or garner sought-after jobs. Honors students receive special invitations to various events, including meeting industry, faculty, and staff. They can also gain funding for research or travel to conferences held in other cities.



Contact Information

If you have any questions regarding the paperwork in the School of Computing, Informatics, and Decision Systems Engineering or finding a faculty adviser in the area of Computer Science, Computer Systems Engineering, or Informatics, please contact:

CIDSE Advising Center contact information:

Advising Center

Appointments Graduate and Undergraduate:

(please go to this website) <https://fultonapps.asu.edu/advising/>

Telephone 480-965-3199

Email cidse.advising@asu.edu

Address Arizona State University
Ira A. Fulton Schools of Engineering
School of Computing, Informatics, and Decision
Systems Engineering
Centerpoint (CTRPT) 105
660 South Mill Avenue
Tempe, AZ 85281

Computer Science/Computer Systems Engineering/Informatics
honors faculty advisers:

Dr. Mutsumi Nakamura
Office: BYENG 520
Phone: (480) 965-1757
Email: mutsumi@asu.edu

Dr. Janaka Balasooriya
Office: BYENG 504
Phone: (480) 727-8593
Email: Janaka.Balasooriya@asu.edu

Dr. Yinong Chen
Office: BYENG 414
Phone: (480) 965-2769
Email: Yinong.Chen@asu.edu

The following includes Honor Theses completed recently with their bachelor degree in Computer Science or Computer Systems Engineering.

Thesis Title	Thesis Director
On the Semantic Equivalence of a Program and any of its SSA Form Intermediate Representations	Rida Bazzi
Categorizing and Discovering Social Bots	Huan Liu
Imprompt2: An Event Searching Application	Janaka Balasooriya
Genie: A Population Genetics Simulation Built with JavaScript	Reed Cartwright
Learning the Initial Lexicon in Translating Natural Language to Formal Language	Chitta Baral
MeetPoint: Study Group Organizer for Android	Janaka Balasooriya
Predicting Trends on Twitter with Time Series Classification	Huan Liu
Exploration of Sea Ice Concentrations using Graph Metrics	Violet Syrotiuk
Reliance Dashboard	Marcie LePine
Using Language Generation to Create Weather Forecasts	Chitta Baral
Exploring the Design of Vibrotactile Cues for Visio-Haptic Sensory Substitution	Sethuraman Panchanathan
Enhancing Object Detection In An Augmented Reality Learning System	Robert Atkinson
Expansion Algorithms in Self-Organizing Particle Systems	Andrea Richa
An iOS Application for Palliative Care Patients	Janaka Balasooriya
GCKEngine: An Algorithm for Automatic Ontology Building	Hasan Davulvu
Integrating Forensic Tools for Collaborative Forensic Analysis	Gail-Joon Ahn
A Survey of Spoofing Attacks and Current Well Known Defenses	Partha Dasgupta
Cloud Solutions for 3D Modeling	Yinong Chen
Raspberry Pi Radio: Programming a Multiple Source Music Player	Kevin Burger
Wireless Mecanum Wheel Vehicle	Kevin Burger

Rout Planner iOS Application	Janaka Balasooriya
Perceived Confidentiality of Mobile Application Data	Gail-Joon Ahn
Real-Time and Crowd Sourcing Baseball Statistics in a Mobile Application	Farideh Tadayon-Navabi
Coldfire Processor Modeling	Kevin Burger


Designing Digital Textbooks: Personalized and Collaborative Learning	Erin Walker
The Emblems: Speech-Recognition in Games - Honors Creative Project	Yoshihiro Kobayashi
Analysis of Twitter's Effect on Stock Prices	Hasan Davulcu
The Emblems: OpenGL	Yoshihiro Kobayashi
Security Analysis of x86 Processor Microcode	Gail-Joon Ahn
Visual Analytic Tools for Geo-Geneology and Geo-Demographics	Ross Maciejewski
Preventing Attacks Against iCLASS Elite: RFID Security and	Gail-Joon Ahn

Countermeasures	
Aerial Camera Control and Electronic Stabilization System	Kevin Burger
Computing Platform for Context Aware Smart Objects for Stroke Rehabilitation	Sethuraman Panchanathan
Web Solutions for Scholastic Tracking: Increasing Efficiency through Web Development	Janaka Balasooriya

Comparing and Analyzing Electromyography and Electroencephalography	Jeffrey LaBelle
Enhancing Physical Learning Experiences Using Online Tools Tutoring Center Management System	Janaka Balasooriya
Evaluation of Multiplayer Modes in Mobile Apps	James Collofello
Software Solutions to Academic Resource Distribution and Management Student Dashboard System and Scheduling Algorithm	Janaka Balasooriya
Event Searching Web Site	Janaka Balasooriya
Integrating Online and Offline Learning Experiences: Determining Design Opportunities to Enhance In-Person Experiences with Academic Resources on a College Campus	Janaka Balasooriya
Productizing Embedded Systems Project Boards and Demonstrating Expandability	Kevin Burger

Extending NS-3 for Three-Dimensional Wireless Networks	Andrea Richa
Comparison of MIMD and SIMT Parallel Iterative Solvers for Laplace's Equation	Carl Gardner
NGExtract 2	David Allee
Interface Design with Multiple Devices in Mind	Debra Calliss
Real-Time and Crowd Sourcing Baseball Statistics in a Mobile Application	Farideh Tadayon-Navabi
Distributed Systems Management Based on CIM Schema	Gail-Joon Ahn
Perceived Confidentiality of Mobile Application Data	Gail-Joon Ahn
Synthesis and Facilitation: Designing for Secure User Actions	Gail-Joon Ahn
Pursuing Greener Profits through Aftermarket Services: An Avnet Case Study	George Basile
GCKEngine: An Algorithm for Automatic Ontology Building	Hasan Davulcu
Improved Collections API for Java	Hessam Sarjoughian
Intelligent Input Parser for Organic Chemistry Reagent Questions	Ian Gould
Analysis of Software Testing to Identify Optimal Techniques for Web Applications	Janaka Balasooriya
Transcriptome Gene Expression Analysis of Breast Cancer Using RNA-Seq	Karen Anderson
Space Wizards: An Augmented Geolocation Application for Mobile Devices	Loren Olson
Classifying Security Updates for Dynamic Software Updates	Rida Bazzi
Wet NanoBonding: Catalyzing Molecular Cross-Bridges and	Robert Culbertson

Interphases Between Nanoscopically Smoothed Si-Based Surfaces and Tailoring Surface Energy Components	
Analyzing the Production of Great Minds During the Renaissance	Valerie Adams
The Dyadic Interaction Assistant for Individuals with Visual Impairments	Vineeth Nallure Balasubramanian
Graph Analysis of Arctic Ice	Violet Syrotiuk
Supercomputing for the Masses: An Exploration of Educating Non-Technical Individuals in Core Supercomputing Concepts	Winslow Burleson
Hospital Discharge Query Web Services and Their Applications	Yinong Chen
Loyals: Web Achievements for Evaluating Customer Trends and Loyalty	Yinong Chen



Guidelines for honors theses in the Computer Science, Computer Systems Engineering, and Informatics

The following provides general guidelines. Please check with the Barrett Honors College guidelines for updated information:

The student is responsible for formulating the thesis topic, for requesting faculty to serve on the committee, to submit the necessary forms to the Honors College, and to inform the chair of the committee of all Honors College requirements and deadlines.

The students can start thinking of thesis topics as early as their freshman and sophomore years. The students should definitely have a clear plan of the thesis topics or research by their junior year.

- Investigate the research areas of the faculty in your department or in a related field.

There are also various research presentations (posted on the CIDSE school website) where honors students can attend. Honors students can also contact one of the faculty honors advisers Dr. Nakamura (mutsumi@asu.edu), Dr. Balasooriya (Janaka.Balasooriya@asu.edu), or Dr. Chen (Yinong.Chen@asu.edu) for any guidance on how to find a thesis director/adviser. Your thesis adviser does not need to be in your major area, but needs to be a full-time ASU faculty member.

- Based on the research areas or what you have learned in a particular class, choose your thesis director. Your director needs to be a full-time ASU faculty member.
- Work with your thesis director to find a second reader. Your second reader can be someone outside of ASU.
- Write your prospectus and have it signed by your director and second reader.
- Turn in the prospectus by the relative deadlines.
- The recommended timeline is to begin work on the project no later than three semesters prior to anticipated graduation, taking CSE492 in first semester, then CSE493 the following semester. This leaves your final semester open in case you switch your topics, or an unexpected turn/problem arises.

- You must sign up for the appropriate thesis/creative project credit. Typically this will be CSE492 and/or CSE493. Note that Honors students will be given the SLN for Research and Thesis only after a form is submitted to the CIDSE advising center. Please contact the CIDSE advising center for the form.

When registering for CSE493, if you plan on writing a six-credit-hour thesis over two semesters, make sure your director's department allows the Z grade option. Meet with your Barrett honors adviser to make sure you are registered for the appropriate class at the appropriate time.

Students may not use more than 6 hours of total credits in CSE499, 492, 493, and 484 towards either degree program in Computer Science or Computer Systems Engineering. CS/CSE Honors Students are allowed to use an extra three hours of their electives which can be satisfied with CSE493. CSE492 and 493 (and 499, 484) may be taken only by Senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. For more information, please contact the CIDSE academic adviser.

The Prospectus is your declaration that you are beginning and formalizing your work on the thesis. It is submitted to the Barrett Advising office the semester PRIOR to the semester you register for thesis hours and schedule your defense.

The following site has a list of due dates for Prospectus, Defense, Final Submission for upcoming semesters:

<http://barretthonors.asu.edu/academics/thesis-and-creative-project/>

***If you are concerned you may miss a deadline, please contact your Barrett Honors Adviser in advance.**



CS/CSE Faculty and Thesis Options

Students looking for faculty members to supervise their honors theses can review the list on the following website. Students may work with others from another department, as well, and this list is intended as a starting point only.

<http://cidse.engineering.asu.edu/facultyandresearch/4-major-research-areas/>

Their contact information can be found at:

<http://cidse.engineering.asu.edu/facultyandresearch/directory/faculty-by-research-area/>

FURI (Fulton Undergraduate Research Initiative)

Undergraduate students within Ira A. Fulton Schools of Engineering can also participate in FURI (Fulton Undergraduate Research Initiative) to receive a stipend while doing a research or working on a thesis:

<http://more.engineering.asu.edu/furi/>

OR

<https://furi.engineering.asu.edu/>

Offerings Available for Honors Contracts

Our school encourages all of our faculty members to offer honors contract for their courses.

For more information:

INFORMATION ON HONORS ENRICHMENT CONTRACT

<http://barretthonors.asu.edu/academics/honors-courses-and-contracts/honors-enrichment-contracts/>

INFORMATION ABOUT BARRETT INTERNSHIP OPPORTUNITIES

<http://barretthonors.asu.edu/academics/internships/>