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Winter Symposium

Winter Symposium 2018

Jan 25th, 8:00 AM - 12:30 PM

Program Presentation

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2018 Winter Symposium

**Centers of Excellence:
A New Model for
Research and Scholarly
Activity at PSU**

2018 Winter Symposium Agenda

- 9:00 a.m.** – **Keynote, Question & Answer**
Dr. Daniel Sperling, University of California, Davis
- 10:00 a.m.** – **Table Discussions about Centers**
- 10:40 a.m.** – **BREAK**
- 11:00 a.m.** – **Discussions about Center Ideas**
- 12:00 p.m.** – **Center Pitches**
- 12:30 p.m.** – **Event Concludes**



2018 Winter Symposium

Keynote Speaker

Dr. Daniel Sperling

Distinguished Professor of Civil
Engineering and Environmental Science
and Policy, University of California, Davis

Art and Practice of Launching Successful University Research Centers ...based on decades of (sometimes painful) lessons

Daniel Sperling

Distinguished Blue Planet Prize Professor
Founding Director, Institute of Transportation Studies
University of California, Davis

and

Board Member, California Air Resources Board

25 January 2018



UC Davis Institute of Transportation Studies

By the Numbers

- Founded 1991
- 60 faculty and Ph.D. researchers
- 110 graduate students (1/2 in grad group administered by ITS)
- \$14M expenditures/year

Host 5 Centers

- Plug-in Electric and Hybrid Vehicle Center
- China Center on Energy and Transportation
- Sustainable Transportation Energy Pathways Program
- 3 Revolutions Mobility Program
- National Center for Sustainable Transportation
- Pavement Research Center (affiliated)

Host Interdisciplinary Grad Group (MS and PhDs)

Sponsorship and Engagement

- 60+ Company relationships
- 15 Government agencies
- NGO participation



Asilomar Conference on Transport and Energy (biennial since 1988)

ITS-Davis Activities and Functions

- Host and Support Research
 - Consortia, Centers
- Fundraising
 - 2 dedicated fundraisers
- Communications and Publicity
 - Press releases, social media, white papers and policy briefs, webinars
- Events
 - Workshops, conferences, visiting delegations

.... along with personnel, IT, purchasing, grants administration

Hosting lots of events AUGUST--SEPTEMBER

MOU signed with
Shaanxi Land
Group



6th International Cycling
Safety Conference

16th Biennial
Asilomar
Conference on
Transportation
and Energy,
hosted by ITS-
Davis under
auspices of TRB.



NOVEMBER, DECEMBER, JANUARY, AND FEBRUARY EVENTS



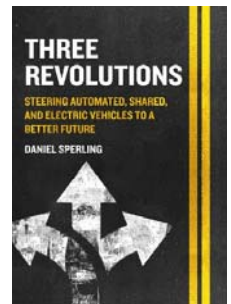
November 14-15:
**Permeable Pavement
Workshop hosted by the
University of California
Pavement Research Center**

December 7-8:
**STEPS Fall Symposium
and Advisory Board
Meeting**

January 19:
**Co-hosting Celebration of
California ARB's 50th
Anniversary**
(with Governor Jerry Brown)

January 30-31:
**Co-hosting California-
Germany ZEV
Symposium**
(Berlin, Germany)

February 26-28:
**2nd Annual Three
Revolutions Policy
Symposium**
(and book party!)



With laser focus on supporting, training, mentoring students....

2016-17 Corporate Affiliate Student Fellows (grad students)

Sponsors

- *BYD*
- *Lyft*
- *Nissan*
- *PG&E*
- *Hyundai*
- *Shell*
- *Toyota*
- *BMW*
- *ExxonMobil*
- *Daimler*



Preface: Universities are Conservative and Fairly Unique

- Flat (horizontal) organizational structure (vs hierarchical)
- Shared governance; tenured faculty are accountable for their research/teaching, not contributions to organization nor their “boss” (eg, loyalty)
- Universities are designed to be conservative institutions to retain disciplinary structure
- Thus:
 - changes are (painfully) slow
 - continuing tensions between faculty and administration
 - resistance to interdisciplinary initiatives

2 types of research centers

- Facilities based and basic science
 - Can function as cost center (lab/equipment recharging)
 - Funded largely by NSF, DOD, DARPA, NIH, other federal sources
 - Requires large upfront funding
- **Applied research (I focus on these)**

Why and How to Create Successful University Research Centers

- WHY: additional funding, enhanced profile, greater impact
 - Positioned for success because more focused on targeted constituencies and societal problems
- HOW: No formula: Very specific to the university, topic, people, but...
 - FIVE strategies

CASE STUDY:

Successful (EEC) vs. Unsuccessful (EI)

Two centers were launched about same time (10 years ago).

- **Energy Efficiency Center (EEC)**
 - established with seed grant of \$1M (in competition with other universities)
 - immediately created strong external advisory board
 - faculty chair: senior professor with director experience
 - exec director: recent MBA grad with experience
 - engaged fundraisers (“borrowed” from ITS)
- **Energy Institute (EI)**
 - championed internally by deans
 - premised on cluster hire of 12 young faculty
 - no advisory board
 - Faculty chair: senior prof but not experienced as director nor entrepreneurial
 - Minimal startup funds
 - no fundraiser nor exec director

Which succeeded?

Key Elements of Successful Centers

1. Effective and Entrepreneurial Leader

- Seeks funding opportunities
- Builds bridges externally
- Builds bridges internally with:
 - Depts to facilitate faculty recruitments
 - Faculty to collaborate

2. Unique and/or the Best, and Tailored Funding Model

- Identify distinct constituencies with funding (corporations, foundations, government agencies, legislature)
- Create research consortia, industrial affiliates if relevant
- Seed funding is necessary!
- Campus funding mechanisms needed (indirect overhead return on grant money helps, but not enough)

3. Engage (bribe) Academic Faculty

- Money
- Students
- Facilities (labs/space)

4. Provide Value-Added Activities

(for campus, faculty, students)

- Communications, events, and fundraising (preferably in-house capabilities for industry/foundations)
 - Disseminate research, raise profile
 - Fundraising with foundations and corporations, targeting constituencies
 - Leave individual philanthropy to central campus
 - Writing assistance for researchers (proposal writing, etc.)
 - Host webinars, workshops, conferences, social media, etc.
- Build strong research staff (in addition to academic faculty)
 - Recruit strong research faculty (non-academic)
 - Make them happy, rewarded, and secure
 - Create culture of appreciation (not treated as 2nd class citizens)

5. Create Engagement and Service Culture

- Create strong service culture internally—to engage academic faculty
 - Efficient/quality service: use shared and /or clustered services (IT, personnel)—especially for smaller centers
- Create strong engagement culture externally—to build research sponsorships, to be impactful

Role of Campus (Administrative) Leaders

- Champion centers
- Assure space is provided
- Facilitate cross-campus relationships:
 - Give colleges and depts. financial credit
 - “Broader” centers should report to Provost or VP research (not colleges or depts.)
- Facilitate academic faculty engagement
 - Be responsive to academic senate issues (faculty promotion, diversion of \$ from depts.)
 - Assure center involvement in recruiting
 - Explore innovations such as assigning faculty to centers for fixed terms (3-5 years)
- Assure “core” funding—indirect return, fixed allocations, \$ in lieu of individual fundraising (UM)

Ongoing Tensions/Challenges to Address

- Faculty, colleges, departments resist campus resources being “diverted” to centers
- Departments/colleges jealously guard faculty personnel actions—in terms of allocation of faculty FTE and promotions
 - Effect is to discourage faculty from affiliating with centers
- Deans control space and reluctant to give it to centers they do not fully control

Summary

Why Encourage Centers?

1. Mechanism to increase funding

- Assemble research teams to address interdisciplinary challenges (applied and basic)
- Better positioned than departments to target constituencies (companies, governments, foundations)

2. Enhance profile of faculty and increase impact

- Can target key audiences with events and communications (webinars, workshops)

Benefits that follow:

- Recruit better students and faculty
- Raise profile of university, faculty, service activities, research output

But it is not easy...

Thank You

Q & A

Key Questions for Faculty

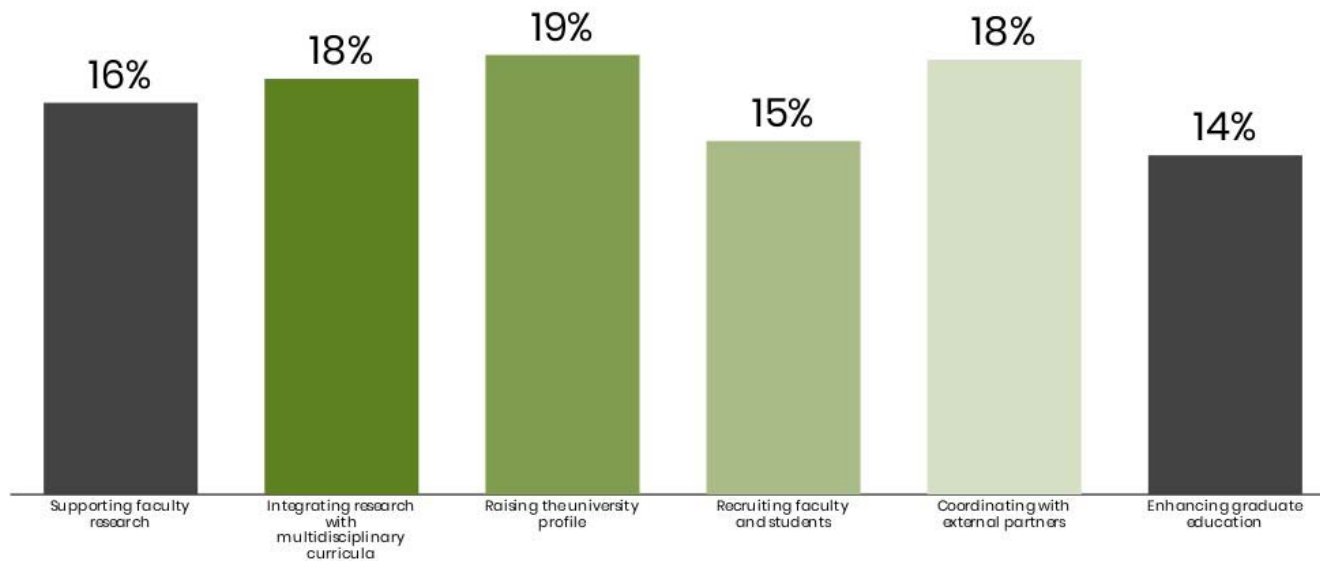
- What do you want from a center?
 - Money, promote faculty and their research (impact), help on proposals, equipment/facilities
- What don't you want a center to do?
- Governance of centers?
 - Senate faculty director? Exec. Comm.? (depends on size)
- How should the success of centers be measured?
 - Leveraged campus dollars, students employed, profile raised...



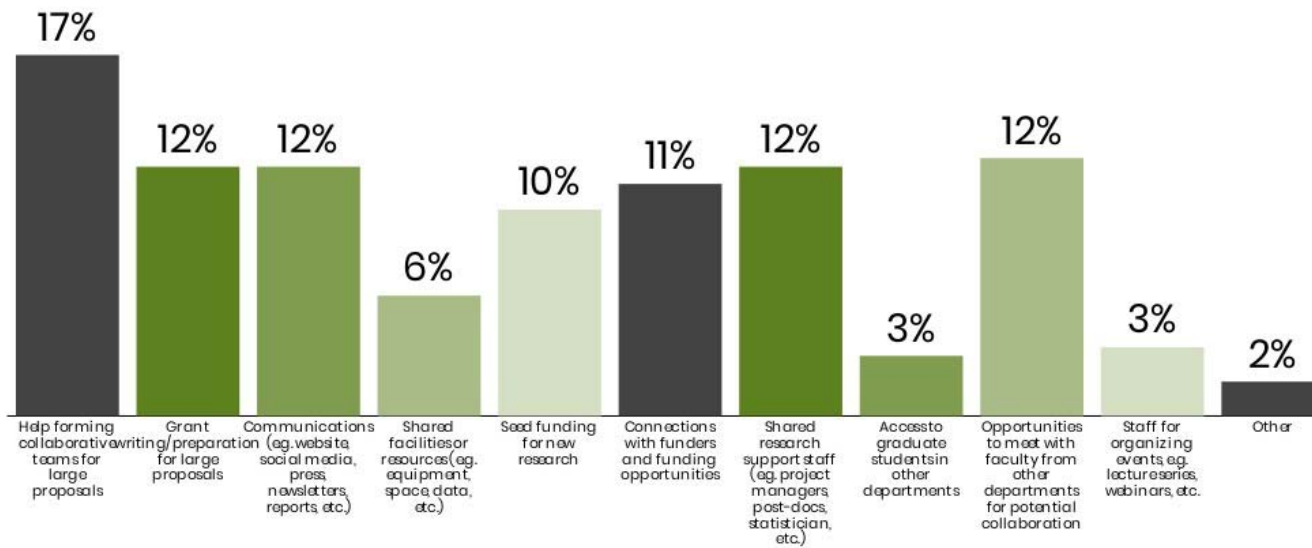
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Table Discussions

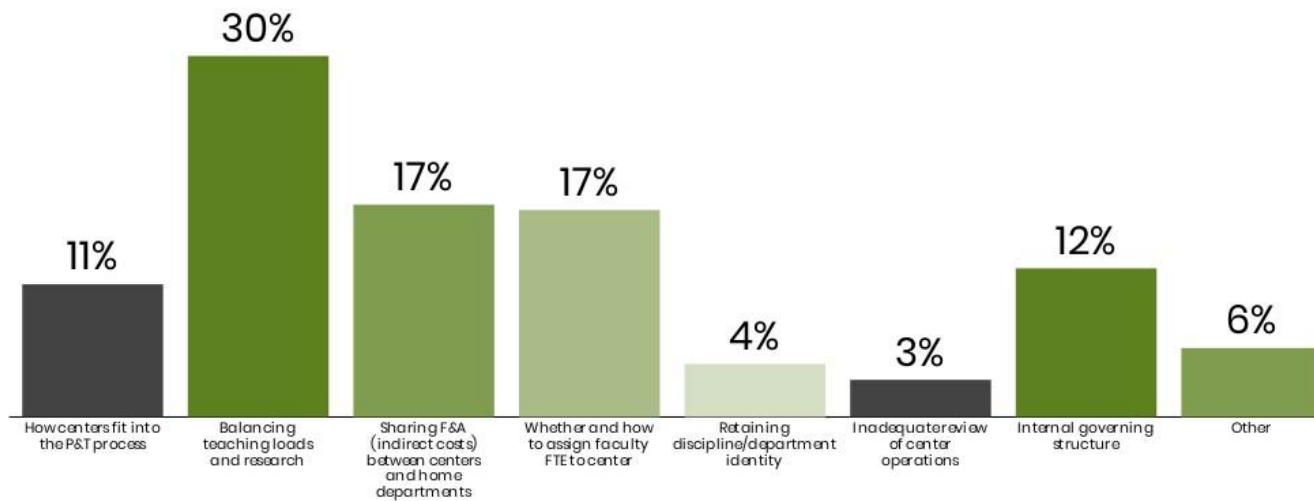
What important roles should a Center of Excellence play at a university? (Pick all that apply.)



As a faculty member or researcher, what activities/services from a center would be most valuable to you? (Choose two.)



What are your perceived challenges to successful centers? (Pick two.)



How would you measure the success of a center? Please answer in one word.





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BREAK

Return at 11:00a.m.

Proposal Topic	Table #(s)
Accessible & Affordable Higher Education	1
Center to Advance Design Education Research (CADER)	2
Children's Well-being	3
Civic Engagement and Impact Across the Lifespan	4
Classroom Innovation (Higher Ed)	5
Climate Change-resilient Metropolitan Regions	6
Community Resilience in Ecological-Socio-Technological Systems (CRESTS)* ...	7, 8
Development of Sustainable Social Innovation	9
Digital Humanities	10
Environmental Extremes*	Room 333 – 11, 12
Environmental Humanities	13
Equitable and Sustainable Economic Development	14
Interdisciplinary Center of Applied Social Sciences*	15, 16
Low-carbon Cities	17
Migration Studies*	18, 19
Planetary Health & PNW Waters (Sensing, Monitoring, and Modeling the PNW...)	20
Race, Inclusion, Equity, and Justice*	Room 333 – 21, 22, 23
Resiliency, Emergency/Disaster Planning & Response	24
Smart Cities*	25, 26
Smart Manufacturing/Mechatronics (Advanced Materials & Additive Manufacturing)	27
Social Determinants of Health	28
STEM Education*	29, 30
Sustainable Urbanization for Homeless	31
The Portland Institute for Computational Sciences	32
Theory of Culture	33

**Indicates more than one table reserved, based on response volume.*



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Center Ideas Discussion



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Center Pitches and Conclusions



Save the Date!

PSU/OHSU

Faculty Mixer

WHEN: 4:30–6:30 p.m.

Thursday, February 22

WHERE: Collaborative Life Sciences Building (CLSB)
2730 SW Moody Avenue

WHAT TO EXPECT:

A fun, informal evening for PSU and OHSU researchers to make new connections and discover potential partners for new projects or existing efforts.