

September 7, 2017

CHAIR FARRELL ACKERMAN  
Academic Senate, San Diego Division

SUBJECT: Senate ORU Task Force Final Report

Dear Professor Ackerman,

Please find attached the report from the Senate Task Force to Consider Organized Research Units. The Task Force was appointed and charged last summer and it was a big challenge to address these important issues.

One theme you will see in the report is that experiments with the multidisciplinary research support process are desirable because there are so many uncertainties. However, the success of this approach depends on continued involvement of the Academic Senate to insure appropriate points of view in the evaluation and evolution of new models. Another theme is that this report is not the final word on the matter but hopefully a step forward in an on-going effort.

The discussions we had about the differences in approaches to research in the different disciplines represented on the Task Force were extremely valuable and enlightening. While it may be efficient to focus on only one kind of approach (e.g. In the Arts & Humanities) in some future efforts, we encourage the Academic Senate and administration to always consider the broader perspective for all of the disciplines across the University, as represented on our Task Force.

I am sure the members of the Task Force would be happy to answer any questions you have about our report, as I would, if we can help you.

Sincerely yours,

A handwritten signature in blue ink that reads "Frank L. Powell". The signature is written in a cursive style with a large, prominent "F" and "P".

Frank L. Powell, Chair  
Senate ORU Task Force

cc: R. Horwitz  
T. Mallis  
R. Rodriguez

## Senate Task Force to Consider Organized Research Units (ORUs)

**Objective:** The objective of the Task Force is to examine the current role of ORUs and how they are evaluated, and to consider alternative structures that might better meet the needs of the campus. The Task Force's recommendations will be reported to Senate Council, after which a discussion with the Administration can begin.

**Specific issues** to be addressed include the following:

- 1) What are the benefits and disadvantages of ORU status versus Center status for General Campus, Health Sciences and Marine Sciences?
- 2) What form of ORU, Center or other entity would be most appropriate for Arts & Humanities faculty? *[NOTE: the task force realized that the same concerns apply to some of the social sciences too. Hence, we refer to these collectively as "AH/SS" as explained in the full discussion of this issue later.]*
- 3) Should each ORU establish its own metrics for success when it is established? Alternatively, what are the specific criteria by which all ORUs should be evaluated to ensure fairness?
- 4) Should grants received by ORU faculty be a criterion for evaluating ORU's, and, if so, how should the grants be counted? Faculty are frequently pressured to route grants through their home department, rather than through an ORU, which places an inherent conflict on the faculty member; what is the best way to address this conflict?
- 5) Can a standard template/financial statement be developed for the budget portion of the ORU review?
- 6) Should ORUs automatically sunset after a specified period of time?
- 7) What is the role of the Senate in review of non-ORU centers in the divisions and schools?

### **Executive Summary:**

- The task force assumes that multidisciplinary research is good because it enhances the research capacity of the faculty and promotes innovation, both of which enhance the overall reputation of UCSD.
- The term "Center" is used in many ways at UCSD but we are concerned only with multidisciplinary research centers that utilize common institutional support, i.e. funds that could be used for other research purposes at UCSD.
- A main benefit of designating ORU vs. non-ORU center status for the institution is formalized faculty input in ORU establishment and review according to principles of shared governance. Similar faculty input could add value for comparable non-ORU multidisciplinary research centers also and there is policy to support it.
- Fundamental differences in how research is (a) done and (b) supported in science

and engineering vs. arts and humanities and some social sciences preclude an effective common model for establishing and supporting multidisciplinary research centers in all of these areas.

- The current ORU policies work well for most ORUs in science and engineering that rely on external grants to conduct research, and these policies should continue to be refined.
- The biggest barrier to faculty-initiated efforts in multidisciplinary research in science and engineering appear to be rules on how grants are “counted” in the PI’s department, versus where the work is actually done. The biggest barrier is *not* the opportunity to receive ORU support.
- We could not identify a common ideal model for multidisciplinary research in arts and humanities and some social sciences so we support the current experiments by the administration to support new models of such centers.
- Calls for the formation of new multidisciplinary research centers in arts and humanities and some social sciences should include faculty initiated efforts, as well as administrative initiatives. All efforts should involve faculty input in the spirit of shared governance.
- Previously identified examples of successful multidisciplinary research centers in the arts and humanities on and off campus appear to rely mainly on support from the institution, endowments and donors.
- The question of automatic sunsets depends on the philosophy of the multidisciplinary research support program. If it is to foster innovation and support research that is not possible in existing units, then it should have a natural life cycle promoting turnover even when campus resources are not growing.
- Automatic sunsets work with a model based on turnover and require mechanisms to (a) incorporate successful approaches that the University wants to continue into an evolving master plan, and (b) consider the future of faculty, trainees and staff in centers that sunset.
- The primary metric for a return on investment for multidisciplinary research centers should be scholarly activity that would not have been possible without the investment. UCSD faculty are capable and prepared to evaluate this (as evidenced by using the same metric for academic personnel reviews).

**Task Force activities:** The task force was appointed in the summer of 2016. We met several times during the 2016/17 academic year to discuss the issues and also had meetings with:

- Academic Senate leadership for orientation,
- VCR Sandra Brown and EVC Peter Cowhey about the history of ORU reform and new models of support being developed by the EVC for non-ORU research centers in Arts & Humanities and Social Sciences,

- CFO Pierre Ouillet, several of his administrative colleagues and CPB members about funding mechanisms
- Dean McGinnis (Biology) about the challenges ORUs present to traditional departments,
- Senate Council to provide a progress report and get feedback and input.

The task force prepared this report with input at the editing stage from members of CPB interested in the problem. We finalized the report using individual meetings and email in the summer of 2017.

**Fundamental considerations:** *The distinct feature of an ORU is that it pursues interdisciplinary or multidisciplinary research that might not be possible in a single division, department or existing organizational unit.* We supported the assumption that interdisciplinary research is desirable because it enhances the research capacity of the faculty and promotes innovation, both of which enhance the overall reputation of UCSD. This leads to the question of how to most efficiently and fairly distribute limited resources to support such research efforts organized across traditional campus units.

There are already several examples of multidisciplinary research centers at UCSD that never had ORU status, and others that do not plan to apply for renewal of ORU status. We refer to such centers, as well as some new models for effective multidisciplinary research units in Arts & Humanities and Social Sciences as “non-ORU Centers”. ***In referring to a non-ORU center throughout the rest of this report, we are concerned only with multidisciplinary research centers that utilize common institutional support, i.e. funds that could be used for other possible research purposes at UCSD but traditionally have been used for ORUs.*** Non-ORU Centers are distinguished from other centers on campus that do *not* have a primary goal of multidisciplinary research, for example centers for educational or outreach programs, or that publicize or coordinate a disciplinary research program. An Appendix is attached listing all of the UCSD ORUs and non-ORU research centers that we can currently find on UCSD websites. It also includes other types of centers we identified at UCSD but it is almost certainly incomplete.

We quickly recognized that there would be fundamental differences in answers to our questions between disciplines. This diversity is driven by differences in both how the research is funded and the culture of how the research is actually done, and is most clearly seen between the Science, Technology, Engineering and Math (STEM) disciplines, on the one hand, and the Arts & Humanities and some Social Sciences (AH/SS), on the other. (We note that our charge singled out Arts & Humanities but clearly some of the Social Sciences have more similarities with A&H than STEM so they are grouped in our report.) These differences are considered in detail under Specific Issue #2, “What form of ORU, Center or other entity would be most appropriate for Arts & Humanities faculty?” However, it is fundamental to recognize such diversity in all of our consideration and recommendations, especially considering the long history of efforts at UCSD to try and fit all multidisciplinary research programs into the ORU model.

We note that the current ORU model works well for most multidisciplinary research programs in STEM disciplines that are funded mainly by external grants, and we do not want to waste effort trying to fix something that is not broken. However, we do have other recommendations that depend on the philosophy of a program in which the administration provides discretionary research support. If the program is focused on innovation in new multidisciplinary approaches, then it should have a natural life cycle with regular turnover in the programs receiving such support. The source of such support ultimately impacts the recommendations too.

### **Specific issues:**

#### **1. What are the benefits and disadvantages of ORU status versus Center status for General Campus, Health Sciences and Marine Sciences?**

We observed that the main benefit of ORU status for most ORUs is the financial support they receive from ORA (or the VC of Health or Marine Sciences) and assigned research space, while the main disadvantage is being subject to review. However, from the institutional point of view, we conclude that the main benefit of ORU status is formalized faculty input, via the Academic Senate, to the Administration for allocation of limited institutional resources to support interdisciplinary research. This insures the principles of shared governance, which we argue should apply to non-ORU centers as well -- at least those receiving common institutional support above a reasonable size, as discussed in detail under Specific Issue #7 later.

Considering the benefit of faculty input as part of a formal institutional review, a uniform policy for faculty input to ORU and non-ORU center reviews across all parts of UCSD is desirable to avoid barriers to multidisciplinary research. Specifically, the Vice Chancellors for Research, Health Sciences and Marine Sciences should agree on common principles and policies to support interdisciplinary research instead of developing independent policies to avoid involving each other in reviews. We also note that if ORU and non-ORU research centers are established for finite periods of time with automatic sunsets (see #6), it should be easier to establish cost-sharing arrangements for a finite period of time for centers extending across the major divisions at UCSD.

#### **2. What form of ORU, Center or other entity would be most appropriate for Arts & Humanities and some social science faculty?**

The task force concluded that there is no single ideal form for an ORU or non-ORU to bring together researchers in departments in the Arts and Humanities and some Social Sciences (referred to collectively here as "AH/SS"). Organizing multidisciplinary research in AH/SS must take into account both how research is conducted and presented, and how it is funded. In general, the ORU model developed for the hard sciences does not work well for AH/SS because both of these aspects are quite different.

Formal collaboration, especially collaboration that reaches the level of co-authorship, is unusual in AH/SS. Much research is done alone, whether in libraries and archives, or with non-academic people in communities near or far, through surveys, interviews, and ethnographic observation. Most research is published in single-authored monographs, through University presses that often focus on certain fields; in single-authored substantial articles in field journals; and as book chapters in multi-author collections.

Such publications, as well as the editorship (or co-editorship) of such collections, form the foundation of scholarly engagement and promotion. Collaboration, often in the form of conferences and workshops, can lead to multi-author volumes; but each author is responsible for his/her own chapter, with input from the editors to tie it all together and write an introduction explaining the impact of the work on the field. Collaboration can also lead to important multi-authored books, articles, digital projects, performances, and artworks, but the success of collaborative spaces cannot be judged solely by such obvious results.

Formal, funded collaboration takes the shape of invited lecturers presenting new, usually unpublished work; conferences with researchers' papers presented and discussed in various ways; workshops in which work-in-progress of each member is read intensively in turn so that it can be improved; symposia in which a group focusses on the work of one key researcher; seminars in which a group reads and discusses sources or publications together; and, increasingly, more varied and creative formats including digital cooperation. Such group work is critical to AH/SS, even when publications bear only one name as author. (The long acknowledgement sections in publications reflect the style of collaboration.) In these settings, AH/SS faculty, graduate students, and even undergraduates, at levels appropriate to their work, engage the major debates within and across fields, shape their arguments by presenting them publically, hear criticisms that change their views, garner suggestions about new sources, and meet theories from other disciplines that have a bearing on their subject. Precisely because most research and writing is done solo, it is critical for AH/SS researchers to be able to frequently have such discussions, and for graduate students to be exposed to diverse ideas outside of their area of specialization. Further, in such venues, the questions and comments of graduate students are productive for faculty research, not only because they have their own valuable contributions to make, but also because they are a part of the audience research results must speak to.

Further, graduate students and their advisors do not typically co-author publications, or even work on the same topic. Independence is valued and can be emphasized more than in some hard science, in which the costs to pursue new experimental approaches may be prohibitive. Graduate students are expected to develop their own topics of research within the larger area of their advisor's expertise, and to obtain funding for their own research from outside sources. Advisors typically have no grants that include funding for graduate students, and the Senate has made it very clear that faculty research funds may not be used for the graduate students' own work. Just as for faculty, for graduate students multidisciplinary collaboration of the kind described is critical for the design and creation of research that is theoretically engaged, complex, relevant to important issues, and based on the best research methods and data. The education of graduate students, and even undergraduates, should not be separated from faculty research as the University required of CILAS, resulting in the loss of Title VI funding. The cross-fertilization of multi-disciplinary collaboration is absolutely necessary to cutting-edge research by both faculty and graduate students in AH/SS.

For AH/SS studies human beings and their works in the world, and human beings do not act or think in ways that can be contained within one department's area of research. Multi-disciplinarity is not a luxury but a necessity. Cultural objects, social tendencies,

economic formations and changes, philosophical conceptions, change and continuity across time in every area of human life, and so on can only be understood through sophisticated theories constantly developing within and across departmental fields, through comparisons with other times and places, and through consideration of multiple kinds of data. Hence, effective multidisciplinary non-ORU centers within AH/SS (see below) should integrate research with education while maintaining a clear justification for research support.

Not only does published research look different in each AH/SS department, but also, of course, the productions of internationally-recognized faculty in visual arts, theatre, music, and creative writing at UCSD has an entirely different profile. In the AH/SS area, there is more and more interest in innovative projects that integrate typical academic research with creative productions, not only to reach a wider audience, but to come to a more multi-dimensional understanding of the various aspects of humanity and the world studied in AH/SS. An ORU or non-ORU multidisciplinary space could do much to bring academic research and artistic creation together in this way and would respond to current debates on the relation between practice-based work and research.

In regards to external funding sources for research in AH/SS, we note that many of the successful examples identified at other institutions by previous work groups tend to rely on endowments. These are essentially institutional funds. The Kavli Institute may be the closest to this at UCSD and it may provide some lessons for development if fundraising is an option to support such centers here. One complication for this expectation, however, is that endowments from single donors are not readily available for most AH/SS ORU's and non-ORU Centers. Building large enough endowments from multiple small donors can be expected to take more than the five years normally expected for self-sufficiency by ORA.

The Task Force could not identify an ideal program template for multidisciplinary research centers in the Divisions of Arts & Humanities and Social Sciences. However, we did note the possibility above of focusing a center around a nexus of research and performance practices, building on collaborations, some of longstanding, between, research and practice in Theater, Music, Visual Arts and Literature/Creative Writing, for example. We also support the Administration's recent approach to experiment with new types of programs to promote effective multidisciplinary and interdisciplinary research in collaboration with AH/SS. Examples of this approach includes the International Institute and the Black Studies Project in the Division of Social Sciences

In supporting the Administration's approach, we note that it is critical that the structure and support of these new models for effective multidisciplinary research be considered experimental. This emphasizes that we do not know if these models will be successful yet and, therefore, they can be expected to evolve as we learn what works or not. Also, we recognize how these new models emerged from "grass root" efforts and the creativity of faculty and students in these fields who have invested themselves in multidisciplinary and interdisciplinary research for several years prior. This latter point illustrates how new programs do not have to be "top down" or rely only on calls for competitive proposals. Mechanisms involving faculty in the review of non-ORU centers (see #7) should provide sufficient input to insure fairness even in the absence of an open competition. However,

this needs further consideration because members of the task force had different ideas about the value of having open competitions versus relying on the initiative of faculty and students to propose new models on their own. In summary, given our conclusions on other issues (establishing metrics for success, “counting” grants, automatic sunsets and role of Senate in review discussed below), we conclude that the experimental approach being taken by the EVC to support new multidisciplinary research in AH/SS is the best way to address this specific issue at this time.

**3. Should each ORU and non-ORU multidisciplinary research center establish its own metrics for success when it is established? Alternatively, what are the specific criteria by which all ORUs should be evaluated to ensure fairness?**

Yes, and in fact, we understand that this is the current approach being used by ORA when ORUs are formed. It is important that this is a negotiation between the “proposer” and the “supporter”, as ORA currently does with directors for new ORUs. We propose that the same approach can be used with new non-ORU centers. One criterion that should apply to all such interdisciplinary units is, “How do they contribute to scholarly and other research-based productivity at UCSD that could not be achieved within existing departmental or divisional (i.e. disciplinary) structures?” Hence, we also propose that the criteria should focus on scholarly productivity and creativity and not only external funding, especially in some cases in AH/SS where large amounts of competitive external research funding is not the norm. Our faculty is certainly capable of advising the Administration on the achievements of a research unit in terms of scholarly productivity for any discipline, considering the effectiveness of CAP in reviewing faculty in all disciplines. We acknowledge that using scholarly productivity as a criterion for establishing a new unit must look at a previous track record, but that is no different than looking at a previous record of securing external funding. Finally, we note that this approach should apply to non-ORU centers in contexts where research productivity may be scholarly or practice-based or both.

**4. Should grants received by ORU faculty be a criterion for evaluating ORU's, and, if so, how should the grants be counted? Faculty are frequently pressured to route grants through their home department, rather than through an ORU, which places an inherent conflict on the faculty member; what is the best way to address this conflict?**

[NOTE: this addresses mainly STEM areas.] The main metric needs to be scholarly productivity, as argued above. However, the question of how grants should be counted is critical to making any recommendations about multidisciplinary research units that cut across traditional administrative (financial) boundaries in the University. In fact, our group spent as much time on this problem as we did considering what the best structures might be to support multidisciplinary research in AH/SS. Also, this question may be the most important question to address “to consider alternative structure that might better meet the needs of campus.”

The most common input we got from faculty was that the biggest barrier to interdisciplinary research is *not* a lack of ORU status or funding. Rather they think the financial and administrative barriers to how grants are counted, and therefore how

institutional research support is allocated, is the biggest barrier to research extending across departmental or divisional boundaries.

ORA recognizes the problem and in response developed new reports for divisional deans to quantify “multidisciplinary augmentation”, i.e. how much their unit gains from external funding to PIs in another unit, balanced by how much their unit loses when their PIs run or contribute to a grant awarded to another unit. However, currently such gains or losses are informational only and there are no corrections in the distribution of indirect cost recovery to support the cost of the research wherever it is actually being done. The award and accounting of a grant exclusively in a PI’s home unit creates silos that are administrative versus scientific.

If grant funding and the associated institutional support were apportioned to faculty participating in an interdisciplinary research project according to where the work was actually done, then new collaborations could arise more naturally across divisional and disciplinary lines. We were pleased to learn from the VCR that the plan is to make adjustments to institutional support for inequities that show up in “multidisciplinary augmentation” between units, which is one approach to this goal. Apparently, SIO already splits grants extending across different units. Certainly this will present challenges for accounting but if ORA could help achieve this goal, then it might be as valuable as any direct support it could provide. The philosophy of this approach is to remove a stick instead of providing another carrot for interdisciplinary research.

#### **5. Can a standard template/financial statement be developed for the budget portion of the ORU review?**

This is relatively straightforward for traditional STEM and grant funded ORUs and CPB is already working with ORA to devise the most effective report. Similar to other issues discussed above however, it will be important to define the goals for such financial reports. Financial sustainability can be evaluated quite simply with formulae relating indirect costs recovered from grants to a unit with institutional support to the unit. However, it will be difficult, if not impossible, to estimate comparable “returns on investment” for AH/SS centers operating without major external grants or endowments. The challenge for units not relying on external grants to achieve their goals, is translating between institutional financial support and the unit’s scholarly output. Regardless of the metric for success, however, the value added by the multidisciplinary approach, versus existing divisional and departmental approaches, should be quantified.

#### **6. Should ORUs automatically sunset after a specified period of time?**

Establishing ORU and non-ORU centers with institutional support for a finite period of time has several pros and cons, all of which relate to the idea of establishing the new idea of a “life cycle” for such units. For example, automatic sunsets only make sense if there is a comparable policy for establishing new units also on a fixed time scale, which needs to be adjusted for growth or contraction on campus. The future of staff and trainees supported by a unit facing a sunset, as well as that of faculty with research programs dependent on support through the unit, need to be addressed also. Hence, establishing a policy for automatic sunsets has major implications for the objectives and philosophy of an institutional program to support multidisciplinary research.

Factors to consider include that multidisciplinary research is typically innovative in combining new ideas. If this is the primary goal of an ORU or non-ORU center, then automatic sunsets make sense as a mechanism to establish a natural turnover in the program to fund new efforts. If an ORU is still productive after, for example, ten years, then most likely it has established its approach as mainstream. If and when a multidisciplinary approach matures to this point, then it needs to be evaluated relative to the other existing traditional, disciplinary research units at the institution and incorporated into the research portfolio either as a new unit within a division or department, or as new department that stands alone. An example of this life cycle at UCSD may have been Biomedical Engineering. We note that this approach should work even if the campus is working with a master plan that does not depend on continuous growth (of the student body or external funding). Steady-state planning has to incorporate turnover and renewal to keep on the cutting edge of research in any case, and such turnover is in line with the general philosophy of sustainability at UCSD.

If a policy was adopted to automatically sunset ORUs and non-ORU centers after 5 years, with the option to compete for one more 5 year renewal (perhaps at a reduced level of support), then an institutional support program for ORU and non-ORU centers could be run similar to the current FISP program. This works well for STEM programs relying on external funding for research support and could accommodate the new models for non-ORU multidisciplinary research centers being developed by faculty in AH/SS discussed above (see #2). Such a policy also needs to address how a unit is “decommissioned” at sunset (future of staff, trainees and faculty research) and how such processes fit, or not, with University policies, for example on disestablishment in the Compendium. However, one can imagine a scenario where this approach leads to “a change only for the sake of change”. For example, consider a multidisciplinary research area that developed to the level of being able to sustain itself independently with external funding, and the field more broadly became established such that departments were being organized for it in our peer universities. If our master plan did not allow for growth in the area’s home division, and the home division could not afford to decommission another existing unit, then this research program would cease at UCSD if it depended on such a multidisciplinary research policy for support. Hence, this raises serious and complicated questions and perhaps the best approach would be to do an experiment. For example, a program such as that described above could be used to launch some new ORU and non-ORU research centers with automatic sunsets, recognizing that there would be serious details to be worked out during the sunset phase.

We also note that such policy should treat disciplines fairly by likely creating similar financial benefits and challenges for a AH/SS non-ORU center or grant-based STEM ORU at sunset. For AH/SS, there is limited external support for research so those activities would need institutional support to continue beyond a sunset. This requires new resources (i.e. growth) or redirecting resources (i.e. updating a departmental or divisional master plan), to continue. A similar situation is likely for a successful STEM ORU with grant funding also. For example, it probably requires more than 7.5% of \$1 million in cost recovery (i.e. the current formula) to support a successful program office.

Finally, this issue also raises the general question, “What is the ultimate source of such institutional support?” Assuming it involves some form of indirect cost recovery, we

note that any new policies for multidisciplinary research support should be considered in the broader context of institutional support for all of the research programs initiated by the faculty who generate these indirect costs. For example, it may be appropriate to balance support for such a new multidisciplinary research support program with a program to “bridge” gaps in external grant funding for historically successful disciplinary research programs. The latter is currently covered by the Academic Senate Bridge and Research Grant Funding programs, which also consider applications to seed new areas of research. This program has proved very efficient in terms of return on investment (at least on bridge grants).

### **7. What is the role of the Senate in review of non-ORU centers in the divisions and schools?**

For non-ORU centers, the lack of faculty review, advice or input to the administration can lead to questions of fairness, damage to faculty morale and lack of respect for the University’s principle of shared governance. Therefore, we propose that the Academic Senate could play a role in the establishment and review of non-ORU centers also, especially in new initiatives in AH/SS that are designed to achieve the same general goals of interdisciplinary research as ORUs (see below). Of course, we do not propose involving the Academic Senate in reviewing every center because there need to be limits that recognize the cost of review and the value it can add, as considered below.

Also, the Academic Senate, per se, does not need to be involved in all reviews if there are other organized faculty groups that can provide input in the spirit of shared governance. For example, ORUs in Health Sciences that are transitioning to non-ORU status could involve representatives from the Health Sciences Faculty Council in reviews, playing a role equivalent to COR and the Academic Senate for ORU reviews on the General Campus.

There is policy to support this faculty input to non-ORU center reviews in the Compendium. “Universitywide Review Processes for Academic Programs, Academic Units, & Research Units” outlines the ORU creation and review process. In section V.A. Organized Research Units (page 29):

“Non-ORU Center: The term Center may be used for research units not formally constituted as ORUs upon approval by the Chancellor after consultation with the divisional Academic Senate. Before approval is granted for a Center that is not an ORU, the campus may stipulate terms and conditions such as a process for appropriate periodic review, including administration, programs, and budget; appointment of a director and advisory committee; an appropriate campus reporting relationship; and progress reports.”

The non-ORU centers that should have Academic Senate review need to be defined. As a starting point we note the current workload the ORU reviews that the Committee on Research (COR) effectively handles. Hence, COR should be able to handle the review of any ORUs that convert to non-ORU research centers, for example in Health Sciences. Similarly, COR should be able to handle the review of new models for non-ORU centers being formed in AH/SS with the support of the EVC, some of which are replacing previous ORUs. Beyond these, criteria should be developed to establish a threshold in terms of the level of institutional investment (i.e. funding and space, which could be used

for other multidisciplinary research purposes). Similarly, there are much larger multidisciplinary research units that are subject to extensive external review (e.g. NIH review of the Moore's Cancer Center and UCOP review of Calit2) that may not need a separate ORU-like review by our faculty since it would not add value. In all cases the faculty and administration need to agree that Academic Senate review can add value and is worth the effort.

Respectfully submitted by:

Jeffrey Gee, GRD/SIO  
Dayo Gore, Ethnic Studies  
George Papen, ECE  
Frank Powell, Medicine (Chair)  
Sonia Remamoorthy, Surgery  
Margaret Schoeninger, Anthropology  
Oleg Shpyrko, Physics  
John Welchman, Visual Arts  
Marin Yanofsky, Biology

Appendix: Current ORU and non-ORU multidisciplinary research centers identified at UCSD.

[Blink: Information for UC San Diego Faculty and Staff](#)

[HOME](#) [Links](#) [Office of Research Affairs \(ORA\)](#) [Organized Research Units \(ORUs\)](#) [Roster and Contacts](#)

## ORA - ORU Roster and Contacts

Last Updated: July 19, 2017 12:09:17 PM PDT

Give [feedback](#)

See a roster and contact information for Organized Research Units (ORUs) at UC San Diego.

Organized Research Units	Director	Website
<b>Multi-Campus</b>		
IGCC - Institute on Global Conflict & Cooperation	Tai Ming Cheung	<a href="http://igcc.ucsd.edu/">http://igcc.ucsd.edu/</a>
IGPP - Institute of Geophysics and Planetary Physics	Steven Constable	<a href="https://igpp.ucsd.edu/">https://igpp.ucsd.edu/</a>
<b>General Campus</b>		
BCI - BioCircuits Institute	Jeff Hasty	<a href="http://biocircuits.ucsd.edu/">http://biocircuits.ucsd.edu/</a>
Calit2 /Qualcomm Institute - California Institute for Telecommunications and Information Technology-UCSD Division	Ramesh Rao/Larry Smarr	<a href="http://www.calit2.net/">http://www.calit2.net/</a>

*CCAS - Center for Cyber-Archaeology and Sustainability (see Social Sciences)	Thomas E Levy	<a href="http://ccas.ucsd.edu/">http://ccas.ucsd.edu/</a>
*CISA3 - Center of Interdisciplinary Science for Art, Architecture and Archeology	Falko Kuester	<a href="http://culturalheritage.calit2.net/cisa3/">http://culturalheritage.calit2.net/cisa3/</a>
*CITA - Center for Information Theory and Its Applications	Alon Orlitsky	
*CREL-Center for Research in Entertainment and Learning	Shlomo Dubnov	<a href="http://crel.calit2.net/">http://crel.calit2.net/</a>
CASS - Center for Astrophysics & Space Sciences	George Fuller	<a href="http://casswww.ucsd.edu">http://casswww.ucsd.edu</a>
CCB - Center for Circadian Biology	Susan Golden	<a href="http://ccb.ucsd.edu/">http://ccb.ucsd.edu/</a>
CCIS - Center for Comparative Immigration Studies	John Skrentny/ David Fitzgerald	<a href="http://www.ccis-ucsd.org/">http://www.ccis-ucsd.org/</a>
cDDI - Center for Drug Discovery Innovation	Michael K. Gilson/ Thomas Hermann	<a href="http://drugdiscovery.ucsd.edu/Pages/default.aspx">http://drugdiscovery.ucsd.edu/Pages/default.aspx</a>
CER - Center for Energy Research	Farhat Beg	<a href="http://cer.ucsd.edu/">http://cer.ucsd.edu/</a>
*Center of Excellence for Renewable Resources and	Jan Kleissl/ Carlos Coimbra	

Integration		
CGJ - Center on Global Justice	Fonna Forman and Gerry Mackie	<a href="http://globaljustice.ucsd.edu/">http://globaljustice.ucsd.edu/</a>
CHD - Center for Human Development	Terry Jernigan	<a href="http://chd.ucsd.edu/">http://chd.ucsd.edu/</a>
CILAS - Center for Iberian and Latin American Studies	David Mares	<a href="http://cilas.ucsd.edu/">http://cilas.ucsd.edu/</a>
CMRR - Center for Memory and Recording Research	Eric Fullerton	<a href="http://cmrr.ucsd.edu/">http://cmrr.ucsd.edu/</a>
*CNGDM-Center for Next Generation Digital Media	Sheldon Brown	
CRL - Center for Research in Language	Marta Kutas	<a href="http://crl.ucsd.edu/">http://crl.ucsd.edu/</a>
FF-21 - Food and Fuel for the 21st Century	Stephen Mayfield/ Julian Schroeder	<a href="http://ff21.ucsd.edu/">http://ff21.ucsd.edu/</a>
*Cal-CAB - California Center for Algae Biotechnology	Stephen Mayfield	<a href="http://algae.ucsd.edu/">http://algae.ucsd.edu/</a>
IEM - Institute of Engineering in Medicine	Shu Chien	<a href="http://iem.ucsd.edu/">http://iem.ucsd.edu/</a>
*BMTEC- Biomaterials and Tissue Engineering Center	Shaochen Chen/ Kang Zhang	<a href="https://iem.ucsd.edu/centers/biomaterials-tissue-engineering.html">https://iem.ucsd.edu/centers/biomaterials-tissue-engineering.html</a>
*BTC-Biophotonics Technology Center	Michael Berns/ David Hall	<a href="https://iem.ucsd.edu/centers/biophotonics-technology.html">https://iem.ucsd.edu/centers/biophotonics-technology.html</a>

*CANE-Center for Advanced Neurological Engineering (see INC)	William Mobley	<a href="http://iem.ucsd.edu/centers/advanced-neurological-engineering.html">http://iem.ucsd.edu/centers/advanced-neurological-engineering.html</a>
*CBSEC-Cardiac Biomedical Science and Engineering Center	Sylvia Evans/ Kirk Knowlton/ Andrew McCulloch	<a href="https://iem.ucsd.edu/centers/cardiac-biomedical-center.html">https://iem.ucsd.edu/centers/cardiac-biomedical-center.html</a>
*CEC-Center for Engineering in Cancer	Stephen Howell/ Liangfang Zhang	<a href="https://iem.ucsd.edu/centers/engineering-in-cancer-center.html">https://iem.ucsd.edu/centers/engineering-in-cancer-center.html</a>
*CED-Center for Engineering in Diabetes	David Gough/ Maike Sander	<a href="https://iem.ucsd.edu/centers/engineering-in-diabetes.html">https://iem.ucsd.edu/centers/engineering-in-diabetes.html</a>
*CMDI-Center for Medical Devices and Instrumentation	Juan Lasheras	<a href="http://iem.ucsd.edu/centers/medical-device.html">http://iem.ucsd.edu/centers/medical-device.html</a>
*CMILS-Center for Multiscale Imaging of Living Systems	Robert F. Mattrey	<a href="http://iem.ucsd.edu/centers/multiscale-imaging.html">http://iem.ucsd.edu/centers/multiscale-imaging.html</a>
*CMSA-Center for Mobile-health Systems and Applications	Kevin Patrick/ Joseph Wang	<a href="https://iem.ucsd.edu/centers/center-for-mobile-health-systems-and-applications.html">https://iem.ucsd.edu/centers/center-for-mobile-health-systems-and-applications.html</a>
*CMSR-Center for Musculoskeletal Research	Ju Chen/ Robert Sah/ Samuel Ward	<a href="http://iem.ucsd.edu/centers/musculoskeletal-research.html">http://iem.ucsd.edu/centers/musculoskeletal-research.html</a>
*CNME-Center on Nano-Medicine and Engineering	Adah Almutairi/ Ratneshwar Lal	<a href="https://iem.ucsd.edu/centers/nano-medicine-engineering.html">https://iem.ucsd.edu/centers/nano-medicine-engineering.html</a>
*CPH-Center for Perinatal Health	Todd Coleman/ Gladys Ramos	<a href="https://iem.ucsd.edu/centers/perinatal-health.html">https://iem.ucsd.edu/centers/perinatal-health.html</a>

*VEC-Vaccine Engineering Center	Klaus Ley/Victor Nizet	<a href="https://iem.ucsd.edu/centers/vaccine-engineering.html">https://iem.ucsd.edu/centers/vaccine-engineering.html</a>
*Whitaker Center for Biomedical Engineering	John Watson	<a href="http://iem.ucsd.edu/centers/whitaker-center.html">http://iem.ucsd.edu/centers/whitaker-center.html</a>
INC - Institute for Neural Computation	Terrence Sejnowski/ Gert Cauwenberghs	<a href="http://inc2.ucsd.edu/">http://inc2.ucsd.edu/</a>
*CANE-Center for Advanced Neurological Engineering (see IEM)	Tzyy-Ping Jung	<a href="http://inc.ucsd.edu/cane.html">http://inc.ucsd.edu/cane.html</a>
* The Science Collaboratory (TSC)	Roger Bingham	
KIBM - Kavli Institute for Brain and Mind	Nick Spitzer/ Fred Gage	<a href="http://kibm.ucsd.edu/">http://kibm.ucsd.edu/</a>
SDSC - San Diego Supercomputer Center	Michael Norman	<a href="http://www.sdsc.edu/">http://www.sdsc.edu/</a>
<b>School of Medicine</b>		
ARI - AIDS Research Institute	Douglas Richman	<a href="http://ari.ucsd.edu">http://ari.ucsd.edu</a>
CARTA - Center for Academic Research and Training in Anthropogeny	Ajit Varki/ Fred H. Gage/ Margaret Schoeninger	<a href="http://carta.anthropogeny.org/">http://carta.anthropogeny.org/</a>
CTRI - Clinical and Translational Research Institute	Gary Firestein	<a href="http://ctri.ucsd.edu/">http://ctri.ucsd.edu/</a>
CRBS - Center for Research in	Mark Ellisman	<a href="http://crbs.ucsd.edu/">http://crbs.ucsd.edu/</a>

Biological Systems		
GRTC - Glycobiology Research and Training Center	Ajit Varki/ Jeffrey Esko	<a href="http://grtc.ucsd.edu/">http://grtc.ucsd.edu/</a>
IGM - Institute for Genomic Medicine	Kelly Frazer	<a href="http://igm.ucsd.edu/">http://igm.ucsd.edu/</a>
UC San Diego Moores Cancer Center	Scott Lippman	<a href="http://cancer.ucsd.edu/">http://cancer.ucsd.edu/</a>
SIRA - Stein Institute for Research on Aging	Dilip Jeste	<a href="http://sira.ucsd.edu">http://sira.ucsd.edu</a>
<b>Scripps Institution of Oceanography</b>		
Climate, Atmospheric Science, and Physical Oceanography (CASPO) Research Division	Teresa Chereskin	<a href="https://scripps.ucsd.edu/caspo">https://scripps.ucsd.edu/caspo</a>
Center for Marine Biodiversity & Conservation (Program)	Lisa Levin	<a href="https://scripps.ucsd.edu/centers/cmbc/">https://scripps.ucsd.edu/centers/cmbc/</a>
Center for Marine Biotechnology and Biomedicine	William Gerwick	<a href="https://scripps.ucsd.edu/cmbb">https://scripps.ucsd.edu/cmbb</a>
Geosciences Research Division	David Hilton	<a href="https://scripps.ucsd.edu/grd">https://scripps.ucsd.edu/grd</a>
Integrative Oceanography Division	Peter Franks	<a href="https://scripps.ucsd.edu/iod">https://scripps.ucsd.edu/iod</a>
Marine Biology	Mark Hildebrand	<a href="https://scripps.ucsd.edu/mbrd">https://scripps.ucsd.edu/mbrd</a>

Research Division		
Marine Physical Laboratory	William Kuperman	<a href="https://scripps.ucsd.edu/mpl">https://scripps.ucsd.edu/mpl</a>
<b>Non-ORU Centers</b>		
<b>School of Medicine</b>		
Shiley-Marcos Alzheimer's Disease Research Center (ADRC)	Douglas Galasko/ Edward Koo	<a href="http://adrc.ucsd.edu/">http://adrc.ucsd.edu/</a>
Biostatistics and Bioinformatics	Karen Messer	<a href="http://biostat.ucsd.edu/">http://biostat.ucsd.edu/</a>
California NeuroAIDS Tissue Network	Igor Grant	<a href="http://cntn.hivresearch.ucsd.edu/">http://cntn.hivresearch.ucsd.edu/</a>
Center for AIDS Research	Douglas Richman	<a href="http://cfar.ucsd.edu/">http://cfar.ucsd.edu/</a>
Center for Community Health	Sheila Gahagan	<a href="https://www.pediatrics.ucsd.edu/divisions/general-pediatrics/about/cch/Pages/default.aspx">https://www.pediatrics.ucsd.edu/divisions/general-pediatrics/about/cch/Pages/default.aspx</a>
Center for Neural Circuits and Behavior	Anirvan Ghosh/ William Mobley	<a href="http://cncb.ucsd.edu/">http://cncb.ucsd.edu/</a>
CIHED – Center for Investigations of Health and Education Disparities	Antonio DeMaio/ Ross Frank	<a href="http://cihed.ucsd.edu/">http://cihed.ucsd.edu/</a>
CPM - Center for Pain Medicine	Mark S. Wallace	<a href="http://anesthesia.ucsd.edu/divisions/pain-medicine/Pages/default.aspx">http://anesthesia.ucsd.edu/divisions/pain-medicine/Pages/default.aspx</a>
HIV Neurobehavioral Research Center	Robert K. Heaton	<a href="https://hnrc.hivresearch.ucsd.edu/">https://hnrc.hivresearch.ucsd.edu/</a>
Howard Hughes Medical Institute	Robert Tjian	<a href="http://www.hhmi.org">http://www.hhmi.org</a>
Ludwig Institute for	Webster Cavenee	<a href="http://www.ludwigcancerresearch.org/location/san-">http://www.ludwigcancerresearch.org/location/san-</a>

Cancer Research, San Diego Branch		<a href="#">diego-branch</a>
<b>Scripps Institution of Oceanography</b>		
Center for Clouds Chemistry and Climate	V. Ramanathan	<a href="http://www-c4.ucsd.edu/">http://www-c4.ucsd.edu/</a>
Cooperative Institute for Marine Ecosystems and Climate	David Checkley	<a href="https://scripps.ucsd.edu/cimec">https://scripps.ucsd.edu/cimec</a>
**Scripps Center for Marine Archaeology	John Hildebrand/Thomas Levy	Coming Soon
<b>Arts &amp; Humanities</b>		
CUE - Center for Urban Ecologies	Teddy Cruz	<a href="http://visarts.ucsd.edu/center-urban-ecologies-sme-building-402-and-404-0">http://visarts.ucsd.edu/center-urban-ecologies-sme-building-402-and-404-0</a>
CHS - Center for Hellenic Studies	Thomas Gallant/ Edward Watts	<a href="https://history.ucsd.edu/affiliated/hellenic.html">https://history.ucsd.edu/affiliated/hellenic.html</a>
<b>Engineering</b>		
Bernard and Sophia Gordon Engineering Leadership Center	Albert P. Pisano	<a href="http://www.jacobsschool.ucsd.edu/GordonCenter/">http://www.jacobsschool.ucsd.edu/GordonCenter/</a>
CASB - Center for Algorithmic and Systems Biology	Pavel Pevzner	<a href="http://casb.ucsd.edu/">http://casb.ucsd.edu/</a>
CWC - The Center for Wireless Communications	Sujit Dey	<a href="http://www-cwc.ucsd.edu">http://www-cwc.ucsd.edu</a>
Charles Lee Powell Structural Research	Gil Hegemier	<a href="http://structures.ucsd.edu/node/52">http://structures.ucsd.edu/node/52</a>

Laboratories		
CNS - Center for Networked Systems	Stefan Savage	<a href="http://cns.ucsd.edu/">http://cns.ucsd.edu/</a>
Cymer Center for Control Systems and Dynamics	Miroslav Krstic	<a href="http://ccsd.ucsd.edu/">http://ccsd.ucsd.edu/</a>
Information Theory and Applications Center		<a href="http://ita.ucsd.edu/">http://ita.ucsd.edu/</a>
Von Liebig Entrepreneurism Center	Rosibel Ochoa	<a href="http://www.jacobsschool.ucsd.edu/vonliebig/">http://www.jacobsschool.ucsd.edu/vonliebig/</a>
<b>School of Global Policy and Strategy (GPS) [formerly International Relations and Pacific Studies]</b>		
USMEX - Center for U.S. Mexican Studies	Melissa Floca	<a href="http://usmex.ucsd.edu">http://usmex.ucsd.edu</a>
EmPac - Center on Emerging and Pacific Economies	Gordon Hanson	<a href="http://empac.ucsd.edu/">http://empac.ucsd.edu/</a>
GIIC - Global Information Industry Center	Roger Bohn	<a href="http://giic.ucsd.edu/">http://giic.ucsd.edu/</a>
<b>Physical Sciences</b>		
CAMSEE - Center for Advancing Mathematics, Science and Engineering Education	Jeffrey Remmel/ Gabriele Wienhasen	<a href="http://camsee.ucsd.edu/">http://camsee.ucsd.edu/</a>

Center for NMR Spectroscopy and Imaging of Proteins	Stanley J. Opella	<a href="http://nmrresource.ucsd.edu/">http://nmrresource.ucsd.edu/</a>
CTBP - Center for Theoretical Biological Physics	Herbert Levine/Jose Onuchic	
LMS - Laboratory for Mathematics and Statistics		
CCoM - Center for Computational Mathematics	Randolph Bank/ Phillip Gill/ Michael Holst	<a href="http://ccom.ucsd.edu/">http://ccom.ucsd.edu/</a>
IPAPS - Institute for Pure and Applied Physical Sciences	Brian Maple	
CIMS - Center for Interface & Materials Science	Brian Maple	
CAMSEE - Center for Advancing Mathematics, Science and Engineering Education	Jeffery Remmel/ Gabriele Wienhausen	
<b>Social Sciences</b>		
AAASRC - African and African-American Studies Research Center	Bennetta Jules-Rosette	<a href="https://www.facebook.com/AAASRC">https://www.facebook.com/AAASRC</a>
CCW - Center for Community Well-being	Michael Cole/ Hugh Mehan	<a href="http://ccw.ucsd.edu/">http://ccw.ucsd.edu/</a>
CGJ - Center on Global Justice	Fonna Forman/ Gerry Mackie	<a href="http://globaljustice.ucsd.edu/">http://globaljustice.ucsd.edu/</a>

CSAPE - Center for the Study of African Political Economy	Clark Gibson	
CREATE - Center for Research on Educational Equity, Assessment, and Teaching Excellence	Mica Pollock	<a href="http://create.ucsd.edu/">http://create.ucsd.edu/</a>
LCHC-Laboratory of Comparative Human Cognition	Michael Cole	<a href="http://lchc.ucsd.edu/">http://lchc.ucsd.edu/</a>
CEE - Center for Environmental Economics	Ted Groves	<a href="http://econweb.ucsd.edu/cee/">http://econweb.ucsd.edu/cee/</a>
CRGP - Center for Research on Gender in the Professions	Mary Blair-Loy	<a href="http://crgp.ucsd.edu/">http://crgp.ucsd.edu/</a>
SSPAD - Center for Sustainability Science, Planning and Design	Keith Pezzoli	coming soon: <a href="http://www.sustainability-science.ucsd.edu">www.sustainability-science.ucsd.edu</a>
**Scripps Center for Marine Archaeology	John Hildebrand/Thomas Levy	Coming Soon

\* Centers within ORUs

\*\* Joint center between Scripps Institution of Oceanography and campus Division of Social Sciences - Department of Anthropology

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**Scripps Division**

**Type**

**Research Topics**

Name	Director / Principal Investigator	Description	Type
Center for Climate Change Impacts and Adaptation (CCCIA) (https://scripps.ucsd.edu/centers/adaptation/)	MERRIFIELD, Mark (/profiles/mamerrifield)		Center
Center for Marine Biodiversity and Conservation (CMBC) (https://scripps.ucsd.edu/centers/cmabc/)	LEVIN, LISA (/profiles/llevin) ROUSE, Greg (/profiles/grouse) NORRIS, RICHARD (/profiles/rnorris) SANDIN, STUART (/profiles/ssandin) SEMMENS, BRICE (/profiles/bsemmens) SMITH, JENNIFER (/profiles/jes013) ABURTO OROPEZA, Octavio (/profiles/maburto) HAMDOUN, Amro (/profiles/ahamdoun)	Promotes interdisciplinary research and educational approaches to maintain the integrity of ocean ecosystems and manage their use in the face of rapid and inevitable global change.	Center
Center for Western Weather and Water Extremes (CW3E) (http://cw3e.ucsd.edu/)	RALPH, Marty (/profiles/mralph)	Provide water cycle science, technology and outreach to support effective policies and practices that address the impacts of extreme weather and water events on the environment, people and the economy of western North America.	Center
Scripps Center for Marine Archeology (SCMA) (http://scma.ucsd.edu/)	HILDEBRAND, JOHN (/profiles/jahildebrand) LEVY, THOMAS (/profiles/tlevy)		Center
Scripps Genome Center (http://genomes.ucsd.edu/sgc_index.shtml)	GAASTERLAND, Terry (/profiles/tgaasterland)		Center

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Name	Director / Principal Investigator	Description	Type
Broadband Seismic Data Collection Center (ANZA) ( <a href="http://eqinfo.ucsd.edu/anza/deployment/">http://eqinfo.ucsd.edu/anza/deployment/</a> )	VERNON, FRANK ( <a href="/profiles/flvernon">/profiles/flvernon</a> )	Seismic data for the following regional networks, arrays, and portable deployments.	Data Center
CLIVAR and Carbon Hydrographic Office ( <a href="http://cchdo.ucsd.edu/">http://cchdo.ucsd.edu/</a> )	SWIFT, JAMES ( <a href="/profiles/jswift">/profiles/jswift</a> )	Primary mission is to deliver the highest possible quality global CTD and hydrographic data to users.	Data Center
Coastal Data Information Program (CDIP) ( <a href="http://cdip.ucsd.edu/">http://cdip.ucsd.edu/</a> )	GUZA, Bob ( <a href="/profiles/rguza">/profiles/rguza</a> )	Measures, analyzes, archives, and disseminates coastal environment data for use by coastal engineers, planners, and managers, as well as scientists and mariners.	Data Center, Program
Geological Data Center (GDC) ( <a href="http://gdc.ucsd.edu/">http://gdc.ucsd.edu/</a> )	STOCKS, KAREN ( <a href="/profiles/kstocks">/profiles/kstocks</a> )	Archiving and providing access to marine geological data, particularly from Scripps vessels.	Collection, Data Center
Oceanographic Data Facility ( <a href="http://odf.ucsd.edu/">http://odf.ucsd.edu/</a> )	SWIFT, JAMES ( <a href="/profiles/jswift">/profiles/jswift</a> )		Data Center
Scripps Orbit and Permanent Array Center (SOPAC) ( <a href="http://sopac.ucsd.edu/">http://sopac.ucsd.edu/</a> )	BOCK, YEHUDA ( <a href="/profiles/ybock">/profiles/ybock</a> )		Data Center

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Name	Director / Principal Investigator	Description	Type
California Center for Algae Biotechnology (Cal-CAB) ( <a href="http://algae.ucsd.edu/">http://algae.ucsd.edu/</a> )		Identifying innovative solutions that partner algae research with private industry for commercial success.	External Affiliated Center
California Cooperative Oceanic Fisheries Investigations (CalCOFI) ( <a href="http://www.calcofi.org/">http://www.calcofi.org/</a> )	CHECKLEY, DAVID ( <a href="/profiles/dcheckley">/profiles/dcheckley</a> )	Studies the marine environment off the coast of California, the management of its living resources, and monitors the indicators of El Nino and climate change.	External Affiliated Center
California Current Ecosystem Long Term Ecological Research (CCE-LTER) ( <a href="http://ccelter.sio.ucsd.edu/">http://ccelter.sio.ucsd.edu/</a> )	OHMAN, MARK ( <a href="/profiles/mohman">/profiles/mohman</a> )	Investigating nonlinear transitions in the California Current coastal pelagic ecosystem.	External Affiliated Center
California Nevada Applications Program (CNAP) ( <a href="https://scripps.ucsd.edu/programs/cnap/">https://scripps.ucsd.edu/programs/cnap/</a> )	CAYAN, DANIEL ( <a href="/profiles/dcayan">/profiles/dcayan</a> )	Providing cutting edge climate science to stakeholders in water resources, natural resources and coastal resources.	External Affiliated Center
Center for Aerosol Impacts on Climate and the Environment (CAICE) ( <a href="http://caice.ucsd.edu/">http://caice.ucsd.edu/</a> )	PRATHER, KIMBERLY ( <a href="/profiles/kprather">/profiles/kprather</a> ) DEANE, GRANT ( <a href="/profiles/gdeane">/profiles/gdeane</a> )	CAICE is a Center for Chemical Innovation focused on the fundamental chemistry behind the impact of aerosol particles on our climate.	External Affiliated Center
Cooperative Institute for Marine Ecosystems and Climate (CIMEC) ( <a href="http://scripps.ucsd.edu/cimec">http://scripps.ucsd.edu/cimec</a> )	CORNUELLE, BRUCE ( <a href="/profiles/bcornuelle">/profiles/bcornuelle</a> )	Facilitates and enhances research cooperation among University of California and other West Coast universities and NOAA entities.	External Affiliated Center
Scripps Center for Oceans and Human Health (SCOHH) ( <a href="https://scripps.ucsd.edu/scohh">https://scripps.ucsd.edu/scohh</a> )	MOORE, BRADLEY ( <a href="/profiles/bsmoore">/profiles/bsmoore</a> ) ALUWIHARE, LIHINI ( <a href="/profiles/laluwihare">/profiles/laluwihare</a> ) ALLEN, ERIC ( <a href="/profiles/eallen">/profiles/eallen</a> ) JENSEN, PAUL ( <a href="/profiles/pjensen">/profiles/pjensen</a> ) FENICAL, WILLIAM ( <a href="/profiles/wfenical">/profiles/wfenical</a> )		External Affiliated Center

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**Appendix C**  
**Non-ORU SIO Research Centers**  
**(as of 6/3/16)**

Name	Director	Established	Governance	Website
<b>SIO Research Centers (Subject to SIO Center Policy - SIO Reviewed)</b>				
Center for Climate Change Impacts and Adaptation (CCCIA)		2015	New-Review TBD	<a href="https://scripps.ucsd.edu/centers/adaptation/">https://scripps.ucsd.edu/centers/adaptation/</a>
Center for Marine Biodiversity and Conservation (CMBC)	Levin, Lisa	2001	MBRD	<a href="https://scripps.ucsd.edu/centers/cmhc/">https://scripps.ucsd.edu/centers/cmhc/</a>
Center for Western Weather and Water Extremes (CW3E)	Ralph, F. Martin	2013	CASPO	<a href="http://cw3e.ucsd.edu/">http://cw3e.ucsd.edu/</a>
Scripps Center for Marine Archaeology (SCMA)	DeLoup, Damien/ Hildebrand, John/Levy, Tom	2015	SIO/UCSD Dept of Anthropology	New - Coming
Scripps Genome Center	Gaasterland, Terry	2003	MBRD	<a href="http://genomes.ucsd.edu/sgc_in dex.shtml">http://genomes.ucsd.edu/sgc_in dex.shtml</a>
Center for Environment and National Security (CENS)	Harnish, Reno	2009	Director's Office	<a href="https://scripps.ucsd.edu/cens">https://scripps.ucsd.edu/cens</a>

**External Affiliated Centers (SIO PI Involvement only - externally reviewed)**

Center for Aerosol Impacts on Climate and the Environment (CAICE)	Prather, Kimberly	2010	NSF	<a href="http://caice.ucsd.edu/">http://caice.ucsd.edu/</a>
California Center for Algal Biotechnology (Cal-CAB)	Mayfield, Stephen, UCSD		Campus ORU – Food & Fuel for the 21st Century	<a href="http://algae.ucsd.edu/">http://algae.ucsd.edu/</a>
Cooperative Institute for Marine Ecosystems and Climate (CIMEC)	Cornuelle, Bruce	2010	CASPO/MPL Multi-campus NOAA Initiative	<a href="https://scripps.ucsd.edu/cimec">https://scripps.ucsd.edu/cimec</a>
Scripps Center for Oceans & Human Health (SCOHH)	Moore, Bradley	2013	NSF/NIH	<a href="https://scripps.ucsd.edu/scohh/news">https://scripps.ucsd.edu/scohh/news</a>
California Nevada Applications Program (CNAP)	Cayan, Daniel	1999	NOAA	<a href="http://cnap.ucsd.edu/">http://cnap.ucsd.edu/</a>
California Cooperative Oceanic Fisheries	Checkley, David	1920	IOD	<a href="http://www.calcofi.org/">http://www.calcofi.org/</a>

Investigation (CalCOFI)				
California Current Ecosystem – Long Term Ecological Research (CCE-LTER)	Ohman, Mark	2004	IOD	<a href="http://ccelter.sio.ucsd.edu/">http://ccelter.sio.ucsd.edu/</a>

**Facilities (not subject to SIO Center Policy – not reviewed)**

Coastal Observing Research and Development Center (CORDC)	Terrill, Eric	2003	MPL	<a href="http://cordc.ucsd.edu/">http://cordc.ucsd.edu/</a>
California Spatial Reference Center (CSRC)	Bock, Yehuda	1997	NGS, Caltrans	<a href="http://csrc.ucsd.edu/">http://csrc.ucsd.edu/</a>
Center for Observations, Modeling and Prediction at Scripps (COMPAS)	Cornuelle, Bruce		CASPO	<a href="http://www.compas.ucsd.edu/">http://www.compas.ucsd.edu/</a>
Instrument Development Group (IDG)	Davis, Russ E.	1972	CASPO	<a href="http://idg.ucsd.edu/">http://idg.ucsd.edu/</a>
Ocean Bottom Seismograph Instrument Pool (OBS Facility)	OBSIP: Evers, Brent SIO PI: Orcutt, John	1999	OBSIP–Inc. Res. Institutions for Seismology (IRIS)	<a href="http://www.obsip.org/index.php/">http://www.obsip.org/index.php/</a>
Hydraulics Laboratory	Deane, Grant	1964	MSDC	<a href="https://scripps.ucsd.edu/hlab/staff">https://scripps.ucsd.edu/hlab/staff</a>

**Data Centers (not subject to SIO Center Policy – not reviewed)**

Broadband Seismic Data Collection Center	Vernon, Frank		IGPP	<a href="http://eqinfo.ucsd.edu/">http://eqinfo.ucsd.edu/</a>
CLIVAR and Carbon Hydrographic Data Office	Swift, James		NSF/NOAA	<a href="http://cchdo.ucsd.edu/">http://cchdo.ucsd.edu/</a>
Coastal Data Information Program (CDIP)	Terrill, Eric/Thomas, Julie/Guza, Bob/Feddersen, Falk		IOD	<a href="http://eqinfo.ucsd.edu/">http://eqinfo.ucsd.edu/</a>
Geological Data Center (GDC)	Stocks, Karen	1970	GRD	<a href="http://gdc.ucsd.edu/">http://gdc.ucsd.edu/</a>
Oceanographic Data Facility	Swift, James	1972	SOMTS	<a href="https://scripps.ucsd.edu/ships/shipboard-technical-support/odf">https://scripps.ucsd.edu/ships/shipboard-technical-support/odf</a>
Scripps Orbit and Permanent Array Center (SOPAC)	Bock, Yehuda	1990	IGPP	<a href="http://sopac.ucsd.edu/">http://sopac.ucsd.edu/</a>

Shore Station Program	McGowan, John/Terrill, Eric/Flick, Ron			<a href="http://shorestations.ucsd.edu/">http://shorestations.ucsd.edu/</a>
High Resolution XBT/XCTD Network Site	Roemmich, Dean			<a href="http://www-hrx.ucsd.edu/index.html">http://www-hrx.ucsd.edu/index.html</a>

January 25, 2016

WILLIAM GRISWOLD  
Chair, Committee on Committees

SUBJECT: Senate ORU Task Force Request

Dear Bill:

At the June 2016 Senate Council meeting, then Senate Chair Gerry Boss proposed creating a task force in response to issues raised during Senate evaluations of Organized Research Units in the spring. Senate Council agreed, and a charge for the task force has now been finalized. As this is a Senate only task force, I am requesting that Committee on Committee appoint its members. The *Senate Task Force to Consider Organized Research Units Charge* is attached. I look forward to your response.

Sincerely,



Robert Continetti, Chair  
Academic Senate, San Diego Division

cc: Kaustuv Roy, Divisional Senate Vice Chair  
Ray Rodriguez, Divisional Senate Director

**Senate Task Force to Consider Organized Research Units (ORUs) Charge**

January 25, 2016

Objective: The objective of the Task Force is to examine the current role of ORUs and how they are evaluated, and to consider alternative structures that might better meet the needs of the campus. The Task Force's recommendations will be reported to Senate Council, after which a discussion with the Administration can begin.

Specific issues to be addressed include the following:

- 1) What are the benefits and disadvantages of ORU status versus Center status for General Campus, Health Sciences and Marine Sciences?
- 2) What form of ORU, Center or other entity would be most appropriate for Arts & Humanities faculty?
- 3) Should each ORU establish its own metrics for success when it is established? Alternatively, what are the specific criteria by which all ORUs should be evaluated to ensure fairness?
- 4) Should grants received by ORU faculty be a criterion for evaluating ORU's, and, if so, how should the grants be counted? Faculty are frequently pressured to route grants through their home department, rather than through an ORU, which places an inherent conflict on the faculty member; what is the best way to address this conflict?
- 5) Can a standard template/financial statement be developed for the budget portion of the ORU review?
- 6) Should ORUs automatically sunset after a specified period of time?
- 7) What is the role of the Senate in review of non-ORU centers in the divisions and schools?

Proposed Task Force Composition

- Arts and Humanities Faculty Member
- Social Sciences Faculty Member
- Physical Sciences Faculty Member
- Biological Sciences Faculty Member
- Engineering Faculty Member
- Health Sciences Faculty Member
- Marine Sciences Faculty Member
- Committee on Research Current or Past Member
- Planning and Budget Committee Current or Past Member
- Former ORU Director

Staff: Senate Analyst

Proposed Timeline:

- Report by September 1, 2016