



Caltech Mourns the Passing of Andrew Lange

From *Caltech Today*:

Dr. Andrew Lange, the Marvin L. Goldberger Professor of Physics at Caltech, passed away 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. He 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**
STAFF WRITER

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 Anneila

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

"Whatever bookstore, it is almost certain that it will not take all of the space used [by the old bookstore]"

Warren Brown, Faculty Committee Chair

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.

Exactly how such space was used has not been established. A proposal put together by student leaders this last summer when the bookstore was closing down in its entirety made suggestions on uses for the

space. A new plan might still utilize some of those suggestions.

It turns out that making an economically viable bookstore is rather challenging. "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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ASCIT BoD MINUTES - JANUARY 19, 2010

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

Call to order: 5:07 PM

Funding requests:

- **CLUE revampage:** Domenic Denicola 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.

Officer Reports:

- **V.P. of Academic Affairs**

(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 set scheduling for Chem 1b because the frosh currently are forced to do their sets for chem. the day before they are due. There's a student-faculty lunch tomorrow. They ARC is working on short-term feedback mechanisms: each ARC member is working with one prof to implement a short-term feedback plan, such as putting feedback cards in lecture halls.

- **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 the 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!

Apache is February 13!
Drop Day is February 27!
• **Treasurer:** Maral will have Chris help out with this term's club checks.

Meeting adjourned: 5:27 PM

Submitted by Laura Conwill

ASCIT Secretary

IHC MINUTES - JANUARY 19, 2010 - DABNEY

Present: Pallavi (Chair), Tim (Sec), David (Av), Sly (BI), Max (Da), Daryl (FI), Robbie (LI), Paul (Pa), Rosa (Ri), Kirit (Ru)

Absent: None

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

Daryl and Pallavi met with Peter Hero and Anneila to talk about endowments. Endowments are a good thing because they make the houses get more money. Daryl and Pallavi said students are envious but not resentful.

Pallavi and Tim are going to talk to Ray and Owen about Prefrosh Weekend; Our emails to them have not been returned.

Murals:

The IHC got the proposed mural policy at the meeting with Anneila Sargent.

Robbie: The only issue is they don't want doors to be painted.

Daryl: And they want to restrict murals within rooms.

Max: I have a problem with them disallowing murals in lounges.

Daryl: Trying to argue this with Peter Daily more will not help.

Daryl: The trustees are not going to be talking about murals at their next meeting

(Update 1/24: they will walk through in April)

Robbie: But they'll show them

eventually.

Max: The best place is at the student housing committee meeting.

Max: We don't want this to be vague; we want to know what is going to be enforced.

Paul: Why don't they want doors painted?

Max: They supposedly can't tell where the door is. But if there's a number on the door and a whiteboard on the door and a doorknob, it's not clear why.

Daryl: What if we make sure the doorframe is white?

Robbie: What we do is that any rooms with murals go to upperclassmen.

Pallavi: But eventually there will be more murals than upperclassmen.

Max: No; crappy frosh rooms won't get painted.

Pallavi: We need something in there that ensures that they can't automatically repaint those rooms.

What about the items that require immediate action?

Max: They should be covered, not immediately repainted. Where are

they going to draw the line for "things that require immediate action"?

Rosa: You can't.

Daryl: Things that will require immediate action will be limited to things that aren't approved.

Sly: The things you need to submit to get it approved are sketch of the design, dimensions, colors. Basic shit.

Pallavi: We don't want to argue about the fee for painting within rooms, right?

Daryl: Is there something saying that the IHC will be notified before any repainting?

Max: I went to talk to Peter after the meeting. He says he's on our side.

House Dues:

Paul: Maximum house dues is \$65.

Daryl: We get house dues from student affairs. Students pay to student affairs, then student affairs pays the houses.

Rosa: Everyone pays a set amount as part of tuition. Any house dues owed over that charged to your account.

Paul: Page wants to raise the maximum house dues.

Rosa: Can we lift the upper bound?

Paul: No, you don't want houses charging arbitrarily much.

Dan Thai: Are prefrosh told house dues?

Paul: No, but if they ask, nobody will lie.

Rosa: House choice shouldn't depend on dues amount.

Paul: If the extra house dues matters to someone, they can work something out.

Agreement to raise max to \$100.

Monday is the last day to take the Rotation survey - Go to donut.caltech.edu and click "Surveys and Elections".

Blacker and Fleming presidents will turn over before the next meeting.

This IHC has been Le-gen- wait for it... -Daryl.

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ASCIT 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.

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
UNDERGRADUATE

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 Committee for Commerce, Science and Transportation. Therefore, I was able to witness the political process a lot of scientific legislation goes through. I distinctly remember sitting in on a hearing about the newest nanotechnology bill. The senators were proposing to give out millions

of dollars in new funding, which encouraged me because it meant that the government was taking this new science seriously, but suddenly my hopes were dashed. The President's liaison for the bill had stood up and started to voice concerns about the dangers of nanotechnology and how the bill should divert some of the funding for research and put it toward exploring the possible dangers of the research and how to protect against these unknown future problems. As a Caltech student, it was infuriating to watch someone in power, who had little to no scientific knowledge, just "guess" that there were dangers involved in this new science and therefore diminish the funding that would be made available. They were in their non-science bubble, and people like us are needed to shake things up.

It was that experience that made me realize many more scientifically minded people, such as Caltech students, were needed in government, if only to educate people about the science

they are legislating. None of the other interns I worked with had any science background beyond high school. Because of Caltech, I knew enough science to confidently give help to my senator's aides who were writing bills. I was different, but still uniquely qualified to be there.

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 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.

There is just over a month left for your students to enter the 2010 Dell Social Innovation Competition. The University of Texas at Austin and Dell invite all student social entrepreneurs to enter the competition for a chance to win \$50,000 to turn their world-changing ideas into a new business or nonprofit with a mission to change lives for the better. The competition is open to college and university students worldwide.

The deadline to enter is March 1, 2010. Students can submit their ideas online at <http://www.dellsocialinnovationcompetition.com>.

Along with students, citizens worldwide are invited to comment on, vote for and discuss the ideas in the online community forum.

<http://www.dellsocialinnovationcompetition.com>
<http://twitter.com/dellsocialinnov>
<http://www.facebook.com/DellSocialInnovation>

The RGK Center for Philanthropy & Community Service in the LBJ School of Public Affairs at The University of Texas at Austin introduced the Social Innovation Competition in 2006, awarding more than \$200,000 in prizes to student social entrepreneurs.

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.

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Saturday,
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Beckman Auditorium
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Sean Nandayapa
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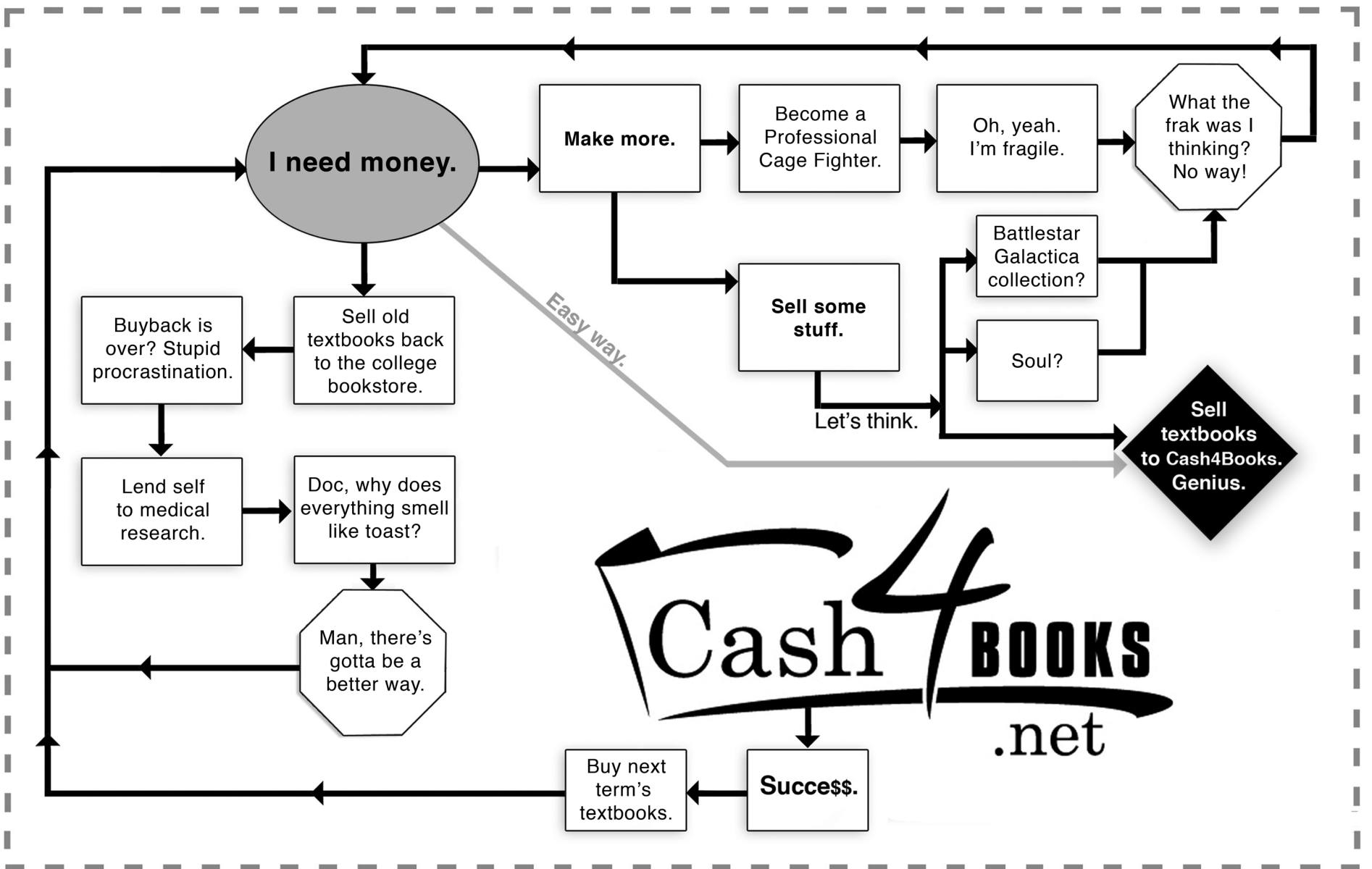


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