Caltech Mourns the Passing of Andrew Lange

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From Caltech Today:

Dr. Andrew Lange, the Marvin L. Goldberger Professor of Physics at Caltech, passed away on Friday, January 22, 2010.

Lange had been at Caltech since 1993. He graduated from Princeton University with his BA in 1980 and received his PhD from UC Berkeley in 1987. He first came to the Institute as a visiting associate in 1993–94, was appointed a full professor in 1994, and was named the Goldberger Professor in 2001. In 2006 he was named a senior research scientist at the Jet Propulsion Laboratory and in 2008 was appointed chair of the Division of Physics, Mathematics and Astronomy. He had recently resigned from his chairmanship of the division.

The principal focus of Lange’s research was the Cosmic Microwave Background (CMB)—a gas of thermal radiation left over from the Big Bang—that filled the entire universe. He developed a new generation of radio-frequency detectors and led a string of experiments that employed this novel technology to study the CMB. It is perhaps best known for co-leading the BOOMERanG experiment, the first experiment to image the CMB with sufficiently high fidelity and angular resolution to determine that the spatial geometry of the universe is flat. The data further allowed precise measurement of the age of the universe and the abundance of the dark matter known to hold galaxies together. The data also supported previous measurements that suggested that the cosmological expansion is actually accelerating, implying either a violation of Einstein’s general relativity or that the Universe is filled with “dark energy,” some exotic new negative-pressure fluid. BOOMERanG also confirmed the predictions of inflation, an ambitious theory that aims to explain the very earliest fraction of a nanosecond after the Big Bang.

Lange’s subsequent work has improved upon these measurements and aimed also to detect the primordial gas of gravitational waves predicted by inflation through their effect on the CMB polarization. Lange was also one of the leaders of the recently launched Planck satellite, a collaboration between US and European scientists that aims to image the CMB with unprecedented precision.

Lange was a member of the American Academy of Arts and Sciences, the National Academy of Sciences, and the American Physical Society. Lange and Dr. Saul Perlmutter (from the Lawrence Berkeley National Laboratory) were jointly named the 2003 California Scientist of the Year for their seminal contributions to cosmology. Lange shared the 2006 Balzan Prize for Observational Astronomy and Astrophysics with Paolo de Bernardis (of the University of Rome), his BOOMERanG coleader. The two shared the 2009 Dan David Prize with Paul Richards, a coleader of the parallel MAXIMA experiment.

Source: Caltech PMA Division Website

Committee Working on New Plan for the Bookstore.

Future for Winnett Likely to Include Space for Students

By Joel Nikolaus

Although the Caltech bookstore continues to maintain a selection of Caltech apparel and office supplies, since it was reorganized last May its selection of books has become practically nonexistent. That may change before the end of the academic year.

Since August the “Future of the Bookstore” Committee has been working on developing a new plan for the bookstore that is more financially viable and that might also bring back some of the atmosphere and selection associated with the old bookstore.

It will deliver its recommendation to Amneilla Sargent, Vice President of Student Affairs, sometime this spring.

The textbook and book component of the bookstore was closed for financial reasons, so a traditional bookstore like the old Caltech Bookstore is probably out of the question. The new bookstore would probably be at least partly virtual, but that does not mean there would be no books.

Warren Brown, the faculty chair of the committee, said that one of the options currently being considered is that the bookstore maintain a selection of “books to browse, but then terminals to actually buy.” This option would provide some of the same atmosphere of the old bookstore without the expense associated with maintaining a physical selection of books. Brown said “Caltech is such a decentralized place...the committee has decided there is a need to present Caltech to the campus.” Under such a plan the bookstore might still be such a place. Regardless of the what form the new bookstore eventually takes, it would, in all likelihood, still include at least some space for students. “Whatever bookstore, it is almost certain that it will not take all of the space used [by the old bookstore],” said Brown. “We actually brought someone from the area who was running a working scientific bookstore...They said that the committee [and its idea for the bookstore] was crazy. They said the only reason that they were keeping their bookstore open was so that their employees would not lose their jobs,” said Brown.

The final decision on what to do with the bookstore will be made by the Provost after reviewing the various recommendations.

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Officers Present: Anthony Chang, Andrey Poltavets, Pallavi Gunalan, Nadia Iqbal, Maral Mazrooei, Michael Maseda, Laura Conwill

Call to order: 5:07 PM

Funding requests:
- CLUE revamp: Domenic Dencil is going to help revise the CLUE site; he has written a proposal detailing his plans. Andrey has $250 from his own budget, and would like an additional $250 to fund this project. This matter is not urgent and the BoD will discuss it next week.

President’s Report:
- Haiti Relief Fund: Anthony urged everyone on the BoD to encourage their friends to donate at least $5 to Haiti via Partners in Health. There is a trustee who is willing to match Caltech’s students’ donations up to $1000.

Elections: Nominations will open on February 1 and will close on February 5. The election will be February 8.

Staff Report:

ARC Chair: The ARC met! They had one course complaint, for Math 5b, but there is a new lecturer now so this has been resolved. The ARC is working on setting scheduling for Chem 1b because the freshmen are forced to do their sets for chem, the day before they are due. There’s a student-faculty lunch tomorrow. The ARC is working on short-term feedback mechanisms: each ARC member is working on one professor to implement a short-term feedback plan, such as putting feedback cards in lecture halls.

P. V. of Academic Affairs

V. P. of Nonacademic Affairs (IHC Chair): The IHC met today. The new Blacker and Fleming presidents will come to the meeting next week! The IHC received a new proposed mural policy; it still needs to be run by the Student Housing Committee before it is signed and implemented: Pallavi and Tim are meeting soon with Admissions regarding Prefrosh Weekend.

Operations Director: Mike emailed the current big T editors asking for a list of the current house historians. Social Director: Lloyd Interhouse is January 30!

Board of Directors:

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IHC Minutes - January 19, 2010 - DABNEY

Present: Pallavi (Chair), Tim (Sec), Daniel Erenrich, Joel Nikolaus, Laura Conwill

Absent: None

Guests: Nadia Iqbal, Dan Thai, Daniel Kolodrubetz, Chris Kennelly

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ASCT Election Notice

Nominations for the upcoming ASCIT elections will open on 2/1/2010 and will close on 2/5/2010 at 5PM. The election will be on 2/8/2010 from 10AM to 11:59:59PM, with a Q&A with candidates at noon on 2/8/2010.

ASCIT Election Notice

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The California Tech is obligated, under the ASCIT Bylaws, to publish the minutes of the Board of Directors. The BoD minutes are published as received (including any errors) and without further abridgment. For unabridged versions of the minutes, consult Laura Conwill, ASCIT Secretary. The editors include minutes from IHC meetings, excerpts from the ARC’s meetings, and other announcements voluntarily as a service to the community.
My Beckman Political Internship Experience

By Helen Kondos

During one of my first days at Caltech, I was walking across campus to get some lunch when I realized the person walking next to me had won a Nobel Prize in 2005. The experience was surreal, and it made me feel honored to be at Caltech with so many great scientific minds around me. Working in the United States Senate gave me much of the same feeling.

Experiencing the U.S. government firsthand can be both gratifying and incredibly frustrating. I worked for Texas Senator Kay Bailey Hutchison, who I chose because she is the leading Republican on the Science and Transportation Committee for Commerce. Senator Kay Bailey Hutchison, frustrating. I worked for Texas Senator Kay Bailey Hutchison, who I chose because she is the leading Republican on the Science and Transportation Committee for Commerce, and the leading Republican on the Science and Transportation Committee for Commerce.

It was that experience that made me realize many more things up. I sat in on the healthcare debates, the nomination of Supreme Court Justice Sonia Sotomayor and took shorthand notes at the Democratic press conferences so I could report back to my senator even before it was broadcasted on television. The chief of staff handed me a stack of flashcards during my first day and told me to memorize them. I soon realized they were pictures and names of Senators so I would recognize them in the halls. By the end of my time there, I could easily navigate the maze of the Capitol building and the internal subway system that runs from the office buildings to the House and Senate sides.

Washington D.C. certainly wasn't all work and no play. I remember playing softball in front of the capitol building during the Senate softball tournament and watching a rollerblade street hockey game behind the White House. I went to the Pentagon, the Library of Congress, and watched them print one hundred dollar bills at the U.S. Mint. I learned such fun factoids as the fact that the Supreme Court building was built under-budget and that what the Soviet Union thought was an underground bunker in the middle of the Pentagon is actually a hotdog stand.

The city itself is vibrant and fun. There was always music, art, and exotic food. Crazy protesters proclaiming conspiracy theories mingled with interns like myself on the subway during rush hour. The Fourth of July in the Nation's Capitol was unlike anything I'd ever seen. It was a huge picnic mingled with thousands of people on the National Mall. I went by myself in the afternoon, but by the time the fireworks went off, I had made friends with the twenty people sitting around me.

Many Caltech students might think that the government doesn’t affect them or that other people should deal with it. This is a very narrow minded attitude. Just ask any of your professors about writing grants and how government policy can affect their research. Interning in a government position is no less challenging than summer research, though in a slightly different way. There will still be daily frustrations and triumphs, but it will force you to come out of your comfort zone and stand up for your beliefs. Nothing could be more rewarding than knowing you made a difference, no matter how small. The Beckman scholarship gave me an experience I would never give up. My hopes in writing this article is that it motivates some more Caltech students to get politically involved, at least for the summer.

The Beckman Political Internship will be available again this summer.

The internship, supported by friends of Arnold O. Beckman, will pay a stipend of $6,000. It allows a selected intern to spend the summer working in the office of a politician or a government agency and to see from the inside the process of government. The applicant is expected to make arrangements with the appropriate political persons or organizations. The internship is open to any student who intends to be enrolled as a Caltech undergraduate next year. If interested, submit a proposal describing where and how you would use the stipend along with one faculty recommendation, to the Deans’ Office, 210-87, or email rosel@caltech.edu, deadline: Friday, March 12, 2010.

Editor’s Note: The essay written by Helen Kondos, the Beckman Political Internship notice, and the Dell Social Innovation Competition notice were published at the request of the Undergraduate Deans Office.