PHYSICAL AND BIOLOGICAL SCIENCES COMMUNITY

Re: Fall 2015 Welcome Message

Dear Colleagues:

Greetings to you as we embark on a new academic year. As the fall quarter swings into full gear, I hope that your summer was personally and professionally rewarding. I hope this time of year is as exciting for you as it has always been for me.

This year, there are nearly 1250 new freshman and transfer students, 115 graduate students, and eight new faculty members. I want to welcome those who are new to PBSci in the 2015-16 academic year and acknowledge all the efforts that were made to see the departments and the division through another busy year.

What follows are highlights of the year’s divisional accomplishments. I invite you all to take time to acknowledge and celebrate your own department’s individual achievements as well. Please accept my appreciation for all of your contributions to the division, and for your support, commitment and service.

NEW FACULTY
I want to extend a warm welcome to our new faculty and invite each of you to make them feel at home at UC Santa Cruz. They are a tremendous asset to our division and we are fortunate to have them.

- Frank Bauerle - Mathematics
- Susan Carpenter - Molecular, Cellular, and Developmental Biology
- Nicole Feldl - Earth and Planetary Sciences
- Michael Hance - Physics
- Brant Robertson - Astronomy and Astrophysics
- Nikolaos Sgourakis - Chemistry
- Andrew Skemer - Astronomy and Astrophysics
- Jairo Velasco Jr. - Physics

PROMOTIONS
Join me in congratulating the following faculty on their promotion to Associate Professor (with tenure):

- Needhi Bhalla - Molecular, Cellular, and Developmental Biology
- Noah Finnegan - Earth and Planetary Sciences
- Kathleen Kay - Ecology and Evolutionary Biology
- Vicki Stone - Microbiology and Environmental Toxicology

The following faculty were promoted to Full Professor:

- Jonathan Fortney - Astronomy and Astrophysics
- Matthew McCarthy - Ocean Sciences
- Stefano Profumo - Physics
RETIREMENTS
We wish to acknowledge the hard work and dedication of the following faculty:

- Lisa Sloan - Earth and Planetary Services; 23 years of service
- Bruce Margon - Astronomy and Astrophysics; 9 years of service
- Tom Banks - Physics; 15 years of service

IN MEMORIAM
Robert Ludwig - Molecular, Cellular and Developmental Biology

NOTABLE FACULTY AWARDS, HONORS AND RECOGNITION
Many of our faculty members and researchers were recognized with prestigious award this year. Whether local, national or international, it is clear that their excellence moves science and society forward, far beyond the walls of their labs and classrooms. Join me in congratulating the following individuals:

- The American Geophysical Union (AGU) awarded medals to two UC Santa Cruz scientists in recognition of their breakthrough achievements in Earth science. Gary Glatzmaier and Thorne Lay, both professors of Earth and planetary sciences at UCSC, received the AGU's John Adam Fleming Medal and Inge Lehmann Medal, respectively
- Pradip Mascharak, distinguished professor of chemistry and biochemistry at UC Santa Cruz, was awarded the Mahatma Gandhi Pravasi Samman award by the Non-Resident Indians (NRI) Welfare Society of India.
- Christina Ravelo, professor of ocean sciences at UC Santa Cruz, has received the 2013-14 Outstanding Faculty Award from the Division of Physical and Biological Sciences. The annual award is the division's highest honor for faculty achievement, recognizing combined excellence in research, teaching, and service.
- Peter Fischer, adjunct professor of physics at UC Santa Cruz, was elected a Fellow of the American Physical Society (APS). Election as an APS Fellow is a major recognition of professional accomplishment from the leading organization of physicists.
- Claire Max, professor of astronomy and astrophysics at UC Santa Cruz and director of UC Observatories, was awarded the American Astronomical Society's 2015 Joseph Weber Award for Astronomical Instrumentation at the AAS winter meeting in Seattle.
- Karen Ottemann and Fitnat Yildiz, both professors of microbiology and environmental toxicology at UC Santa Cruz, were elected Fellows of the American Academy of Microbiology in recognition of excellence, originality, and leadership in the microbiological sciences.
- The National Institutes of Health (NIH) awarded $2 million to UC Santa Cruz for a powerful new instrument used by chemists and biochemists to explore the structures and functions of complex molecules involved in human health and disease. (Lead PI, Glenn Millhauser, chemistry & biochemistry)
- Piero Madau, distinguished professor of astronomy and astrophysics at UC Santa Cruz, was inducted into the Johns Hopkins Society of Scholars for achieving marked distinction in the physical sciences. Madau was among 15 new inductees honored at an event at Johns Hopkins University in April.
- Adriane Steinacker was the recipient of the Ron Ruby Award for Teaching Excellence in the Division of Physical and Biological Sciences. The Excellence in Teaching Awards given each year by the UC Santa Cruz Academic Senate Committee on Teaching are among the highest honors faculty members can receive. The awards honor instructors who have demonstrated exemplary and inspiring teaching.
- Nanotechnology researchers at UC Santa Cruz are partners in a new center for nanomaterials research funded by NASA and based at UC Merced. The $5 million NASA grant to establish the Merced Nanomaterials Center for Energy and Sensing (MACES) included $947,000 for UC Santa Cruz. The UCSC affiliates include Jin Zhang, professor of chemistry and biochemistry, and Michael Oye, adjunct professor of electrical engineering and the UCSC co-director of the Advanced Studies Laboratories at NASA Ames Research Center.
There were several additional awards and recognitions that were awarded over the summer:

- The government of the greater Paris region has appointed **Piero Madau**, distinguished professor of astronomy and astrophysics at UC Santa Cruz, to an International Blaise Pascal Research Chair. Madau was honored for his fundamental contributions to understanding the era of first light in the universe, the physics of the intergalactic medium, and the formation and evolution of galaxies.

- **Susan Strome**, distinguished professor of molecular, cell, and developmental biology was awarded a UCSC Presidential Chair. The three-year term comes with funding support of approximately $70,00. The UC president supports presidential chairs on each of the 10 UC campuses through an endowment that the Regents established in 1981. The chairs are competitive, based on proposals, and are offered to distinguished faculty with the intention to encourage new or interdisciplinary programs development or to enhance quality in existing programs.

- **Susan Strom** was also selected to give this year’s 2015 Faculty Research lecture. The annual Faculty Research Lecture is among the highest honors bestowed upon a faculty member by his or her own campus colleagues. It was given to Strome in recognition of her outstanding research accomplishments.

- **Phil Crews** received the 2015-16 Edward A. Dickson Emeriti Professorship. The Dickson Emeritus Professorships are awarded annually and funded by an endowment from the estate of former UC Regent Edward A. Dickson. The honor recognizes Crews for his contributions to research, teaching, and public service. This award will enable him to teach a chemistry graduate course (“Spectroscopy and Applied Analytical Methods”) in 2016.

- **Doug Lin**, from astronomy and astrophysics, was awarded 2015 Catherine Wolfe Bruce Gold Medal from the Astronomical Society of the Pacific (ASP). The highest honor bestowed by ASP, the award recognizes Lin for a lifetime of outstanding research in astronomy.

**PB Sci Staff Scholarship Award**

**Micah Kornberg**, son of earth & planetary sciences staff member, **Amy Kornberg**, was awarded the 2015 PB Sci Staff Scholarship Award in the amount of $5,000.00. Micah is a junior at UC Santa Barbara, and is studying physics. The staff scholarship is awarded to children of staff and is meant to defray some of the costs of a college education. The students’ grades, financial need, and academic progress are all considered when determining the winners of this award.

**DIVISIONAL ADMINISTRATION CHANGES**

**Department Chairs and ORU Directors**

Two of our departments have new leadership effective July 1, 2015.

- **Enrico Ramirez-Ruiz** succeeded Greg Laughlin as chair for Astronomy and Astrophysics.
- **Chad Saltikov** succeeded Karen Ottemann as chair of Microbiology and Environmental Toxicology.

I am grateful to both Greg and Karen for their service to their departments and to the division.

Please welcome **Claire Max** as the new Director of the UC Observatories. Claire has been serving as interim director of UCO since June 2014.

**Department/Administrative Managers**

- **Teel Lopez**, former Graduate Program Coordinator, was hired as the new manager for MCD Biology.
- **Dana Rohlf**, former Department Manager of Politics and Latin American and Latino Studies, in the Social Sciences, was hired as the new manager of EE Biology.

**Dean’s Office/Business Offices**

- **Carrie Haber** joined the Dean’s office in August as Assistant Dean, Planning and Academic Programs.
- **Andrew Melford** and **Alicia Marquez** joined the Division’s Academic Payroll/Personnel team in April.
● Carey Odden succeeded Susie Ellestad as Manager of the PBSci Research Accounting Unit.
● Research Accounting brought on four new employees this year: Valerie Klem joined last October, Tonya Silvestri began in February, and Belinda Au and Lyn Petit joined in April.
● Pat Kent joined the PBSci Facilities unit in February, and Cindy Ogg started in March.
● Jackie Spier joined the Divisional Resources office on September 28, 2015.

Undergraduate Affairs
PBSci Undergraduate Affairs is participating heavily in the EVC’s Student Success Initiative by continuing to serve on the Student Success Steering Committee, serving on the newly convened Advising Task Force, and piloting new case management tools that will replace our current online appointment system and allow better tracking of students and the support and services they utilize.

UGA has worked with the Registrar’s Office this past year to develop functionality in AIS that will allow students to assess their qualification for their intended major. In addition to this new tool for students, we have also developed an internal database for tracking major qualification and declaration. The new MQDB will allow us to easily report on the impact the policies are having on the programs and provide the policy reporting that CEP has mandated.

ACE and Cal Teach
ACE continues to offer specialized active learning problem solving sessions and peer mentoring that supplement selected math and science lectures. ACE is open to undergraduates with proposed or declared STEM majors and who will contribute to a diverse and motivated learning team. Priority is given to EOP STEM students. The ACE program continues to grow in the number of students it serves (last year was about 650 who sat in nearly 1400 seats), meaning many students enjoyed ACE support for several of their STEM classes throughout the academic year.

In 2014-15, Cal Teach offered middle- and high-school internships in Santa Cruz County schools with associated Education Department seminars for science, math and engineering majors exploring K-12 teaching careers. Since the program’s inception in spring quarter 2006, more than 460 Cal Teach interns have graduated and more than 30% of graduates (~150) have pursued a teaching credential; many graduates now are teaching in Santa Cruz County and the broader Monterey and San Francisco Bay areas.

Cal Teach also offers one-week intensive internships in high-need rural and urban schools in the Salinas Valley and east San Jose in September, before fall classes begin, and an array of non-academic teaching and lab internships. In 2014-15, divisional faculty Grant Hartzog, Rita Mehta, Christina Ravelo, and Nandini Bhattacharya mentored Cal Teach interns in paid internships. Cal Teach continues to work with Undergraduate Affairs and the STEM Diversity programs to host STEM Transfer Days and to welcome incoming transfer students to UCSC at ISEE WEST workshops.

EXTRAMURAL AWARDS AND GIFTS
In 2014-15, extramural awards totaled ~ $55.5 million, roughly in line with the previous year.

For 2014-15, the Division received ~$10 million gifts, and was fortunate to receive several significant gifts:

● A $500,000 gift to create the Wilton W. Webster, Jr. Presidential Chair for UCSC Natural Reserves. This gift was matched with $500,000 by the UC Office of the President.
● A $500,000 gift to create Faggin Family Presidential Chair for the Physics of Information. This gift was matched with $500,000 by the UC Office of the President.
● A $560,000 multi-year gift from Wells Fargo Company to provide fellowships and course support for the new Coastal Sustainability Graduate program.
● The Friends of Long Marine Lab received a current use gift of $250,000 for operating support.
● A gift of $100,000 was made to the new Coastal Student Champions Fund to support graduate fellowships and undergraduate research in coastal science.
● A gift of $100,000 was made to the UCSC Natural Reserves.
● The Santa Cruz Cancer Benefit Group expanded its support of MCD Bio to $50,000 this year. This is the 11th year that UCSC has received support from this group.
● The **Gordon Smith Memorial Endowed Scholarship** was created with $39,452 raised by the community in memory of Gordon Smith, the former boat captain at Long Marine Lab, and a match of over $19,700 from a fund at UCSC created to encourage the creation of new endowed scholarships.

We also received many smaller current use gifts in support of programs across the Division for research, student support, and programs.

**CAPITAL PLANNING AND SPACE RENOVATION, 2015-16**

The Facilities unit will be busy coordinating renovation projects this year to support the research of our newest faculty members. In addition, we continue to move our planned capital projects forward. These include:

- **Coastal Biology Building (CBB)** - Construction on the site began in May, with an anticipated completion slated for Fall 2016. The building will house nearly all of the faculty and staff in the EEB Department and will include approximately 40,000 square feet, including wet lab research space, departmental administrative space, a 125 seat classroom, environmental control rooms, analytical labs, equipment rooms, meeting spaces, and conference rooms. This project releases much needed space on the main campus in Earth and Marine Sciences.

  Overall, the campus has been maintaining the schedule and construction has been progressing at a fast pace. Site work as been started in all areas affected by the construction and a demolition of existing structures is complete. The bulleted items below include notable progress to date:

  ❖ Building the berm has been started with soil from the utility trenching excavation. We anticipate the berm to be completely built May 2016
  ❖ The Coastal Biology Building concrete slabs are being poured and the greenhouse site has been cleared.
  ❖ The upper terrace storage yard is nearly complete. The middle terrace utility yard where the new power substation will be constructed is about 45% complete.
  ❖ The Coastal Science Central Campus trail is now open to temporary traffic.

- **Marine Mammal Pools Project** - The Marine Mammal Pools project will refurbish, repair, replace, and expand the marine mammal pools on the Coastal Science campus. The project is important for the continuation of our research on marine mammals and other large vertebrates.

- **HHMI-funded Active Learning Classroom (ALC)** - the ALC, set in motion by a $1.5 million dollar grant from HHMI, will be located in the Science and Engineering Library. Renovations are scheduled to begin early in 2016. The ALC will accommodate ~ 100 students in a technologically robust environment and will provide for collaborative, inquiry- and project-based teaching and learning in introductory biology, chemistry and physics courses.

- **2300 Delaware “Warm Shell” Project** - the “Alterations for Academic Programs”, a.k.a. 2300 Delaware “warm shell” project continues. This is space within the 2300 Delaware space in building “C” that is being prepared to receive the future build-out of functional spaces. Currently two research labs for Physics are under construction (for David Lederman and Jairo Velasco) and are slated for completion in Fall of 2016.

**NEW ACADEMIC PROGRAMS ON THE HORIZON**

Faculty members in many of our departments are collaborating with each other and with colleagues in other divisions on the development of new academic programs in Environmental Sciences, Coastal Sustainability, and Materials Science. Campus administration and the division’s multi-year hiring plan support growth in these areas, which reflect our focus on continued development of interdisciplinary research and teaching.
BUDGET

There are many unknowns regarding the budget for 15-16. Although revenues (including state support) have grown, expenses have grown faster. The campus faces a structural deficit and may assign cuts as a way of closing the gap. The magnitude of cuts for FY15-16 and/or FY16-17 is not yet known. We do know that the campus will impose increased assessments on the division, primarily as a way to fund necessary capital projects across campus.

On the divisional side, we have less flexible resources and have already begun a series of belt-tightening measures. We have slowed the pace of recruitment, and we are considering other cost-cutting measures. I have met with Planning and Budget and they are aware of the challenges we face and are looking at ways to assist us. I expect to have more detail later this fall and will share that information with you as I receive it.

In closing, I wish you all a successful year and again thank you for all the work you do to support the success of the division.

Sincerely,

Paul L. Koch
Dean