PASADENA, CALIFORNIA

JANUARY 14, 2000

LA Aeronautics recreates Kitty Hawk

BY JON FOSTER

"What happened in aeronautics after the Wright brothers?" As Dr. Fred Culick was the first to point out in his lecture to a filled-to-capacity Beckman Auditorium, the answer to the question his title posed is: everything. In just over 65 years, the human race had pictures of Earth from space. Culick's talk on January 12th, part of the Watson Lecture Series, dealt only with the short few years after the Wright's momentous flight at Kitty Hawk.

The Wright brothers stumbled across the secret of how to keep their plane stable by warping the wings, and were able to put this knowledge to work in a very short time. Their first flight came in December, 1903, lasting only 12 seconds. Still, they improved on this, and it was 4 years before anyone else could match the flying ability of the Wright brothers. The climate at the time was one of intense competition, as many different teams, especially a great number of French ones, were making some progress, but never quite stumbled across the right geometry. During that time, the brothers traveled throughout Europe, and negotiated with the American government, in an effort to sell their plane without giving away the secret of their success.

A large part of Culick's talk was to address the question of why, although the first flight occurred in America, within only one year after the first public flight of the Wrights' plane, French aviators had all the flying records. The main reasons were an intense interest in aeronautics in France at the time; a lack of other participants in America; and the stubbornness of the Wright brothers, who were reluctant to make changes to their design.

Culick then went on to describe the fascinating project he is currently working on. The Los Angeles Section of the American Institute of Aeronautics and Astronautics is reconstructing a copy of the Wright brothers' original "Flyer." Culick will be the pilot of the craft when it is completed, and he is also advising on the project.

The recreation will be somewhat what modified, because an accurate recreation of the "Flyer" would really be quite dangerous to fly. "There was no such thing as liability at that time," said Culick, as he described the work which the group had done over the last 20 years. The myriad tests and regulations the group had to meet at every stage in the process are a far cry from the reckless climate of excitement that prevailed in the field at the time of the birth of the first true airplane.

A model of the Kitty Hawk Flyer, displayed at the Wright Brothers memorial near Blue Devil Hills, North Carolina.

"The biggest problem was the new...Oracle system." -- Erik Dill

SURF Competition winners

The 1999 Perpall SURF Speaking Competition winds down with a reception for the winners. Here, Katie Noyes (3rd) and Ming Chen (2nd) speak with JPL's William Whitney. See page 4 for the winner!

inside the tech

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Treasurer
Ell appointed

Sandra Ell, who has been acting as treasurer for Caltech since 1998, was appointed as the Institute's treasurer and chief investment officer on Nov. 4th, 1999.

Ell is a Certified Public Accountant and worked with the U.S. General Accounting Office prior to coming to Caltech in 1984. She is a graduate of the University of California at Berkeley and serves on a citizen's advisory committee for the city of Pasadena.

Since coming to Caltech, she has performed numerous roles. According to William Jenkuns, vice president for business and finance, in the time she has already served in this capacity, "[Ell] has managed operation of the treasurer's office superbly.'"

The California Tech

Editor
by TECH STAFF

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By Justin Ho

The Talented Mr. Ripley (A-) rated R for much ado about head-bashing

The most striking feature about Mr. Ripley (Matt Damon) is that he is not so tal-
ented after all. Rather, he is a man of good fortune with the
benefit of living in a not-so-
agreeable world which allows
him to cover up his mistakes.
He is actually quite careless
and clumsy, but that certainly
makes him all the more hu-
man. Though Tom Ripley's
killing spree would place
him amongst notorious serial
killers and the fictitious
Kuwait State Award

Caltech EE Professor becomes youngest person to win

The California Institute of Technology's Yaser Abu-
Mostafa, professor of electrical engineering and com-
puter science, received the Kuwait State Award in Ap-
plied Science on November 29.

The $50,000 award in-
cludes a gold medal, and rec-
ognizes original and funda-
mental research in a design-
ated area of applied sci-
ence. This year's area was in-
formation science and tech-
nology. Abu-Mostafa's work
on neural networks, learning
from hints, and computational
finance was cited as the pio-
nering contribution that mer-
ted the award.

Abu-Mostafa is the young-
est person to receive this
award since its establishment
in 1979. The awards cer-
emony was televised live in
a number of countries. A recep-
tion by the Emir of Kuwait at

Do it Ze Kveek Vay, Johnny! work for the Tech

The Incredible Justin Ho

The Ticket Stub

by John Doe

Tom and Dickie become os-
tensively closer is almost sur-
real: masked in a gravy el-
egance as the camera shifts
from sailing adventures to
smoky jazz clubs, from men-
rough-housing to women glid-
ing through cobblestone
streets almost aimlessly. It's a
perfect utopia sans irrespon-
sibility. But despite the grow-
ing bond between Tom and
Dickie and their mutual in-
toxication of the lethargy
around them, Dickie's need
for Tom for entertainment is
waning while Tom perversely
sees each passing day as one
step closer to truly become
the fun-loving, jazz-virtuoso he
feigns he already is.

Ultimately, Dickie is
careless-treating people as
transient commodities and
as a means rather than an end.
He exchanges friendship and af-
fections capriciously and pays
with dire consequences. As
the anti-hero of the film,
Ripley's vulnerability works
in the film's favor. Rather than
being an utterly immoral, cal-
culating character, Ripley is
gentle and only violent when
concerned. He becomes fiercely
protective of his newly-ac-
quired station at the expense
of someone else's identity but
he is only psychopathic by
accident. Indeed his first role
in another's cessation of be-
ing was a crime of passion.
Rather than representing a
psychotic for whom murder is
second nature, Ripley's acts
reflect more so of a person
doing bad things, a latent psy-
chopath in the guise of a nor-
mal human being. When the
very bad deeds being to engul-
fe Ripley, he has many reasons
to run. Indeed juggling two
identities gives him an ad-
equate escape route and the
crime detection practices are
utterly rudimentary. Yet,
Ripley remains, comfortable
with the luxuries he has pur-
chased with someone else's
money while the rest grow
suspicious by degrees. This
reflects his growing confi-
dence and mastery of assimil-
ating identities, tragically to
the advantage of his current
consumed supercedes his per-
sonal happiness as well. The
tone of the film changes
abruptly when Ripley trans-
forms from tragic puppydog
Dickie-follower into the abyss
of the criminal. The cinema-
tography is less refined, and
the increasing frequency of
night scenes mirrors the dark-
ness into which Ripley de-
cends. Likewise, the film as-
umes a more frantic pace
filed with coincidences and
chance encounters which keep
Ripley on a tight leash of
impersonation. It is in this se-
cond half when the remainder
of the ensemble truly
emerges: Marge(Gwyneth
Paltrow), as the mentally-un-
stable fiancé ignored by an
absent Dickie; Meredith(Cate
Blanchett) whose impeccable
timing and fleeting an-
swers throw a wrench into
Ripley's dual personalities;
and Robert Kingsley(Jack
davenport), who vies for
Ripley's affection as the ob-
ject of a not-so-subtle homo-
erotic longing. Because of
the mood swing, the film almost
feels like disjunction. There
are two distinct halves leave-
ing different tastes. But of
course, the transition from
nice guy to murderer should
be distinct, though the por-
trayal of psychopath as human
and naive still eerily beckons
empathy.

The Incredible Justin Ho

Do it Ze Kveek Vay, Johnny! work for the Tech

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Abu-Mostafa wins Kuwait State Award

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This coming weekend, the Y is hosting a series of cultural events for the Caltech community. These events begin this evening with our social activism speaker, Adam Werbach, who’s background is explained in more detail below. In this upcoming Sunday, there exists a Y trip to the J. Paul Getty Museum. There has been a very positive response to the trip. Sign-ups are full at this point in time, but if you are interested, please still call the Y at ext. 6163 to see about getting placed on a waiting list. If anyone has any particular idea or event that they would like to see occur on campus, feel free to present your ideas to us either by phone or by coming to one of our weekly meetings. As a reminder, Project Angel Food will be occurring this week. The purpose of this program is to deliver food to housebound people living with HIV/AIDS. This project takes but one hour time on Friday and takes place roughly from 12:00 PM to 1:00 PM. For more information, please e-mail Ying Tian at ying@cco.caltech.edu.

Today: Later this afternoon/ evening, the Caltech Y will be hosting Adam Werbach in the 2nd installment of our Social Activism Speaker Series. Werbach, age 26, is the best known conservationist of his generation. He was elected as the 46th president of the Sierra Club, the oldest and largest grassroots environmental organization in America, at the age of 23. His many accomplishments include the campaign to pass the strongest clean air standards in America’s history and the fight to protect more than two million acres of wilderness. In his two terms as President, Werbach has completely revitalized the membership of the Sierra Club (i.e., increasing membership to 600,000, bringing down the average age of a member by a decade, and guiding the organization back to financial health). Werbach’s keynote talk entitled “Act Now, Apologize Later” will occur at the Beckman Institute Auditorium at 8:00 PM. This talk is free and open to the public. From 4:00 PM to 5:00 PM, there will be a grassroots organizing roundtable at the Avery Library. Space is limited for this roundtable so please contact the Y at (626) 395-6163 to sign-up.

General Info: The Caltech Y holds weekly meetings on Mondays at 12:15 PM in the Y Lounge which is behind Steele House. We welcome anyone who is interested in learning about what the Y does or who wants to get involved. Bring your ideas, your friends, and your lunch. If you would like to get e-mails about Y-events, Y-outdoor events, or Y-community service events, please e-mail Elisa Chiang at polaris@cco.caltech.edu with the e-mail mailing list you would like to be placed on. Also, if you have further questions concerning any of the activities mentioned above, feel free to e-mail me at dogbert@cco.caltech.edu.
The California Tech
January 14, 2000

SURFers

SURF Speaking Competition winner Peter J. Freese, with Robert C. Perpall
Perpall, with 2nd Place SURFer Ming M. Chen

Carolyn Merkel, director of the SURF Program, presents the awards.

Carolyn Merkel and 3rd Place winner Katie Noyes, Merkel SURF fellow, pose for the camera.

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I COMPLETED ALL MY ASSIGNMENTS. HOW MAY I BE OF SERVICE NOW?

MISTER CATBERT, COULD YOU HELP ME SEE THE RELEVANCE OF MY WORK TO THE WELL-BEING OF SOCIETY?

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

LOOK WHO'S BACK EARLY FROM HIS BUSINESS TRIP. YOUR SHUFFLING OF UNIMPORTANT DOCUMENTS HELPS THE AIR CIRCULATE.

CAROL, YOU'RE THE BOSS'S SECRETARY, NOT MY BOSS.

CAROL, YOU'RE THE BOSS'S SECRETARY, NOT MY BOSS. AND THIS IS A PAGE FROM A MAGAZINE.

PILFER CATBERT, COULD YOU HELP ME SEE THE RELEVANCE OF MY WORK TO THE WELL-BEING OF SOCIETY?

I SCHEDULED YOU TO ORDE TO MEETINGS ALL DAY.

COMPLETED ALL MY ASSIGNMENTS.

MY OTHER ASSIGNMENTS WERE ON A WRINKLED PAPER, TOO.

MY LETTUCE IS GONE!

CAROL, YOU'RE THE BOSS'S SECRETARY, NOT MY BOSS.

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

CAROL, YOU'RE THE BOSS'S SECRETARY, NOT MY BOSS.

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

WHEN YOU FINISH THIS, I HAVE ANOTHER ASSIGNMENT FOR YOU.

CAROL, YOU'RE THE BOSS'S SECRETARY, NOT MY BOSS.

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

WHEN YOU FINISH THIS, I HAVE MORE ASSIGNMENTS FOR YOU.

WHEN YOU FINISH THIS, I HAVE ANOTHER ASSIGNMENT FOR YOU.

WHEN YOU FINISH THIS, I HAVE OTHER ASSIGNMENTS ON A RUMpled PAPER, TOO.

PILFER CATBERT, COULD YOU HELP ME SEE THE RELEVANCE OF MY WORK TO THE WELL-BEING OF SOCIETY?

COMPLETED ALL MY ASSIGNMENTS.

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Last week, it seemed that the threat of a Y2K bug bite had just been a bad dream. Or was it? It is hard to tell. Maybe Y2K was never the threat that it was made out to be, with world finance collapsing, planes falling out of the sky and who-knows-what other calamities as faithful electronic servants paused in their ordained activities to ponder whether this was the beginning of the 21st century or that of the 20th. It has been argued that the predicted apocalyptic events would not have taken place even if no “fixes” had been made. After all, countries where very few precautions were taken did not suffer a meltdown or accidently fire off their missiles. But then, one can also argue that the world as a whole did not collapse precisely because there were intensive preparations elsewhere. The bug was real, even if its effects were not felt as brutally as expected. I understand that there were malfunctions in the breath testing machines used on drunken motorists by the Hong Kong police (The Economist, Jan 8, 2000, pp. 22) and that at least one Denmark bank ran into troubles. Closer to home, in New Mexico, half of the Motor Vehicle Offices could not issue driver’s licenses, some workers in Alabama could not be paid, and meteorological Doppler systems shut down briefly in Chicago, according to the LA Times of 1/10/00. Of course, Chicago weather being what it usually is, this time of year, the inability to predict bad weather could be seen as a blessing in disguise. Let me tell you about the bug I ran into, right here in Pasadena. You see, over the week end I had to replace one of the controllers of the watering system for our garden at home. The old one packed up, but that was not a Y2K problem, just one of planned obsolescence. I went to the hardware store, bought a surprisingly cheap replacement, and went to install it. After I had all the leads connected, I began programming the thing, and discovered that the default date on its calendar was 1/1/1996. When I went to change the date, I was able to enter 1997, ’98, ’99 and even 2000 but no month or day of the week. After trying a few times, thinking I surely had made an error, I had to quit. The readout looks funny now, but I don’t really care, as long as functionality is not impaired. What importance does it have if my lawn gets watered on indeterminate dates? I suppose it would matter some, if I worried about which day of the week the sprinklers did their thing - not on Wednesdays, because that’s when my wife tends her flowers and the hedges getting wet, but that is easy to take care of. I’ll just have to watch for Feb. 29th, when Y2K intelligence leads me to suspect my sprinklers might get their days mixed up. But so what, I’ll just have to remember to check that things are OK. Come to think of it, maybe that’s why this particular brand of controllers were much cheaper than the others on the shelf. In a perverse sort of way, finding this minor bug made me feel good. At least I have proof that may be the mass hysteria the world suffered may have had some basis after all. Now, having a well documented water controller was not worth even a very small part of the $100 billion spent nationwide on Y2K. About $150 million of that was expended in LA County itself. The County’s chief information officer indicated that 36,000 programs which were not compliant had to be fixed. But the attention paid to the systems, the upgrading and modernizing that went on as a result of the scare, was probably all to the good, and would have had to be spent sometime soon anyway. But that’s not the end of Y2K related expenses, not by far. Many big companies have filed claims against their insurers claiming that they were covered against losses from "any destruction, distortion or corruption of any computer data, coding, program or software". It is further argued that payment is due under the “sue and labor” clause. Sue and labor covers the cost of sandbagging a factory to prevent worse damage caused by floodwaters... Y2K patches are considered the equivalent of sandbags against their insurance policies. Of course the insurers don’t want to be saddled with these expenses. So GTL Xerox, Nike, Unisys and others have filed suit against them. And if that were not enough there has also been claims against companies for royalties to be paid. While stuck in traffic Bruce Dickens, a Southern California software engineer, dreamed of a simple Y2K fix. He filed a patent application for his idea and was granted it. Since many of the fixes used turn out to be based on the same or similar approaches, he is now asking for what he sees as his due, reports Elaine Korry of National Public Radio. It will not come as a surprise to anyone that companies so approached are refusing to pay, arguing that Dicken’s patent was improper in the first place. Not so say Dicken’s attorneys. The US Patent Office is looking into the matter. It is an issue that will only take a few years to resolve. But wait, it is not all over yet. What about the threat of February 29th, the superterrestrial leap year? A year ending in 00 is normally not a leap year except if, like 2000, it is also divisible by 400. This is commonly said to be such an esoteric event that it will trip off another spate of problems. I don’t know if other fixes also attempted to repair this potential problem. I also don’t know if a fix is really needed. Leap year occur every four years, so 2000, 4 years after 1996 is a leap year that comes when it should. What the rule says is that a year ending in 00 is not normally a leap year (unless divisible by 400). So my guess is that any problem should make itself felt, not this coming Feb. 29th, but Feb. 29, 2100. We may be YOK after all, but not so our descendents. As the French say: “Après moi, le déluge,” i.e., very loosely translated, none of us will live that long, even if advances in medicine will make reaching 100 routine.
The Caltech Student Invest­
ment Society is now accepting applications for club funding. If your club would like to apply for money, you can download an application from: http://www.ccaltech.edu/itc/funds.html. Funds are limited and the deadline for applications is January 14. If you have any questions, please e-mail sif@ssex.caltech.edu.

The Caltech Hallboy Dance Club [CBDC] will be starting its next se­
ries of classes, i.e. for the second half of Winter Quarter '99! For more infor­
mation, see www.ccaltech.edu/­
baadom or call 626-791-3100.

H & SS Division offers the follow­
ing Selected Topics Courses for winter 2000: 1) "Myth, Magic, Madness, and Morte­
n: Selections from American Litera­
ture" Instructor: M. A. Godwin; M 1-4 pm & 1e Daube. The HSS division is also offering another section of Hum­
anities, Faith, and Society and Winter Term: Instructor: Kouser; T 7-9:30 pm & 3-4. Copies of HSS class schedules are available in 228 Baxter.

Independent Record label looking for part time intern. Duties are based on background skill level. Looking for someone who can help with all aspects of the record label. If you have a resume please send via e-mail to studio@independent.com. Please also visit our website http://ivr.fak.net/ to learn more about our company.

The Getty Grant Program - Multicultural Undergraduate Internships at the Getty Museum is available for students who are members of groups underrepresented in museum professions. Applicants must be currently en­
rolled undergraduates in the Los Ange­
elas area, and will have completed at least one academic year degree s in the chemical science. The internship provides stipends of $3,000 for ten-week summer internships in specific departments of the Getty Mu­
museum and other locations located at the Getty Center, beginning June 2000 and ending August 2000. Application forms are now available from the Grant Program office, accessible at the Getty Grant Program, 7000 Wilshire Blvd., Suite 3605, or via e-mail at grants@getty.edu. En­
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Glamour Magazine's 2000 top ten college women competition for finalists: The American Chemical Society (ACS) Program, 7000 Wilshire Blvd., Suite 3605, or via e-mail at grants@getty.edu. En­
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