Welcome to AIMS² 2.0 (HSI-STEM Grant)
Bridging the Gap: Enhancing AIMS² for Student Success

S. K. Ramesh, Ph.D.
Project Director and Professor of ECE

Thousand Oaks Room
Aug 30, 2019

AIMS² Orientation Meeting - Aug 2019

AIMS² Cohort: Photo Courtesy Armando
Disclaimer

• Supported by the AIMS² Program and funded by the United States Department of Education FY 2016 Title III, Part F, Hispanic-Serving Institutions (HSI) STEM and Articulation Program five-year grant, Award Number P031C160053, CFDA Number 84.031C.

• However, the contents of this presentation do not necessarily represent the policy of the US Department of Education, and you should not assume endorsement by the Federal Government.
Welcome and Introductions
  • Project Faculty and Staff
  • Cohort 4 students
  • Overview of Program – Dr. Ramesh, Project Director
Activities
  • Research Projects for Cohort Students
  • Cohort Meetings w/faculty mentors
  • Tutoring/Peer Mentoring
  • View AIMS² Video for 2019 Examples of Excelencia Finalist
  • Panel Discussion with Peer Mentors
  • EMS Survey
  • Open Forum
Project Web Site

www.ecs.csun.edu/aims2
AGENDA

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The AIMS² Project team (2016-21)
Attract, Inspire, Mentor, and Support Students

Faculty and Staff from CSUN and partner Colleges
• Cohort based model
• Collaboration between CSUN and CCC’s
• High Transfer Achievement
• GPA, Persistence, and Graduation
• Served over 240 transfer students (approximately 67% Latino/a).

For more information
Visit [www.ecs.csun.edu/aims2](http://www.ecs.csun.edu/aims2)
AIMS² Program – Nationally recognized
Funded by USDE: 2011-2016 ($5.5 M), 2016-2021 ($6 M)
Organization – Bridging the Gap: Enhancing AIMS² for Student Success
To be eligible, STEM majors must be an individual who has faced or faces social, cultural educational or economic barriers to careers in STEM and be a US Citizen or Permanent Resident.

- Online application
- **Enroll and complete a minimum of 24 units/year and pass all courses with grades of C or better**
- All students eligible to receive bi-annual textbook awards of $500 (at the end of fall/spring semesters) upon meeting requirements
- Selected students eligible to participate in paid UG research activities (30-32/year)
- Tutors and Peer Mentors (Up to 10/year)
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Major activities in AIMS$^2$ grant

- Undergraduate research
- Tutoring
- Mentoring (Faculty and Peer Mentoring)
# Summer 2019 Research Projects with CSUN Faculty Mentors

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Professor</th>
<th>Project Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Mobile Construction Management Risk Assessment Model</td>
<td>Dr. Anwar Alroomi</td>
<td>Click here for information.</td>
</tr>
<tr>
<td>Virtual Labs – Learning Engineering Mechanics and Dynamics with Virtual Hands-on Experiments</td>
<td>Dr. Anwar Alroomi</td>
<td>Click here for information.</td>
</tr>
<tr>
<td>Improving the durability of packaging materials using vapor phase corrosion inhibitors</td>
<td>Dr. Behzad Bavarian</td>
<td>Click here for information.</td>
</tr>
<tr>
<td>Sustainable materials for steam generating system and power plants</td>
<td>Dr. Behzad Bavarian</td>
<td>Click here for information.</td>
</tr>
<tr>
<td>Corrosion protection of steel pipes/reinforced concrete structures using corrosion inhibitors</td>
<td>Dr. Behzad Bavarian</td>
<td>Click here for information.</td>
</tr>
<tr>
<td>Application of high strength aluminum alloys for aircraft applications</td>
<td>Dr. Behzad Bavarian</td>
<td>Click here for information.</td>
</tr>
</tbody>
</table>
AIMS² Orientation Meeting - Aug 2019

CSUN.
COLLEGE OF
ENGINEERING AND
COMPUTER SCIENCE

attract, inspire, mentor, support students

student research symposium

Sept. 11, 2019
3 p.m.
USU Grand Salon

CSUN
COLLEGE OF
ENGINEERING AND
COMPUTER SCIENCE

Attract Inspire Mentor Support Students

HSI STEM Grant Program
AIMS² STUDENT RESEARCH SYMPOSIUM

September 11, 2019
3:00 - 8:00 p.m.
University Student Union (USU), Grand Salon

CIVIL ENGINEERING & CONSTRUCTION MANAGEMENT
• A Mobile Construction Management Risk Assessment Model
• Virtual Labs – Learning Engineering Mechanics and Dynamics with Virtual Hands-on Experiments
• Geotechnical and Earthquake Engineering Research: Active Earth Pressure on Retaining Walls & Soil-Structure Interactions on Building Structures
• Earthquake Engineering Research: 3D Modeling & Simulation of Passive Water Dampers

COMPUTER SCIENCE
• Automated Testing for Introductory Computer Science Assignments
• Validating Machine Learning

ELECTRICAL & COMPUTER ENGINEERING
• An Evolutionary Approach to DoS Defense
• A Particle Swarm Optimization Approach for Route Planning
• Energy Storage and Environmental Impact of Electric Vehicles
• Electric Transportation and PWM (Pulse with Modulation) Speed Drives

MANUFACTURING SYSTEMS ENGINEERING & MANAGEMENT
• Corrosion Inhibition Using Bio-friendly Packaging Materials
• High Strength Aluminum Alloys in Aerospace and Automotive Applications
• Reverse Engineering and Topology Optimization of Cam Support Plate for Harley Davidson Milwaukee 8 Engine in Metal Additive Manufacturing
• Wireless Keyboard Powered by Piezoelectric Effect
• Educated Future
• Hydrosól - a Solar Powered, Portable Charging Hydroflask Cap
Please contact tutors directly to inquire about assistance for any of your other courses. They are not limited to the courses listed below!

### Spring 2019

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Email</th>
<th>Dept.</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexis</td>
<td>Aleman</td>
<td><a href="mailto:alexis.aleman.341@my.csun.edu">alexis.aleman.341@my.csun.edu</a></td>
<td>BIOL</td>
<td>CHEM100, BIOL 106, 107</td>
</tr>
<tr>
<td>Joel</td>
<td>Damain (Barajas)</td>
<td><a href="mailto:joel.barajas.841@my.csun.edu">joel.barajas.841@my.csun.edu</a></td>
<td>EE</td>
<td>CE240. MATH150A, 150B, 250, 280. ECE240, 309, 350, 351, 440, 442, 455, 460, 480. PHYS220B. GEOL101.</td>
</tr>
<tr>
<td>Andrew</td>
<td>Espindola</td>
<td><a href="mailto:andrew.espindola.4@my.csun.edu">andrew.espindola.4@my.csun.edu</a></td>
<td>CE</td>
<td>MATH150A, 150B, 250, 331. COMP110, 182, 282. ECE240, 309, 320, 340, 350. PHYS220A, 220B. BIOL106.</td>
</tr>
<tr>
<td>Xiaoao</td>
<td>Feng</td>
<td><a href="mailto:xiaoaofeng.642@my.csun.edu">xiaoaofeng.642@my.csun.edu</a></td>
<td>EE</td>
<td>COMP110. ECE206, 240, 309, 320, 340, 350, 351, 370, 420, 422, 442, 455, 480, 492. PHYS220A, 220B. MSE304. ME370.</td>
</tr>
<tr>
<td>Ivan</td>
<td>Garcia</td>
<td><a href="mailto:Ivan.garcia.45@my.csun.edu">Ivan.garcia.45@my.csun.edu</a></td>
<td>CE</td>
<td>MSE304. ECE309, 320, 340, 420, 450.</td>
</tr>
</tbody>
</table>
Meetings with faculty mentors

- Be sure to attend all group meetings with your faculty mentor – **Very Important!!**
- For discipline specific questions you can connect with a faculty mentor from your department/program
- Monitor your progress, study skills, time management etc.,
## 2019-20 Peer Mentors

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
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</thead>
<tbody>
<tr>
<td>Marian Giron</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Elvis Chino-Islas</td>
<td>Computer Engineering</td>
</tr>
<tr>
<td>Marcel-Carlos</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Christian Mariscal</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Fernando Landeros</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Froilan Campos</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Garabed Simitian</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Josue Vega</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Eileen Quiroz</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Alexis Siguenza</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Fernando Vargas</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Diego Barreto</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Tiffany-Haghghi</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Jake Lyon</td>
<td>Computer Science</td>
</tr>
<tr>
<td>Meyer Millman</td>
<td>Computer Engineering</td>
</tr>
<tr>
<td>Aaron Palacios-Rom</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Jessica Opinion</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>Luis Landeros</td>
<td>Electrical Engineering</td>
</tr>
</tbody>
</table>

## Returning Peer Mentors

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan Cruz</td>
<td>Mechanical Engineering</td>
</tr>
<tr>
<td>Alexis Sierra</td>
<td>Civil Engineering</td>
</tr>
<tr>
<td>Christian Mendoza</td>
<td>Electrical Engineering</td>
</tr>
<tr>
<td>Cristobal Barajas</td>
<td>Mechanical Engineering</td>
</tr>
</tbody>
</table>

## Returning Alumni Mentors

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Alejandro Campos</td>
</tr>
<tr>
<td>Anthony Ortiz</td>
</tr>
<tr>
<td>Delbert Stewart</td>
</tr>
<tr>
<td>Edith Elyasi</td>
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<tr>
<td>Felix Villa</td>
</tr>
<tr>
<td>Melissa Flores</td>
</tr>
<tr>
<td>Noe Gonzalez</td>
</tr>
<tr>
<td>Pablo Casas</td>
</tr>
<tr>
<td>Scott Judge</td>
</tr>
</tbody>
</table>
**Student-Faculty Interaction**

- Resume Workshops
- Tech Fest preparation
- Research Presentations
- Attending conferences
- Annual AIMS² Research Symposium

- Student mentors
- Student tutors
- Weekly/biweekly meetings
- Meetings via appointments
- Advising
- Maintain minimum requirements for scholarship
Fall 2019 Study Skills Workshops

- Mandatory for Cohort 4 students (new cohort)
- Duration of workshop is 8 hours spread over two days
  - (i.e, Friday 3 PM - 7 PM/Saturday 9 AM – 2 PM)
- Dates: October 18/19
- Format – Common session on Friday for all Cohort 4 students
- Saturday – Breakouts for Transfer and Freshmen Students

08/30/19
Summer 2018 Workshop Images
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- Open Forum
• Examples of Excelencia is the only national initiative to recognize evidence-based programs advancing Latino students in higher education.
• This year, Excelencia in Education received over 166 nominations from 32 states, DC and Puerto Rico for the 2019 Examples of Excelencia. From these nominations, 16 were selected as finalists for their efforts in serving Latino students.

In October, four finalists will be selected as the 2019 Examples of Excelencia - one in each of the following categories: associate, baccalaureate, graduate and community-based organization.
2019 Finalists in the Baccalaureate Category

Attract, Inspire, Mentor, and Support Students - The AIMS² Program
California State University, Northridge (CA)
Career/Workforce; Undergraduate Research

College Assistance Migrant Program (CAMP)
Washington State University (WA)
First Year Support; Learning Community

Pathways to Academic Success & Opportunities (PASO)
California State University, San Marcos (CA)
First Year Support; Institutional Change

Project MALES (Mentoring to Achieve Latino Educational Success)
University of Texas at Austin (TX)
Mentoring

Promesa Scholars
Ferris State University (MI)
First Year Support; Learning Community
2019 Finalist for Examples of Excelencia

https://www.youtube.com/watch?v=WrhC1pRCEc&feature=youtu.be
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CSUN
Engineering Majors Survey
AIMS² New Cohort Orientation
College of Engineering and Computer Science
California State University, Northridge
YOUR Feedback Matters!

CSUN’s Engineering Majors Survey (EMS) helps us to understand the impact of the AIMS² program by exploring students entrepreneurial and innovative interests.

The 15-minute survey asks for you to share your interests and experience—and is NOT about what you know or do now know technically as an engineering or computer science student!
EMS Survey Completed
Twice as an AIMS² Student

Complete at program entry (new cohort, first semester in program)

Administered every other spring term (next and final administration: Spring 2021)
Steps to Complete the EMS Survey

1. Review email pre-invitation (to be sent early fall term)
2. Review email invitation (to be sent early fall term) with survey link
3. Access survey via link on desktop, laptop, or mobile device
4. Complete items and submit the 15-minute survey
5. Claim your $5 Matamoney gift card (details at the end of the presentation and the end of the EMS survey)
Pre-Invitation Email Message

From: [Nathan Durdella or designee]
Subject: CSUN’s College of Engineering and Computer Science Needs YOUR Input

You have an opportunity to participate in the Engineering Majors Survey. And your input is of critical importance!

CSUN’s College of Engineering and Computer Science is pleased to announce the adoption of the Engineering Majors Survey, a short online survey developed by Stanford University’s Epicenter. The Engineering Majors Survey contains questions about your student experiences and your interests in the future. This survey has received high acclaim from engineering students around the country, who say:

“It made me think about what I may be doing five to ten years after I graduate rather than just thinking about immediately after graduation.”

“It made me think about what I actually want to do with my education.”

“This survey opened my eyes to how many different opportunities [are out there] that I might not have pursued yet.”

The Engineering Majors Survey takes only 10 minutes to complete. Your participation in this survey is voluntary and confidential. Each and every response is valued—and response will help us better serve you as students in the College of Engineering and Computer Science and in the AIMS2 program at CSUN (http://www.ecs.csun.edu/aims2/).

To thank you for your participation, all respondents who provide their contact information will receive a $5.00 Matamoney card distributed in-person on campus—details to follow survey.

You will receive an email invitation with the survey link soon—so please look for a message from me in about a week.

We look forward to your input in the Engineering Majors Survey!

Kind regards,

Nathan

Nathan Durdella, Ph.D.
Associate Professor
Department of Educational Leadership and Policy Studies
Michael D. Eisner College of Education
California State University, Northridge
Invitation

Message

Email

Dear CSUN Student,

The Engineering Majors Survey is now open! And your input is of critical importance.

Last week we emailed you to inform you about the Engineering Majors Survey, a short online survey developed by Stanford University's Engineering Majors Program. They are conducting the survey to develop a program of CSU to help students as part of the AMES program. They would like to invite you to complete the survey, which will take approximately 5 minutes to complete.

We would greatly appreciate your completion of the survey by [date]. Thank you for your help on this important project for CSUN's College of Engineering and Computer Science.

Kind regards,

[Signature]

If you have any questions about your participation in this survey, please contact me:

nathan.durrella@csun.edu

If you would like to participate in this survey, please click on the link below:

[Survey Link]

Please note that the completion of this questionnaire is voluntary and confidential, and will not affect your standing at CSUN. Further, your participation is also entirely voluntary, and your individual responses will not be shared with any third party.

To thank you for your participation in completing the survey, you will receive a $5.00 Mamasan gift card at the end of the survey.

Click to complete the survey.
EMS Survey: Welcome Page

Welcome!
Thank you for participating in the Engineering Majors Survey Fall 2017!
The survey is designed to be completed in about 10-15 minutes. For the open-ended questions, feel free to elaborate as much as you would like, we welcome all responses.
Remember, after you reach the end of the survey, you find information on how to claim your free $5 Matamoney card!
Thank you very much for your time in helping us to understand engineering majors today,
Your friends on the Engineering Majors Survey team!
Your rights as a research participant!

Click-through IF YOU ARE 18 YEARS OR OLDER (not eligible if under 18 years)
Section 2: School Experiences

In this section, we would like to know more about your learning experiences and activities during high school and as an undergraduate student, especially as these relate to “innovation” and “entrepreneurship.”

We also understand that some of you may have just started school and you have not had an opportunity yet to do some of the activities or programs listed below:

During high school, did you:

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Item</th>
<th>No</th>
<th>Yes</th>
<th>I prefer not to answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take an art, dance, music, theater, or creative writing class</td>
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<tr>
<td>Learn computer programming</td>
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<tr>
<td>Take a shop class (e.g., a woodworking, automotive, or maker class)</td>
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<td>Participate in a robotics competition, such as a FIRST Robotics Competition</td>
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<tr>
<td>Attend a science, math, technology, or engineering related summer camp</td>
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<tr>
<td>Have a research position or internship at a science, math, technology, or engineering related company or organization</td>
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<tr>
<td>Learn about entrepreneurship</td>
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</tbody>
</table>
Research Compensation: $5 Matamoney Card

• As a thank you for your participation in the EMS survey, we would like to offer you a $5.00 Matamoney gift card.

• After completing the survey, you may pick up your Matamoney gift card from Josefina Gudino (josefina.gudino@csun.edu) in Jacaranda Hall (JD) 4448 in the College of Engineering and Computer Science.
Questions about the EMS?

- If you have any comments, concerns, or questions regarding the conduct of this research
  - Please contact Nathan Durdella (project evaluator) at 818-677-3316 or nathan.durdella@csun.edu.

- If you have concerns or complaints about the research study, research team, or questions about your rights as a research participant
  - Please contact Research and Sponsored Projects: phone 818-677-2901 or email irb@csun.edu.
Questions?