



## Office of Research and Sponsored Projects

# Annual Report 2020-21

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## **OUR MISSION**

The Office of Research and Sponsored Projects (ORSP) works with other units throughout the campus to seek external support for faculty research, creative activity, and institutional projects that support the educational and service mission of the university. Collaboration is sought across disciplines, departments, and community partners in preparing proposals to federal, state, and private agencies.

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# CSUF RESEARCH ENTERPRISE

Under the directive of the Provost, ORSP is led by an Associate Vice President (AVP) for Research and Sponsored Projects. Over 30 staff work in five (5) distinct areas to support campus research, scholarship and creative activities.

## Office of Grants and Contracts (OGC)

OGC assists with proposal preparation, review, and submission to external funding agencies; ensures compliance with agency requirements; reviews grant awards and serves as lead in the issuance, review, and negotiation of contracts, subcontracts, and related agreements.

## Office of Research Compliance (ORC)

ORC ensures university-wide compliance with federal, state, local, and funding agency policies and regulations that involve research and creative activities, including use of human and animal subjects and policies regarding conflict of interest and responsible conduct of research.

## Office of Sponsored Programs (OSP)

OSP oversees the post-award administration of grants and contracts awarded to the university through the CSU Fullerton Auxiliary Services Corporation. Services include invoicing and grant accounting, submission of required reports (e.g, effort reporting), maintaining records of compliance, handling audits, and negotiation of the University's indirect cost agreement.

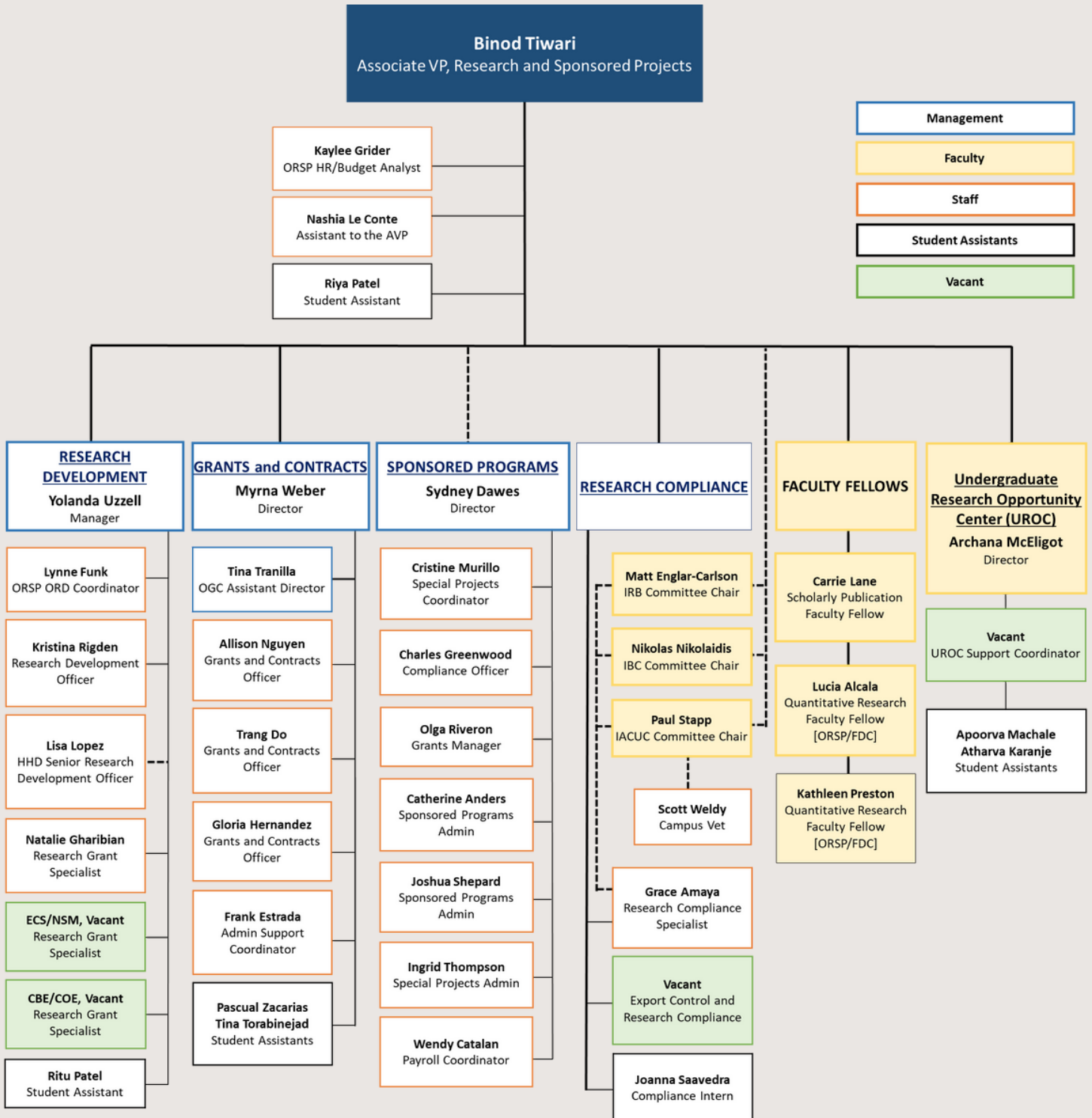
## Office of Research Development (ORD)

ORD assists faculty in identifying funding sources for their research and creative activity; promotes institutional programming and collaborative grant development; and provides guidance, training, and assistance in preparing high quality, competitive proposals.

## Office of Undergraduate Research Opportunity Center (UROC)

UROC promotes and expands opportunities for faculty-student research and creative activities that increase student engagement, learning, and success; Identifies and provides resources needed to support student scholars and faculty mentors and enhances campus student research climate; Organizes on-campus events including CSU Student Research Competition (SRC) and Student Creative Activities and Research (SCAR) Day; Increases student participation in off-campus student research competitions (SCCUR, NCUR, CURSTR).

# ORSP ORGANIZATIONAL CHART



# STRATEGIC PLAN

Related CSUF Goals	Related CSUF Strategy	ORSP Strategy
<p>1. Provide a transformative educational experience and environment for all students.</p>	<p>1.3 Scale and institutionalize culturally responsive curricular/cocurricular High Impact Practices (HIPs).</p> <p>1.8 Increase on-campus student employment, internships, and professional development opportunities.</p> <p>1.9 Expand faculty-student mentoring opportunities, particularly during the last year of the undergraduate experience.</p>	<p>1.1 Support the development and expansion of High Impact Practices (HIPs) with the focus of strengthening faculty professional development in research, scholarship and creative activities.</p> <p>1.2 Conduct an inventory of undergraduate research or other faculty-student mentoring opportunities and develop a model to consistently promote this experience across majors.</p> <p>1.3 Explore and pursue funding opportunities that encourage and support student employment, internships and professional development.</p> <p>1.4 Identify, strengthen and support inter-disciplinary or trans-disciplinary research, scholarship or creative activities.</p>
<p>3. Recruit and retain a high-quality and diverse faculty and staff.</p>	<p>3.1 Conduct campus climate surveys and aggregate data on a regular basis. Report findings to the campus community.</p> <p>3.8 Diversify and grow opportunities to promote faculty teaching, scholarly and creative activities, and support services to enhance the professional lives of faculty.</p>	<p>3.1 Identify ORSP staffing needs and explore creative models to increase support capacities at the department and college level.</p> <p>3.2 Provide and support professional development opportunities for faculty and staff that aim at developing their competencies in understanding and supporting the success of CSUF's diverse community.</p>
<p>4. Expand and strengthen our financial and physical capacity.</p>	<p>4.10 Define an overall university goal for revenue from self-support/entrepreneurial activities.</p> <p>4.11 Develop appropriate financial models and business plans in each self-support/entrepreneurial program to realize net revenue targets.</p>	<p>4.1 Identify goals for research and scholarly activity and explore models that encourage faculty pursuit of extramural funding.</p> <p>4.2 Collaborate with campus partners to develop a sustainable self-support activity and revenue model.</p>

# 2020-21 CSUF NEWS HIGHLIGHTS



**CSUF SCIENTIST RECEIVES SHIELDS AWARD FOR DRUG RESEARCH**

**CSUF CYBERSECURITY STUDENTS COMPETE IN NATIONAL COMPETITION**



**HONORS STUDENTS' RESEARCH PROJECTS PRESENTED TO ACADEMIC CONFERENCES AND COMPETITIONS**



**CSUF RECEIVED \$28.4 MILLION IN GRANTS DURING 2020-21**

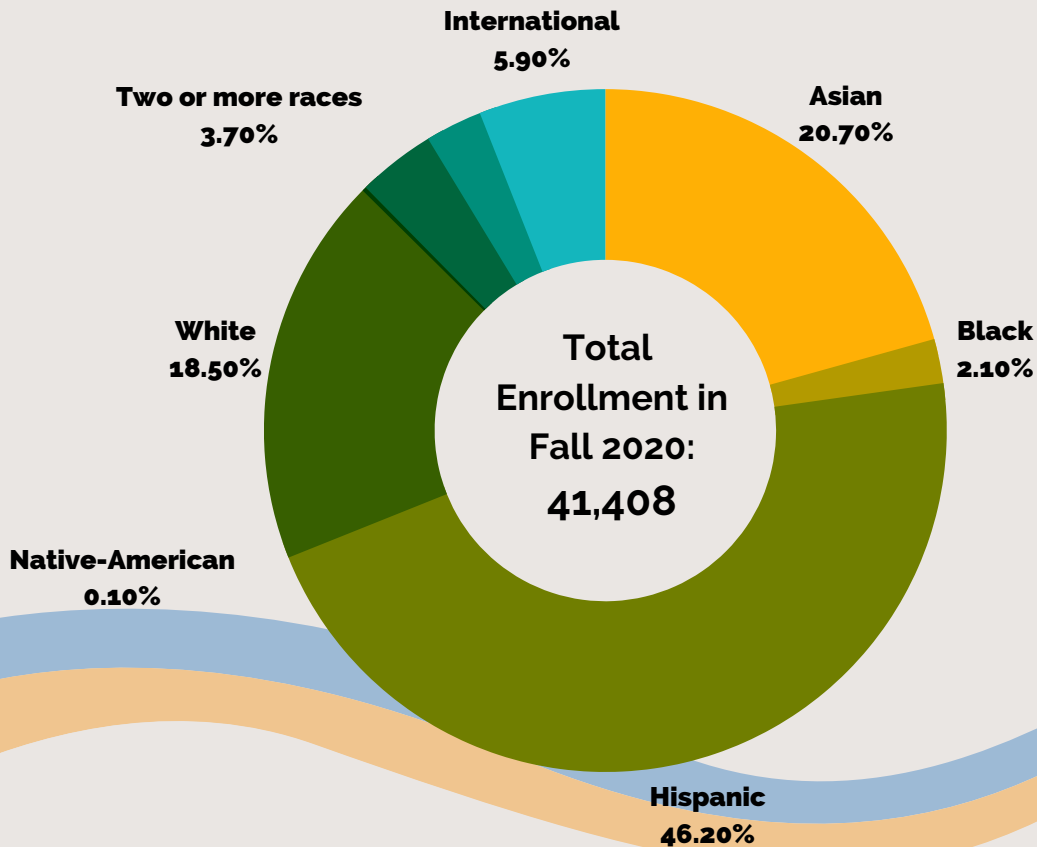


**STUDENT STEM RESEARCHERS RECOGNIZED WITH NATIONAL AWARDS**



# 2020-21 CSUF STATISTICAL OVERVIEW

## CSUF Enrollment: Ethnicity/Race



**79,157**  
TOTAL APPLICATIONS  
RECEIVED IN 2021



**31.70%**  
STUDENTS ARE 1ST  
GENERATION TO  
ATTEND COLLEGE  
FALL 2021

**40,087**  
TOTAL NUMBER  
OF STUDENTS IN  
FALL 2021



**59.7%**  
STUDENTS RECEIVED  
FINANCIAL AID IN  
FALL 2021



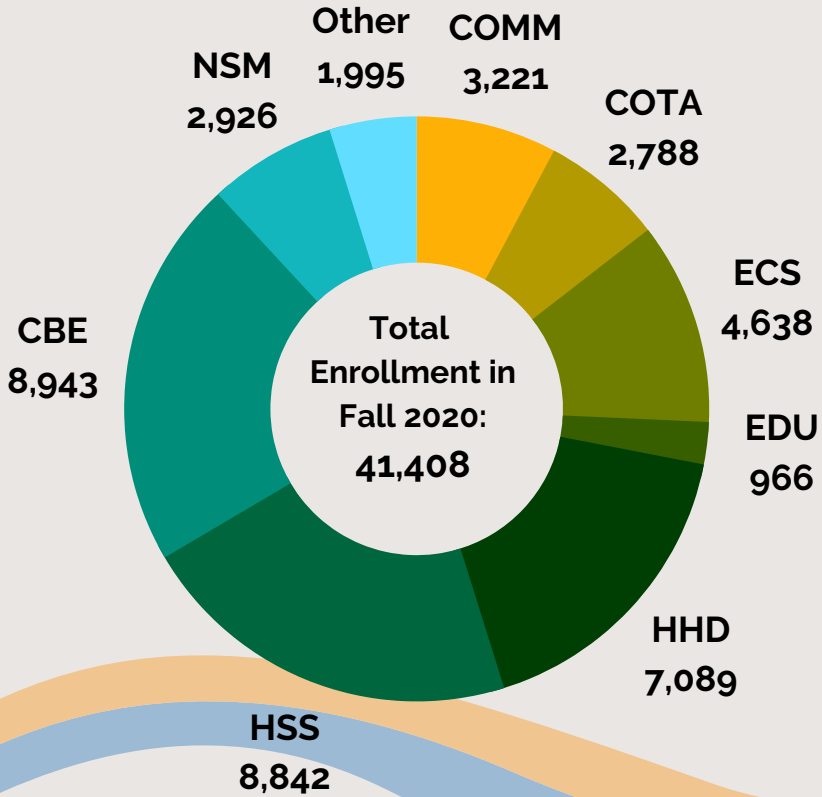
**74.90%**  
FULL-TIME  
STUDENTS IN  
FALL 2021  
\*12 OR MORE UNITS\*



**11,394**  
DEGREES AWARDED IN  
2020-2021



# Student Enrollment by College: Fall 2020

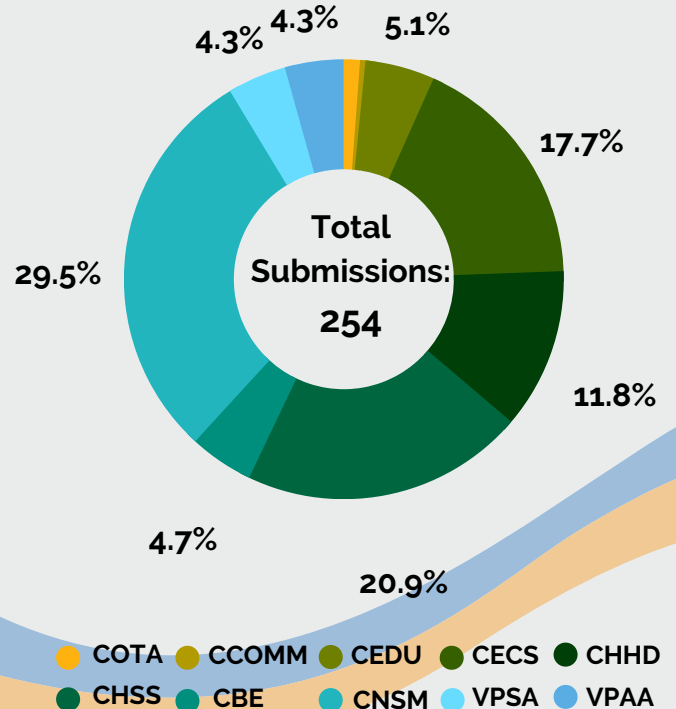


# 2020-21 SUBMISSIONS AND AWARDS

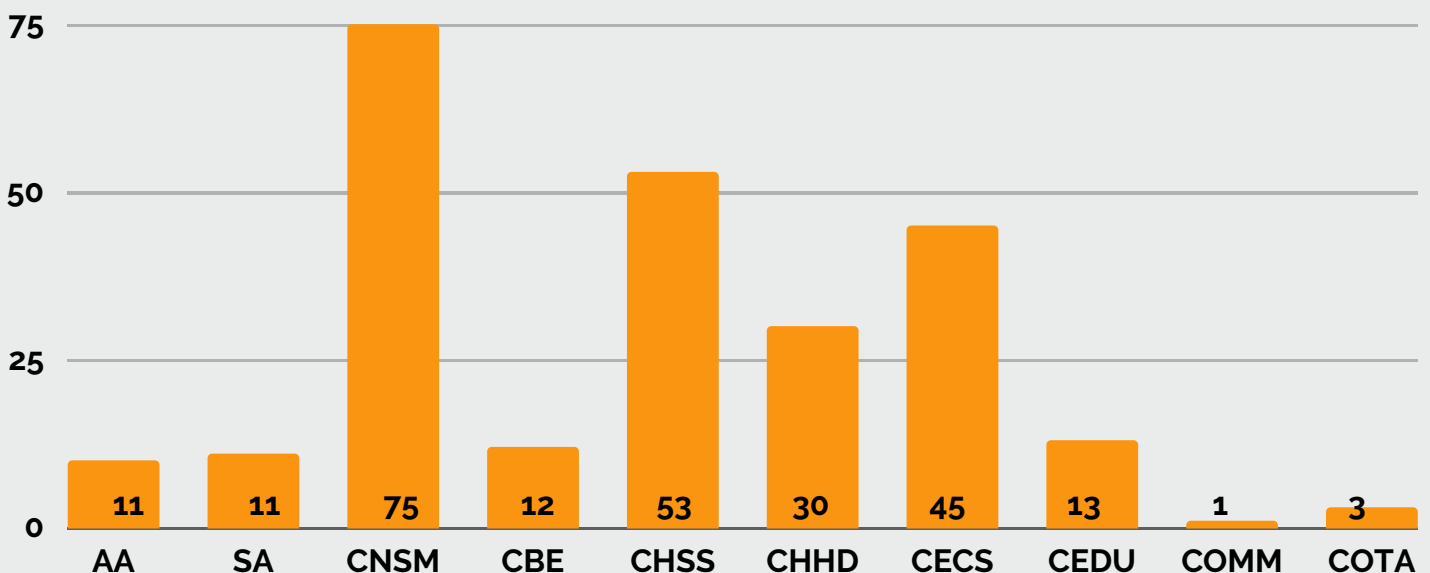
## OVERVIEW

Each year, the Office of Research and Sponsored Projects through the **Office of Research Development (ORD) & Office of Grants and Contracts (OGC)**, supports faculty scholarship with competitive proposal submissions for Research, Scholarship and Creative Activities (RSCA). RSCA funding stimulates and supports faculty research and creative activities. In addition, assistance is provided to faculty for successful external funding. During the 2020-2021 year the Office of Research and Sponsored Projects was able to submit proposal for faculty with **254 funding opportunities** through external sources.

## 2020-21 Submissions by College



## 2020-21 Number of Submissions

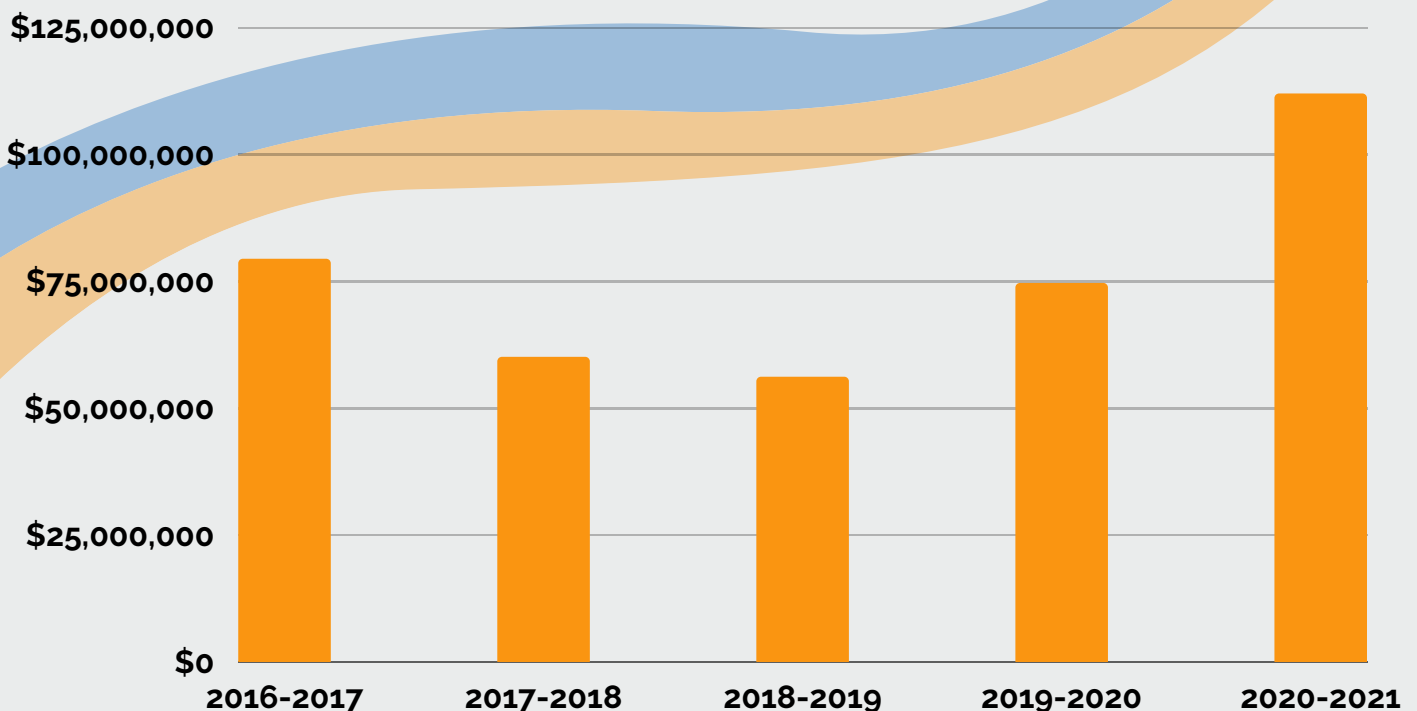


## 2020-21 Requested Amount by College

In the year 2020-2021 **254 funding proposals** were submitted to various funding sources that includes non-profit, for-profit, federal, state, local, and international sources. These sources are key in providing the Office of Research and Sponsored Projects (ORSP) multiple funding avenues to support faculty research and creative activities. In the year 2020-2021 the total requested funding amount reached a record high **\$111,882,803**. This is a record high amount requested by Cal State Fullerton!

COLLEGE	AMOUNT
COTA .....	\$ 43,275
COMM .....	\$ 5,750
EDU .....	\$ 6,010,472
ECS .....	\$ 11,609,250
HHD .....	\$ 15,197,098
HSS .....	\$ 8,412,099
CBE .....	\$ 10,462,653
NSM .....	\$ 30,023,835
SA .....	\$ 27,209,936
AA .....	\$ 2,908,435







## Requested Extramural Funds in the Past 5 years



# Requested Amount by Funding Source

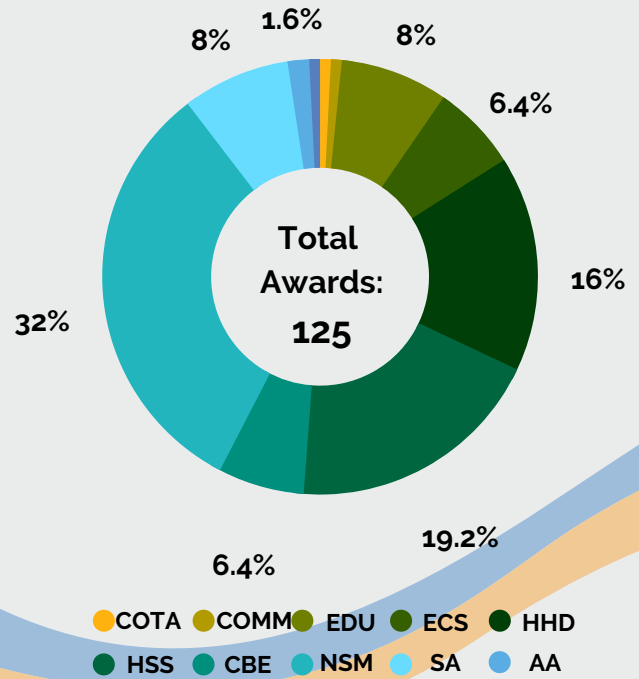
## Submissions

## Amount Proposed

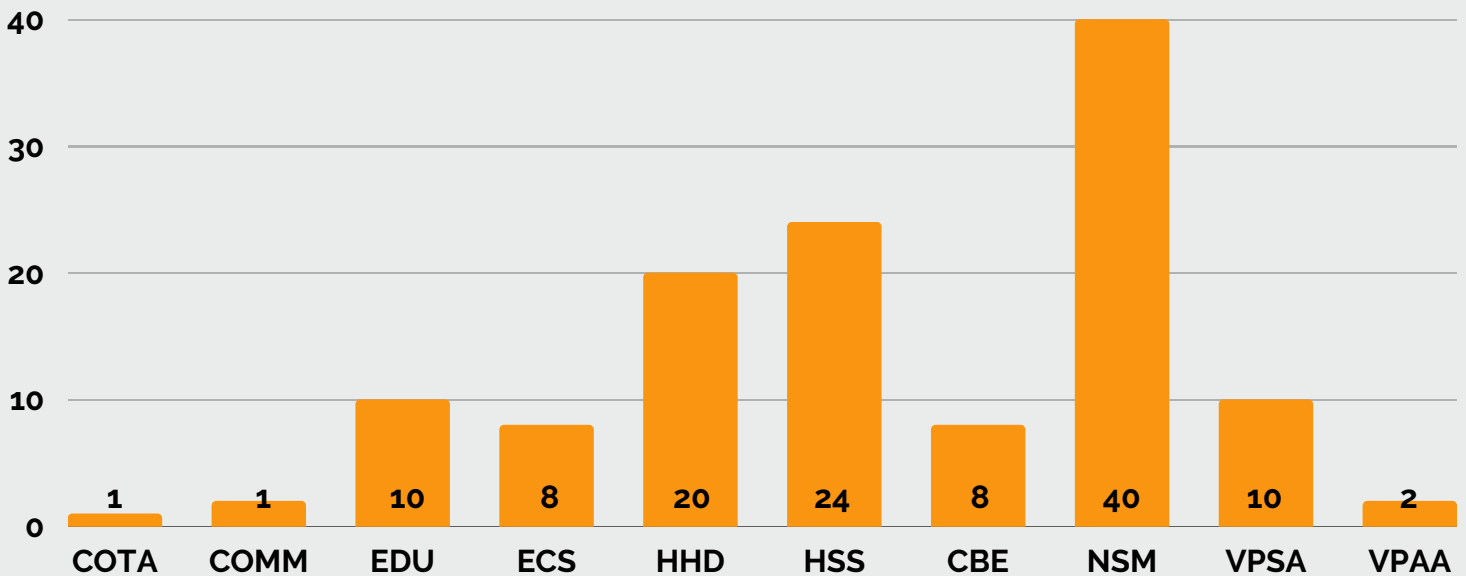
<p><b>52%</b></p> <p>FEDERAL AGENCIES</p> 	<p><b>\$82,750,617</b></p> <p>FEDERAL AGENCIES</p>
 <p><b>13%</b></p> <p>LOCAL AGENCIES</p>	<p><b>\$4,611,870</b></p> <p>LOCAL AGENCIES</p>
<p><b>11%</b></p> <p>STATE AGENCIES</p> 	<p><b>\$14,371,072</b></p> <p>STATE AGENCIES</p>
 <p><b>22%</b></p> <p>NON-PROFIT ORGANIZATIONS</p>	<p><b>\$9,901,642</b></p> <p>NON-PROFIT ORGANIZATIONS</p>
<p><b>1%</b></p> <p>FOR PROFIT ORGANIZATIONS</p> 	<p><b>\$219,386</b></p> <p>FOR PROFIT ORGANIZATIONS</p>
<p><b>1%</b></p> <p>FOREIGN AGENCIES</p> 	<p><b>\$28,216</b></p> <p>FOREIGN AGENCIES</p>

COLLEGE	NO. OF AWARDS
COTA .....	1
COMM .....	1
EDU .....	10
ECS .....	8
HHD .....	20
HSS .....	24
CBE .....	8
NSM .....	40
SA .....	10
AA .....	2
OTHER .....	1

## 2020-21 Awards by College

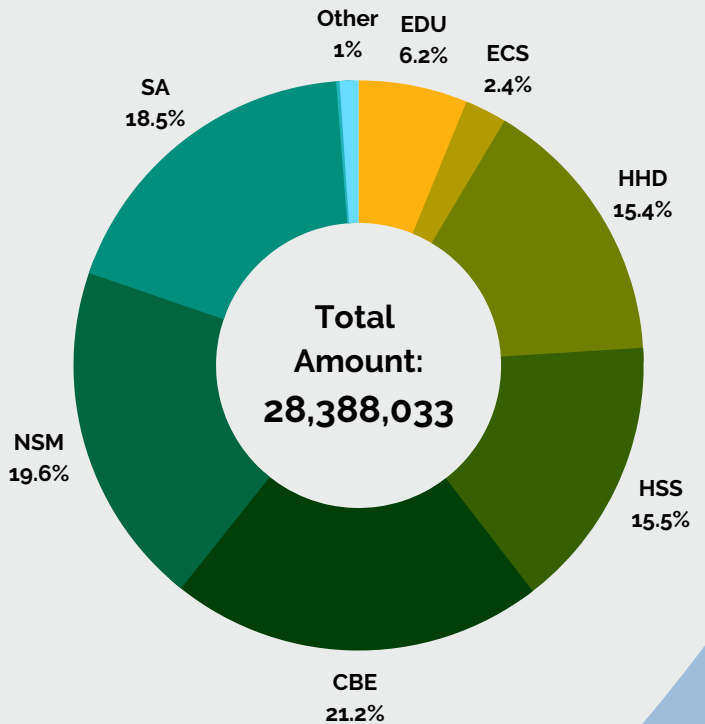


## 2020-2021 Number of Awards

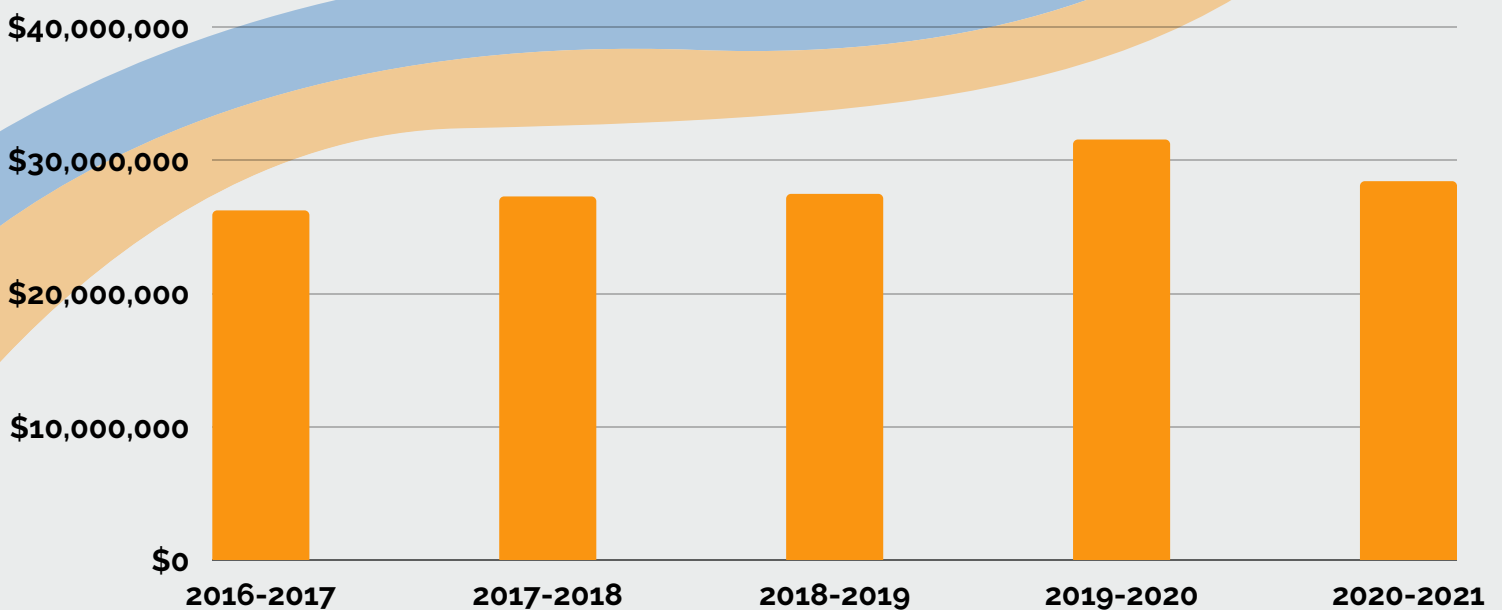


## 2020-21 Award Amount by College

COLLEGE	AMOUNT
COTA .....	\$ 8,925
COMM .....	\$ 5,000
EDU .....	\$ 1,754,729
ECS .....	\$ 675,417
HHD .....	\$ 4,385,798
HSS .....	\$ 4,406,958
CBE .....	\$ 6,009,421
NSM .....	\$ 5,550,392
SA .....	\$ 5,247,324
AA .....	\$ 55,445
OTHER .....	\$ 288,624



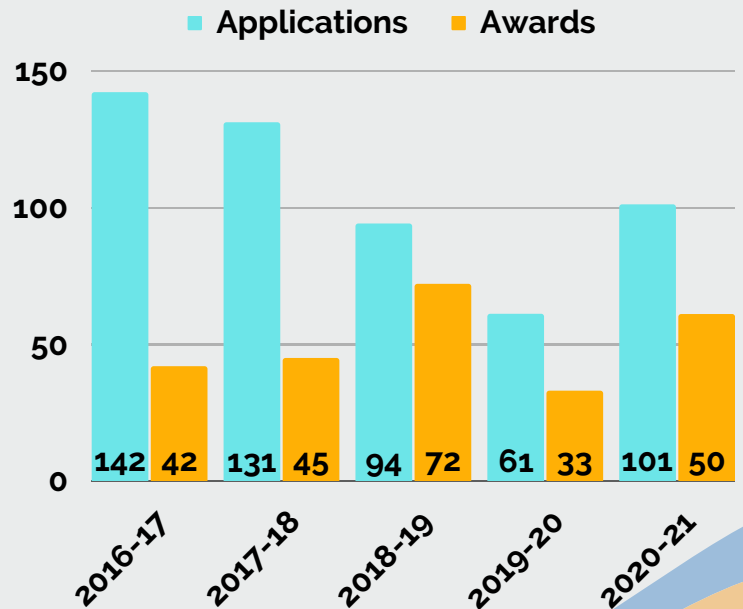
## Award Amounts in Past 5 Years



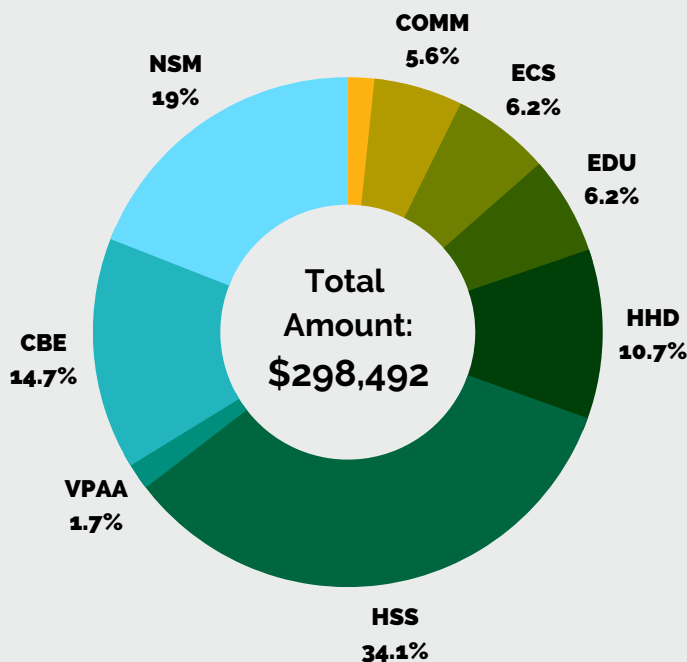
# 2020-21 INTRAMURAL GRANT OVERVIEW

The Office of Research and Sponsored Projects, with the assistance from the **Faculty Research Committee (FRC)**, supports faculty RSCA through competitive intramural funding opportunities. These funds are intended to stimulate and support faculty research and creative activities, and to assist faculty in applying for external funding opportunities. This support takes the form of two awards, but not limited to: **Research Scholarship and Creative Activity Incentive (RSCA) grants** which provide up to \$15,000 per award, and **Junior/Senior Intramural grants** which provide up to \$5,000 or reassigned time (3 Weighted Teaching Units).

## 5-Year JR/SR Intramural Grant Awards

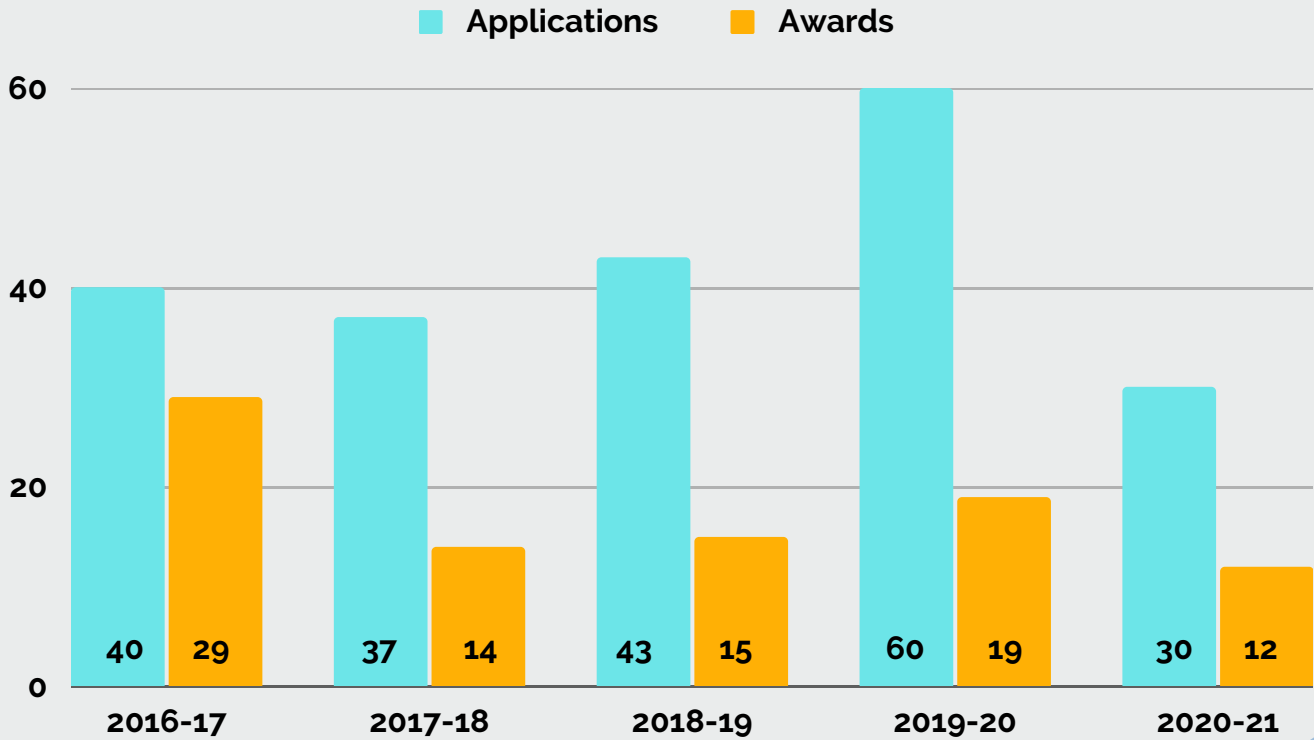


## 2020-2021 JR/SR Intramural Grant Awards

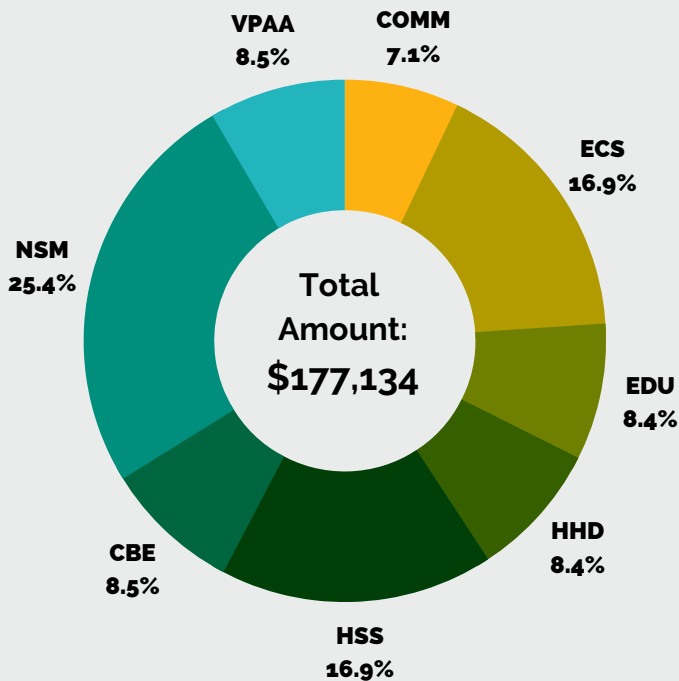


COLLEGE	AWARDS	AMOUNT
COTA	1	\$ 5,000
COMM	2	\$ 16,788
ECS	3	\$ 18,576
EDU	3	\$ 18,576
HHD	5	\$ 32,049
HSS	17	\$ 101,705
VPAA	1	\$ 5,000
CBE	7	\$ 43,940
NSM	11	\$ 56,858

# 5-Year RSCA Incentive Grant Awards



## 2020-2021 RSCA Incentive Grants Awards

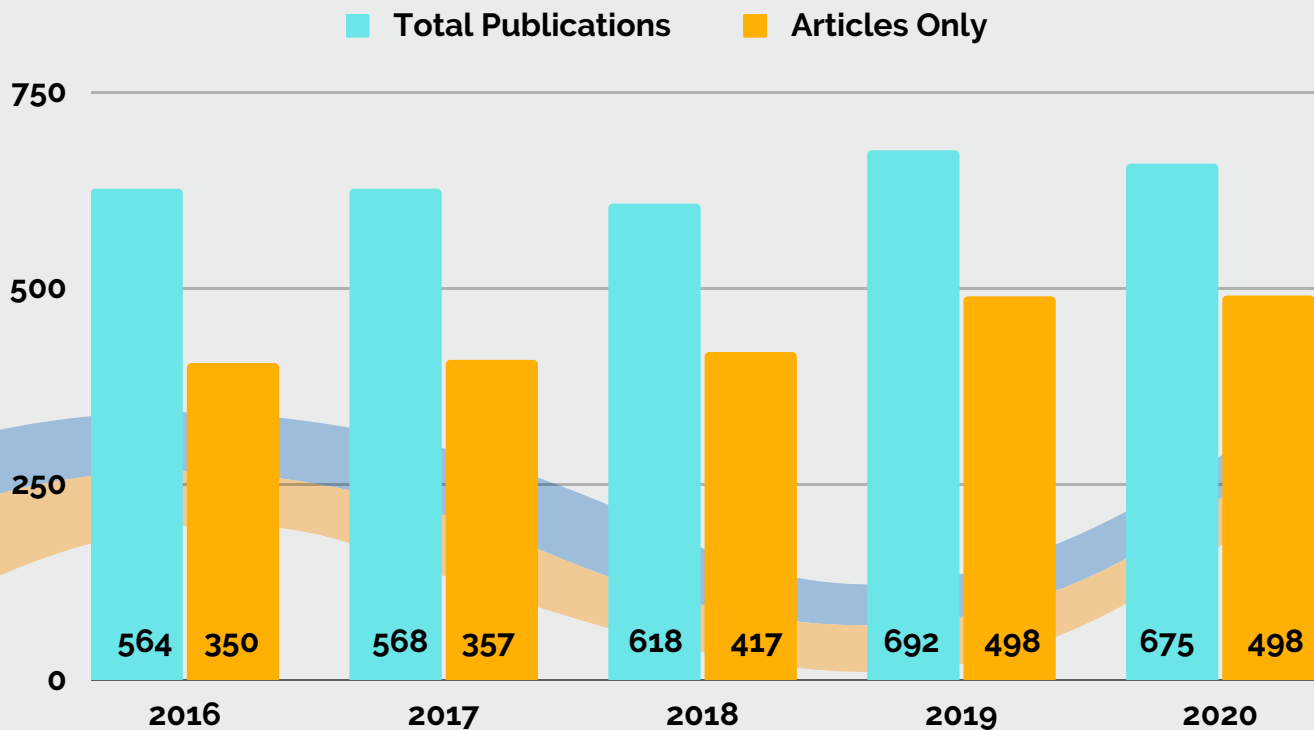


COLLEGE	AWARDS	AMOUNT
COMM	1	\$ 12,546
ECS	2	\$ 29,860
EDU	1	\$ 14,961
HHD	1	\$ 14,828
HSS	2	\$ 30,000
CBE	1	\$ 14,976
NSM	3	\$ 44,963
VPAA	1	\$ 15,000



# PUBLICATION RECORD

Faculty publications are one of the most important forms for showcasing academic support of faculty scholarship at an academic institution. CSU Fullerton ensures that faculty are supported in their academic publications throughout each fiscal year. In the calendar year 2020, CSU Fullerton produced a total of **675** Web of Science™ indexed publications, **one of the highest among the CSU campuses**. In the past 5 years, CSU Fullerton has contributed a total of 3,117 Web of Science™ indexed publications\*.



**675**  
TOTAL  
PUBLICATIONS  
IN CY 2020

**3,117**  
5 YEAR WEB OF  
SCIENCE  
PUBLICATIONS



# FEDERAL RESEARCH GRANT WRITING MENTORSHIP PROGRAM

Twelve (12) CSUF Faculty members were selected as the 2nd cohort for the Federal Research Grant Writing Mentorship Program. The program supports faculty in developing fundamental grantsmanship skills needed to submit a proposal to a federal granting agency.

From January to December 2021, faculty attended targeted workshops hosted by ORD to help them hone their research idea, develop a concept paper, gather peer feedback, communicate with prospective Program Officers, and draft a competitive and persuasive proposal. Cohort participants are partnered with mentors – CSUF senior faculty with a history of successful federal grant submissions and awards – who will advise them on their academic and research goals.

**“Participating in the Federal Research Grant Writing Mentorship Program was a crucial experience in my professional development. Although I had submitted small grant proposals to foundations, I wanted to submit a large external grant to NSF. I started the grant proposal three times and always failed to complete the final submission. However, when I participated in the grant writing mentorship program, I received the feedback and guidance I needed and was able to submit not just one, but three large external grants. The monthly meetings serve as an accountability system, helped me tackle all the elements of the external grant and work at a pace that allowed me to complete the grant. The training was outstanding and gave me the confidence and tools to submit new grants in the near future.”**

**-Dr. Lucia Alcalá**

**“The Federal Research Grant Writing Mentorship Program was instrumental in teaching me how to organize my thoughts for a scientific audience, but also for a broader audience. I was introduced to not only physical writing resources, but also contacts at the university who were able to help me with logistical questions about my budget and budget justification as well as how to represent the university and my research in the best light to grant reviewers. I was able to apply what I learned in the program to my grant applications, resulting in a successful NSF grant on my first attempt at an external grant.”**

**-Dr. Joya Cooley**

Dr. Cooley was awarded \$239,204 from the National Science Foundation (NSF) for the project “Launching Early-Career Academic Pathways in the Mathematical and Physical Sciences (LEAPS-MPS): Interrogating Negative Thermal Expansion in Earth-Abundant Oxide Materials”

# Faculty Selected



**Dr. Lucia Alcalá,**  
Associate Professor,  
Department of Psychology



**Dr. Joseph Carlin,**  
Associate Professor,  
Geological Sciences



**Dr. Joya Cooley,**  
Assistant Professor,  
Department of Chemistry  
and Biochemistry



**Dr. Roselyn Du,**  
Associate Professor,  
Department of Communications



**Dr. Julia Drouin,**  
Assistant Professor,  
Department of Communication  
Sciences and Disorders



**Dr. Veronica Herrera,**  
Associate Professor,  
Division of Politics,  
Administration, and Justice



**Dr. Julian Jefferies,**  
Associate Professor,  
Literacy and Reading Education



**Dr. Rakesh Kumar Mahto,**  
Assistant Professor,  
Computer Engineering Program



**Dr. Maria Malagon,**  
Associate Professor,  
Department of Sociology



**Dr. Huda Munjy,**  
Assistant Professor,  
Civil and Environmental  
Engineering



**Dr. Nicholas Salzameda,**  
Professor,  
Department of Chemistry  
and Biochemistry



**Dr. Ying-Chiao Tsao,**  
Associate Professor,  
Department of Communication  
Sciences and Disorders

# ORSP ADVANCED GRANT WRITING ACADEMY

ORSP has contracted with Hanover Research to provide proposal development support for mid-career faculty interested in revising & resubmitting competitive external proposals. Through the grant writing academy, faculty will be equipped with grantsmanship skills, funding landscape knowledge, strategic grant position, and receive customized proposal review & revision support in grant submission to a federal agency.

As part of this new initiative, six (6) CSUF Faculty were selected as the 1st cohort. From April 2020 to December 2021, faculty attended virtual sessions led by Hanover's Grant Consultants to develop grant seeking skills in alignment with targeted needs and interest areas, work on their individualized development plan, and receive proposal critique and revision support to improve their quality and competitiveness.

## Faculty Selected



**Dr. Daniel Curtis**  
Associate Professor,  
Department of Chemistry  
and Biochemistry



**Dr. Alison Marzocchi**,  
Assistant Professor,  
Department of Mathematics



**Dr. Stevan Pecic**,  
Assistant Professor,  
Department of Chemistry  
and Biochemistry



**Dr. Sinjini Mitra**,  
Associate Professor,  
Department of Information  
Systems and Decision  
Sciences



**Dr. Sagil James**,  
Professor,  
Mechanical Engineering



**Dr. Yu Bai**,  
Associate Professor,  
Computer Engineering  
Program

“ The Advanced Grant Writing Academy helped me tremendously. The Hanover staff was very helpful and provided much needed inspiration and constructive criticism. They really helped me as a scientist to better determine the science that I want myself and my students to do by narrowing my focus. They also really helped my grant writing skills by helping me frame my scientific questions in more interesting and exciting ways. ”

-Dr. Daniel Curtis

“ The grant academy really helped me understand what the funders are looking for in specific areas of a proposal; for example, in the “broader impacts” section for NSF. I also feel that I have a much better understanding about how to deal with a proposal rejection and how to leverage the review committee's feedback in preparing a more competitive proposal for future submission. ”

-Dr. Sinjini Mitra

Dr. Alison Marzocchi and her colleagues were awarded \$297,118 from the National Science Foundation for a three-year project titled, "META: Mathematics Equity Through Teaching Actively"

# STUDENT RESEARCH & CREATIVE ACTIVITIES

In the 2020-2021 academic year, the Office of Research and Sponsored Projects (ORSP), Student Creative Activities and Research (SCAR) Faculty Fellow, and Dr. Terri Patchen supported various student activities. These activities include: the **Southern California Conferences for Undergraduate Research (SCCUR)**, **Student Research Competition (SRC)**, **Outstanding Student Scholarly and Creative Activities (OSA) Award** and **Posters on the Hill (POH)**.

## CSUF/CSU Student Research Competition (SRC)

The **CSUF/CSU Student Research Competition (SRC)** promotes excellence in undergraduate and graduate research and creative activity. CSUF recognizes outstanding student accomplishment, so each year we participate in the **CSU Student Research Competition (SRC)**. The competition consists of two phases. The first phase is a CSUF competition held for CSUF undergraduate and graduate students from all majors. Ten winners are chosen from the first phase and receive a \$100 cash-prize and move on to the second phase of the competition. The second phase is a CSU system-wide competition in which the ten winners from the first phase will compete with other students. 1st and 2nd place winners from the second phase are awarded a cash prize.

In the 2021 Student Research Competition **four CSUF students** went on to win in the CSU system-wide competition. CSUF students **Sierra Farquhar-Wulff**, **Alexa Vega Rivas**, **Kathryn Eckholdt**, and **Makar Makarian** were chosen as winners in the CSU Student Research Competition.



**1st place**  
Sierra  
Farquhar-Wulff



**1st place**  
Alexa Vega  
Rivas



**2nd place**  
Kathryn  
Eckholdt



**2nd place**  
Makar  
Makarian

## Southern California Conferences for Undergraduate Research (SCCUR)

CSUF also participates in the **Southern California Conferences for Undergraduate Research (SCCUR)**, which is held each November. **SCCUR** is a one-day conference held in the greater Los Angeles area. Its purpose is to provide a forum for presentation and discussion on student research and creative activities. The conference is open to all disciplines. Dr. Terri Patchen along with ORSP and SCAR staff help students to participate in this competition.

# Outstanding Student Scholarly and Creative Activities Award (OSA)

ORSP supports student research and creative activities through the **Outstanding Student Scholarly and Creative Activities Award (OSA)**. Each year the award is presented to one undergraduate and graduate student per college. All current CSUF students are eligible and faculty may nominate one student. The purpose of this award is to recognize excellence in student research or creative activities participation.

In the **2021 Outstanding Student Scholarly and Creative Activities Awards (OSA)** 15 students were chosen as award recipients. At least, two students were chosen per college (exception CBE):

Arriel Albarez	HHD	Asha Bhattacharya	CBE
Delia Sanchez	HHD	Rebecca Case	COMM
Alan A. Guandique	HSS	Carina Barbosa	COMM
Dylan Serpas	HSS	Itiel Barrera	COE
Gwendolyn Lind	NSM	Jermain Pipkins	COE
Courtney White	NSM	Patrick Babb	ECS
Alex Padilla	COTA	Jo Wang Dickinson	ECS
Carson Julian	COTA		

## Posters on the Hill (POH)

Each year the **Posters on the Hill (POH)** poster session is hosted by the Council on Undergraduate Research (CUR) on Capitol Hill. **POH** aims to ensure that US Congress members who provide funding for research and education have a clear understanding of the programs they fund and why these programs are important. Nothing demonstrates the value of undergraduate research more effectively than the words and stories of the student participants themselves. CSUF undergraduates are highly recommended to participate and in order to support CSUF undergraduates the Office of Research and Sponsored Projects (ORSP) will fund all CSUF undergraduate registration fees for this event.

In the **2020 Poster on the Hill** event CSUF student **Isaiah Colton Thompson** was chosen as a participant winner to have his scholarly work presented at Capitol Hill.



**POH Winner**

Isaiah Colton Thompson

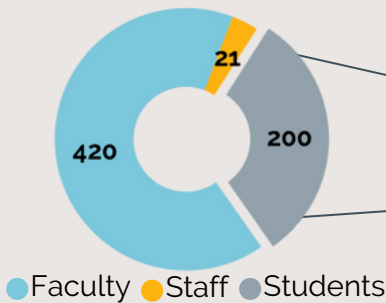
# RESEARCH COMPLIANCE

A key goal of the Office of Research Compliance is to ensure that research at CSUF is conducted safely, ethically, and legally. The Compliance Office facilitates the meeting of this goal by coordinating the University's Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC), programs for Responsible Conduct of Research (RCR), and Institutional Biosafety Committee (IBC).

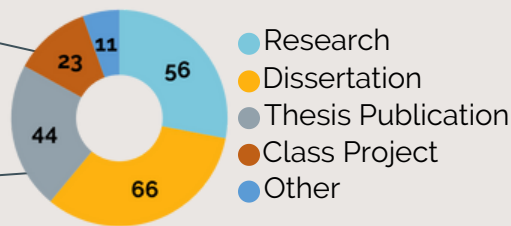
## Protocols Reviewed & Approved in 2020-2021

### IRB Protocols

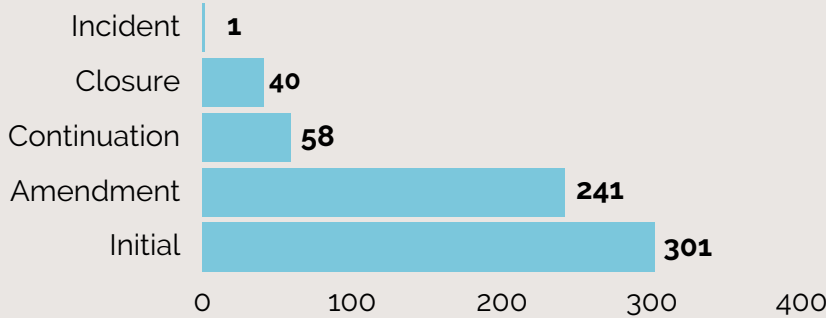
#of IRB Protocols



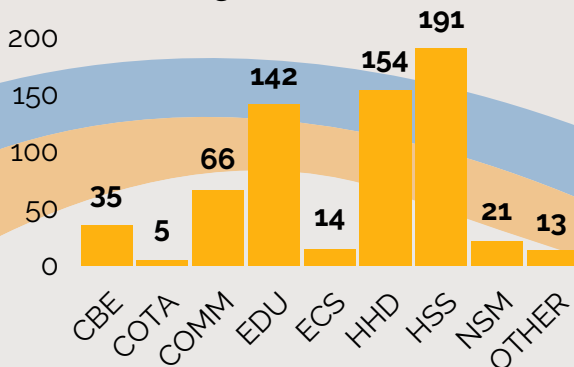
Student Distribution



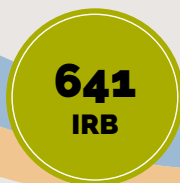
Submission Type



College Distribution

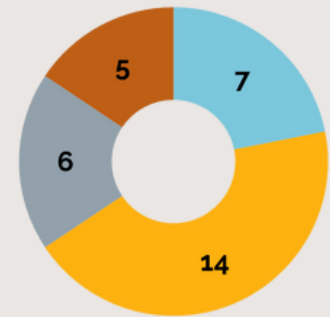


Total Protocols

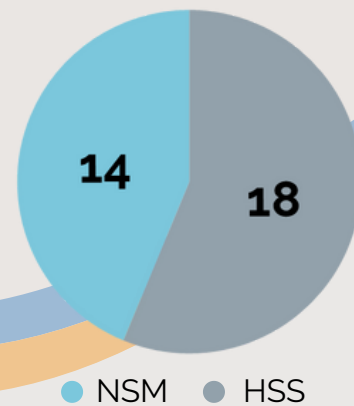


### IACUC Protocols

# of IACUC Protocols



College Distribution





# OFFICE OF RESEARCH AND SPONSORED PROJECTS

The Office of Research and Sponsored Projects (ORSP) works with other units throughout the campus to seek external support for faculty research, creative activity, and institutional projects that support the educational and service mission of the university. Collaboration is sought across disciplines, departments, and community partners in preparing proposals to federal, state, and private agencies.

ORSP staff assist with proposal development, proposal submission to external funding agencies, post award support, and help to assure that research and sponsored programs are conducted in accordance with the highest ethical and regulatory standards. Other ORSP activities include processing the faculty intramural grant awards programs and coordination of campus-wide student research initiatives and competitions.