Friend of the Court

CALTECH ALUMNI ASSOCIATION

Will Peterson (BS ’02) was offered the chance every lawyer dreams of: to argue before the Supreme Court, but the former software engineer had less than four months to prepare his case.

When Will Peterson heard that a Supreme Court Justice was on the phone for him, he instinctively stood up and straightened his tie. Looking out the window of his Houston office, the 35-year-old attorney held the phone quietly for a few moments before Justice Antonin Scalia came on the line. A case was coming up, and the government had opted not to defend its position. Would Peterson be interested in arguing the case in court?

One week later, it was formally announced that Peterson would be presenting oral arguments before the Houston-based law firm Beck Bolton & Wilson on behalf of a Supreme Court Justice. He then joined the Houston-based law firm Beck Bolton & Wilson, which specializes in complex civil trials and appeals.

The case Peterson was drafted on was Reyes Mata v. Lynch, a technical one revolving around immigration and jurisdiction. When Noel Reyes Mata, an undocumented immigrant, was ordered deported, he appealed, first to the Board of Immigration, and when that failed, to the Fifth Circuit Court of Appeals, where the court held that it lacked jurisdiction on the issue. Reyes then appealed to the Supreme Court last fall. “The question essentially was: Did the Fifth Circuit have authority to reopen Mata’s case or not?” Peterson said. While the Fifth Circuit said no, the government had the unusual stance of deciding not to defend its position.

Enter Peterson. “I did not have a client. My role was amicus curiae, or ‘friend of the court,’” Peterson said. “My responsibility was to provide the justices with the strongest arguments for affirming the Fifth Circuit’s judgment.” Of course, to do that, Peterson would have to learn everything about the case—in less than four months.

Defending a judgment that the government has abandoned is usually a losing battle, and indeed, the Supreme Court held it’s that the Fifth Circuit was in error and did not have jurisdiction. Mata himself may not be out of the woods—the case now heads back to the lower court for further rulings.

For Peterson, though, the experience was the opportunity of a lifetime. In a footnote to his opinion, Justice Kagan expressed the Court’s gratitude that Peterson “ably discharged his responsibilities.” Peterson believes that his Caltech education has in many ways contributed to his success. “The law requires a very structured way of thinking, not unlike programming,” he said, before pausing a beat. “Connecting with Caltech always reminds me that I’m not actually a successful lawyer, but instead just a failed engineer.”

We’d object.

This article originally appeared in Tech, published by the Caltech Alumni Association.

News briefs from around the globe

A brief list of events from the past week, compiled by the editors

Kenyan president takes bold stance against ivory trafficking

100+ tons of confiscated ivory burned by president in effort to make a clear statement against elephant and rhino poaching for ivory sales [BBC]

Ancient Roman coins unearthed in Spain

1,300 pounds of Roman coins dating back to the third century A.D. were discovered by construction workers digging a trench in Spain [CNN]

First cruise in decades to leave for Cuba from US port in Miami

728-passenger ship set out to visit Havana, Cienfuegos and Santiago de Cuba [TIME]

Deaths in Aleppo lead Kerry to begin new bid for end to fighting

250+ civilians killed in past 10 days; John Kerry to attempt to bolster ceasefire [BBC]

Blast at Mexican chemical plant reminiscent of 2013 accident

28 confirmed dead after explosion occurs at Pemex chemical plant [CNN]

Graduate student receives grant

NEERA SHAH

Page Editor

How did you hear about the fellowship?

I work with the Blue Waters supercomputer, and they had the fellowship advertised on their website and on posters in my building.

Which year are you in your graduate studies?

I’m currently in my fourth year, and the fellowship will cover me for my fifth (and hopefully last) year.

Which department and lab are you working in?

I’m in physics, and I’m working in Christian Ott’s group.

Can you explain what your research is about and how this fellowship will help you with it?

My research focuses on trying to understand the mechanism that causes large stars to explode and on the consequences of two neutron stars colliding. These are both very important endeavors in astrophysics. Observers regularly watch stars explode as core-collapse supernovae, but when we put a star on a supercomputer and add in the best physics we can, they don’t reliably explode—something is missing in our understanding or our models. Though a completely different phenomenon, colliding neutron stars use a lot of the same physics that is relevant in supernovae. These are cool because they might be able to explain where all the heavy elements (such as gold and platinum) come from, are prime candidates for generating gravitational waves for LIGO to detect and likely also explain the origin of gamma-ray bursts (a long-standing mystery which still has to be verified).

I work on computational models of these events. That is, I try to simulate them on supercomputers as accurately as possible to learn how they work, since we can see the inside of the simulations in detail and distance makes it very hard to observe most things about the real explosions. In particular, I work mostly on a small, but extremely challenging part of the models—the movement of neutrinos through the systems while they’re exploding. It’s a huge problem and is incredibly computationally complex.

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SHERWOOD DISCUSSES

RESEARCH FUNDED BY NEW FELLOWSHIP
The Caltech Y Column serves to inform students of upcoming events and volunteer opportunities. The list is compiled by Neera Shah from information given by the Caltech Y and its student leaders.

Founded by students in 1916, the Y was organized to provide extracurricular activities planned and implemented by students as an opportunity to learn leadership skills and discover themselves. The mission of today’s Y is the same—to provide opportunities that will prepare students to become engaged, responsible citizens of the world.

The Y seeks to broaden students’ worldviews, raise ethical, and cultural awareness through teamwork, community engagement, activism, and leadership. More information about the Caltech Y and its programs can be found at https://caltechy.org. The office is located at 505 S. Wilson Avenue.

Upcoming Events

1. Caltech Y Photo Contest
   Deadline to Submit Photos: Wednesday, May 11th
   Want to win $100? Enter the Caltech Y Photo Contest.

   For our centennial year, the Caltech Y will be holding our first ever Photo Contest. If you have participated in a Caltech Y program and are a current student, submit your photos for a chance to win. We’re giving a $100 prize to the winner of each of the five photo contest categories.

   The 5 categories come from the Caltech Y pillars of: Perspective, Adventure, Service, Civic Engagement, and Leadership.

   Photos should demonstrate the pillar in action. Photos of people are preferred, but exceptional scenic pictures will also be accepted. The deadline to submit photos is Wednesday, May 11th. After the deadline, we select the finalists, upload them to our Facebook page, and our fans vote for their favorites to determine the winners. Winners will be announced on June 1st.

   For more info on how to enter visit: http://caltechy.org/photo_contest/

2. World Fest
   Monday, May 2nd - Friday, May 6th, 2016
   Celebrating the cultural diversity of our campus community, World Fest is brought to you by the International Offices and the Caltech Y, in collaboration with a number of international and cultural student clubs.

   Special Thanks To: Armenian Student Association, Association of Caltech Taiwanese (ACT), Armenian Student Association, Brazilian Students, Caltech C, Caltech International Spouse Club (CISC), Canadian Student Association, Filipino Student Association, French Club, German Students, Korean Students Association, Malaysian Students, Mexican Students, Nigerian Students, Organization of Associated Students from the Indian Subcontinent (OASIS), Pera Student Association, Singapore Student Society, Thai Student Association, Russian Club, Swiss Students, Vietnamese Student Association, and to all our student, staff, and community volunteers.

   World Fest: Born on a Kibbutz
   Tuesday, May 3rd | 12:00 - 1:00 PM | Avery Library | Lunch Provided

   Ever wonder what it’s like to grow up on a kibbutz? Come learn some of the history and evolution of this communal child rearing system in Israeli society, and find out what it was like to be raised on a kibbutz in the 1980s. Presented by Kim Banaji-Gal.

   World Fest: International Food Fair
   Wednesday, May 4th | 4:30 - 6:00 PM | Avery Courtyard | Tickets $5

   For just $5, enjoy a taste of the world. Food provided by Caltech student clubs.

   World Fest: So You Think You Know Mexico?
   Thursday, May 5th | 12:00 - 1:00 PM | Avery Library | Lunch Provided

   Since the end of apartheid 20 years ago, access to housing, education, and healthcare has become more disparate between socioeconomic classes in South Africa. Hear lessons learned about cultural awareness and sensitivity from a Caltech student's two-week study abroad opportunity in Cape Town. Presented by Halston Lim, recipient of a Mellon Mays Undergraduate Fellowship.

3. Caltech Y India Cultural Trip - Applications Available Now
   December 10 - 20, 2016 | Cost: $950 | Applications Due Thursday, May 18th

   The Caltech Y, in partnership with the SURF Program and IIT Gandhinagar (IITGN) in India, is coordinating a trip to Ahmedabad, India. Join us for an exciting trip as we explore India as an emerging nation and its potential role as a global leader in the context of its history and culture.

   The Caltech group will be hosted by IITGN and Corporate Partnerships.

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   Applications Due Thursday, May 18th

   The trip is open to undergraduate students only - sorry no graduate students. Applications can be found at http://caltechy.org/programs_services/areas/India/index.php and are due by Thursday, May 18th.

   Questions may be directed to caltechy@caltech.edu. Space is limited

4a. Pasadena LEARNS
   Friday | 3:00 - 5:00pm | Madison, Jackson, and McKinley Elementary School
   Come volunteer at Madison, Jackson, and McKinley Elementary School! We are partnered with the Pasadena LEARNS program and work with their Science Olympiad team or do regular tutoring along with occasional hands-on science experiments. Transportation is provided.

   For more information and to RSVP, contact Vanish Kumar.

4b. Hathaway Sycamores
   Wednesdays | 5:30-8:00pm | Highland Park
   Volunteer at Hathaway-Sycamores, a group that supports local underprivileged students. There are a variety of ages and subjects being tutored. The service trip includes about an hour of travel time and 1.5 hours of tutoring. Transportation is included.

   For more info and to RSVP email Sherwood Richers at sherriers@tapir.caltech.edu.
Bolton Rants: Bourbakis and bijective functions

BOLTON BAILEY Contributing Writer

Continuing my train of thought on basic mathematical terminology that makes no sense, consider the terminology we use to talk about the following concepts: functions which map no two distinct domain elements to the same image, and functions for which the image of the domain under the function is exactly the range set.

The former are called “injections” or sometimes “one-to-one.” The word “injection” makes absolutely no sense here. If you go to the doctor’s office, and the doctor needs to give you some injections, does the doctor put those injections in different places of your body? No. The doctor picks the biggest vein (on your non-dominant arm) he or she can find and sticks with it. So if we think about the map from the vaccines you’re receiving to the locations in which you receive them, then that map wouldn’t be injective.

Would it? And why would we call a function a “one-to-one function” if some of the “ones” in the image space don’t necessarily have “one” preimage? Really, a “one-to-one” map should be a map which pairs every element of the image set with exactly one preimage (which we would normally call a bijection, but I’ll get back to that).

And what about the second type of function I mentioned, called “surjections” or “onto.” First off, what does “surjection” even mean? The Bourbakis were probably sitting around one day and had a conversation like this:

Bourbakis 1: Hmnn, what’s a good prefix we can use to indicate a function for which every element of the codomain is mapped to by at least one element of the domain?

Bourbakis 2: I know, “over” —

Bourbakis 3: Ahh yes, because “over” is French for “over,” and we’re French.

Bourbakis 4: But how is the concept of “over” tied to the notion we’re trying to capture? Also, why are we speaking English if we are French?

At which point the rest of the Bourbakis group probably kicked Bourbakis 4 out for making too much sense. And “onto”? Well that doesn’t tell us anything about the function. Do functions which are not “onto” prepositionally relate to the image set in some other way? Are they “besideto” functions, or “undergo” functions?

Here’s how it should be:

The first kind of function we talked about should be “collision free.”

The second should be “covering.” Functions that are both of these should be “one-to-one” (because they actually are that way).

Bolton Rants: Bourbakis and bijective functions

A chance to get off campus: A list of recommended cafés near Caltech

KSHITIJ GROVER Contributing Writer

I’m one of those people who know where all the cafés near Caltech are, but don’t have a car to venture out too far (and only a college budget, after all). Here’s a small list of my favorites for the next time you want to leave SFL. Remember: If you don’t take an Instagram picture, the trip never happened.

Intelligentsia:

I recently started visiting Intelligentsia to work and read a couple weeks ago, and it tops

“Remember: If you don’t take an Instagram picture, the trip never happened.”

Urth Caffé:

No list would be complete without Urth, which has the best

contributing writer

CHLOE HSU Page Editor

In honor of the HSS Division’s 50th anniversary, Vernon L. Smith (Caltech, B.S. 49), delivered a special lecture titled “On Changing False Beliefs: Two Cases from Experimental Economics and Their Economic Implications” on Thursday, April 28. In his lecture, Smith addressed the importance of experiments in economics, using two examples of false confirmation bias in 1950s and 1980s.

Vernon Smith, who will turn 90 years old in January, is one of the two Caltech alumni who have been awarded the Nobel Prize in Economics. In 2002, he shared the Nobel Prize in Economics with Daniel Kahneman for “having established laboratory experiments as a tool in empirical economic analysis, especially in the study of alternative market mechanisms.”

This year, Caltech’s HSS Division celebrates its 50th anniversary with a lecture series featuring distinguished HSS alumni and faculty members. The upcoming lecture in the series will be presented by Charles S. Plott, professor of economics and political

Nobel Laureate Vernon L. Smith speaks in HSS 50th Anniversary Lecture

Behavior: Science and Application of Extracting the Wisdom of Crowds” on Thursday, May 26.

my list in almost every respect. It’s a little narrower than some of these other cafés, but they use and decorate the space nicely. If you’re looking for something quick, it’s perhaps not the place: not only will you be enthranged by the vibe, but they churn out drinks with more care (and time) than most. I’ve rarely had coffee here (make no mistake — it’s phenomenal), but I can wholeheartedly recommend their tea. If you end up trying the white peony, let me know how you like it! Protip: If you don’t see an outlet, ask for their portable heater — you won’t regret it!

Copa Vida:

This place has an amazing ambience and is nearly always lively. As for their drinks, I’ve tried the cold brew, a couple lattes and some loose-leaf brewed tea; the drinks aren’t particularly flavorful, but you won’t regret the $4 to $6 you’re spending. I like to stick to the basic brewed coffee here. Remember to bring some nice headphones (or an extreme tolerance for a noisy background) if you’re planning on working here.

Protip: On the weekend, there is no Wi-Fi until 3 p.m., so it’s a better place to relax with friends or do some offline reading.

Bird Pick Tea and Herb:

Come here if you’re a tea addict. Urth’s rich drinks, while on the more expensive side, are undoubtedly worth their price. My favorite order is a black milk tea with mango on ice, but you can’t go wrong with any of their lattes. Urth has an intangible going for it: even though it’s not the best place to work, it’s a great atmosphere for conversation and hanging out with friends. Protip: Be sure to snag an outdoor seat next to a standing heater — you won’t regret it!

Urth Caffé:

List would be complete without Urth, which has the best

“Remember: If you don’t take an Instagram picture, the trip never happened.”

Omoto Café:

This motorcycle themed café deserves a shoutout — I found out about it just yesterday. It’s right next to Afters Ice Cream on the corner of South Chester Avenue and East Green Street; don’t be surprised if you’ve walked past it on the way to East Colorado Boulevard. If you’re looking for a cheaper drink option and love croissant sandwiches, it’s worth your while to try this out. I loved the music selection and was able to be very productive for the couple hours I was here. Protip: Don’t touch the motorbike; just admire.

That’s all for me this time; I didn’t even get into the best boba places, but you’ll just have to wait for part two!
Caltech launches public phase of $2B fundraising campaign

You chose one of the most trusted institutions in SCIENCE. Now choose one of the most trusted institutions in FINANCE.

When you want unsurpassed stability, integrity and value for your money, Caltech Employees Federal Credit Union offers an honest alternative. There are no gimmicks. No annual fees. No harsh penalties. Just some of the lowest lending rates and highest savings rates in the nation . . . and a state-of-the-art eBranch for easy, convenient online and/or mobile access to your account. We’re the overwhelming choice for financial services among the entire Caltech family. If you haven’t yet joined, call or visit us online or in person today. You belong here.
**Women’s water polo team caps off season of significant progress at SCIAC Championships**

**Tennis sends unprecedented 10 to Ojai Tournament**

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**SPOTS**

Women’s water polo team caps off season of significant progress at SCIAC Championships

Women’s water polo team caps off season of significant progress at SCIAC Championships

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**GOCALTECH.COM**

**Actual Sports Content Editor**

**REDLANDS, Calif. (Apr. 23, 2016)** – Caltech women’s water polo capped a season in which the program took major strides forward at the SCIAC Championships, in Redlands this past Friday and Saturday.

Multiple Beavers recorded outstanding efforts to win the SCIAC Championship and earn a spot in the second round of the NAIA West Region. A matchup against Hope College’s Chelsea Wang has a far more reasonable chance against West Region No. 11 No. 6 and #4 seed Simonides, who has teamed with Graham Maassen to form the West Region’s No. 2 doubles pairing but is unranked as a singles player, and would face West No. 9 and #6 seed Joey Dulle, the University of Redlands’ #2 team.

The winner will face the eventual runner-up of #3 seed Hope and Whittier in the West Region. The winner will be looking to add two more goals to the Bulldogs’ #2 team just last Saturday. A victory means a quick turnaround to face the imposing Pomona-Pitzer duo of West No. 6 and #5 seed team of Jonathan Kim and Jake Yasgoor, who have lost just twice this spring.

**Tennis sends unprecedented 10 to Ojai Tournament**

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**GOCALTECH.COM**

**Actual Sports Content Editor**

**OJAI, Calif. (Apr. 20, 2016)** – An unprecedented 10 Caltech men’s and women’s tennis players are set to participate in the 116th Annual Ojai Valley Tournament beginning Thursday, Apr. 21.

A program-record 12 Beavers made the field, and even with the withdrawal of two women’s players, Caltech will field seven singles competitors and four doubles pairings between the Division I and Independent College Events.

**Women**

Freshman Kana Moriyama and sophomore Erin Wang will represent the women’s team in a thin singles bracket. With just one set of #3 seed Hope and Whittier in the West Region. The winner will be looking to add two more goals to the Bulldogs’ #2 team just last Saturday. A victory means a quick turnaround to face the imposing Pomona-Pitzer duo of West No. 6 and #5 seed team of Jonathan Kim and Jake Yasgoor, who have lost just twice this spring.

**Men**

Already having made history on several fronts this season, the men’s team will be looking to add another achievement to the list. The only men’s player to win a singles match in the tournament, assistant coach Devashish Joshi has been in both singles and doubles in 2012), will be on site to help their cause, but their work may certainly cut out for them. Senior Rushikesh Joshi drew Pomona-Pitzer’s Spencer Simmonds, who has teamed with Graham Maassen to form the West Region’s No. 2 doubles pairing but is unranked as a singles player, and would face West No. 9 and #6 seed Joey Dulle, the University of Redlands’ #2 team.

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ASCIT Minutes
Meetings are every Wednesday at 4 p.m. in SAC 13
(Minutes are from last week, no new minutes taken)

ASCIT Board of Directors Meeting
Minutes for 21 April 2016. Taken by Phillip An.

Officers Present: Nima, Serena Delgadillo, Sean McKenna, Kalyn Chang, Annie Chen, Robin Brown

Call to Order: 12:05

President’s Report (Nima):
- Schedule for transition:
  - Still will attend Joe Shepard Meetings and committee meetings until June

Officer’s Reports:
- V.P. of Academic Affairs (ARC Chair: Jay):
  - Absent
- V.P. of Non-Academic Affairs (IHC Chair: Bobby):
  - Absent
- Director of Operations (Sean):
  - Will fix ASCIT screening room projector in Hawthorne soon
- Treasurer (Kalyn):
  - None
- Social Director (Annie):
  - Trivia night is tonight! (every other Thursday until Week 8)
- Secretary (Phillip):
  - None

If anyone has any questions or concerns about a section of the minutes please email the appropriate officer. We are happy to answer any questions. The next meeting will take place on April 28th at 12pm in Winnett Lounge.

Meeting Adjourned: 12:27 pm

REMINDER FROM COUNSELING CENTER:
Meditation Mob
(drop-in mindfulness meditation group)
Meets every Tuesday
12:00-12:50 p.m.
Bottom floor of Winnett

Spring Term Office Hours
12 p.m. - 1 p.m.
Friday, May 6
Thursday, May 12
Wednesday, May 18
Tuesday, May 24
Friday, June 3

VICE PROVOST’S OFFICE HOURS
Vice Provost, Chief Diversity Officer and Professor of English, Cindy Weinstein, holds regular office hours. This is an opportunity for undergraduate, graduate students and postdocs to meet and discuss what they’d like pertaining to the Council on Undergraduate Education, Caltech accreditation, the Staff and Faculty Consultation Center, Student-Faculty Programs, the Center for Teaching, Learning and Outreach, the Caltech Diversity Center and the libraries.

There are four appointments per hour, 15 min. each. Sign up the morning of the office hour in 104 Parsons Gates, Vice Provosts’ Offices (x6339).

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Bottom floor of Winnett
Sherwood Richers receives fellowship from Blue Waters for use of supercomputer to create computational models

Continued from page 2

demanding, so pretty heavy approximations have to be made or even the world’s biggest supercomputers would not be big enough to run the simulations. I am trying to combine two previously separate approximate transport methods (Monte Carlo and two-moment) to simulate the most accurate neutrino transport in three-dimensional simulations ever.

The fellowship provides some computer time on Blue Waters that is enough for some smaller projects. However, I still have to be involved in additional applications for time on supercomputers, including Blue Waters and several others. The fellowship also helps me into contact with leaders in the fields of all kinds of computational science. Good contacts who can vouch for you are invaluable in any field. And, of course, the fellowship pays a stipend that is significantly higher than the Caltech stipend, which will help with additional applications for time on Blue Waters that is enough for some smaller projects. So, I suppose I got my start with computational astrophysics in my senior year when I worked with John Hasley, who is well known for co-discovering the importance of the “magnetorotational instability” in accretion disks (i.e., the disk of stuff circling and falling into black holes). I applied to graduate schools for both computational astrophysics and experimental atomic physics. When I got my first fellowship (Department of Energy Computational Science Graduate Fellowship, or DOE CSGF), I decided to go to Caltech and continue doing computational astrophysics. This specific project, i.e., using Monte Carlo techniques to simulate neutrino transport, started the summer after my first year in graduate school when I was visiting Lawrence Berkeley National Laboratory for a summer of my DOE CSGF fellowship. I worked with Dan Kasen and others to develop my code, and now I’m continuously improving it and making it do bigger and better things.

Will you have to travel to use this supercomputer? Blue Waters is one of many supercomputers in the nation. Thank goodness, travel is not required to use the supercomputer. You just have to ssh (Secure Shell) into it, and you can access it via a command line interface from any computer (or even a cell phone). You set up the program you want to run, submit it to a queue and wait for the computer to run it (there are hundreds of people using any supercomputer at the same time, and there are rather sophisticated automated routines to determine who gets to use how much of the machine and when). It is in Illinois, and I have visited it by chance while at another conference, but it really is completely unnecessary unless you want a tour of the facility.

Is there anything else you’d like to add? Here’s some relevant information for fellowships and lots of other things. Get used to applying for everything you want, and getting rejected for most of it. That’s certainly how it works for me, and I think it extends to most people. If you’re constantly searching for opportunity, opportunity has a way of eventually finding you.

Crossword

Across
1. Stateroom
6. Impulse
10. Cot
14. Unaccompanied
15. Decant
16. Alley
17. Perch
18. Box lightly
19. Cause annoyance
20. Portable shelter
21. Visionary
22. Large passenger ship
23. Ecstatic
25. Rostrum
27. Inhabit
30. Vignette
33. Travesty
35. Wide open
36. Misery
39. Worry excessively
40. Excavate
41. Prima donna
42. The night before
43. Shelf
45. Cloth cap with no brim
46. Menul
48. Wellbeing
49. Evidence of previous injury
51. Small hard fruit
52. Aromatic substance
53. Molecule
54. Edible fat
56. Metallic element
57. Wheelwork
59. Mechanism
61. Step
62. Report or maintain
63. Furry
64. Edible bulb
66. Look after
68. Merely
69. Easily irritated or annoyed
71. Aprotostome
72. Asexual reproduction
73. Mechanism
74. Drudge
75. Dry soil
76. Ethnic group
77. Cereal
78. Artery
79. Scar
80. Grass
81. Leg
82. Organ of hearing
84. Organ of taste
85. Examine
86. legislative body
87. Muscular
88. Teeth
89. Exhale
90. Expend
91. Finish
92. Consider
93. Present...

Down
1. Heavy open wagon
2. Succulent plant
3. Good fortune
4. Teach
5. Mesh
6. Knock over
7. A strong line
8. Keep watch over
9. Make a mistake
10. Color of ripe cherries
11. Precipitation
12. Small island
13. Ale
14. Secret agent
15. Secret agent
16. Small snake
17. Bid
18. Sculp
19. Go stealthily
20. Parasitic insects
21. Regretful
22. Two-wheeled horse-drawn carriage
23. Historic period
24. Time at which something must be completed
25. History
26. In one’s you
29. Scour
30. Unfortified
31. Persuade
32. Crave for something belonging to someone else
33. Uncultivated land with scrubby vegetation
34. Append
36. Two-wheeled horse-drawn carriage
37. Metal
38. Slippery
39. Allay
40. Easily irritated or annoyed
41. Prima donna
42. Excavate
43. Step
44. Shift
45. Small hard fruit
46. Aprotostome
47. Asexual reproduction
48. Drudge
49. Mechanism
50. Organ of sight
51. Organ of hearing
52. Organ of smell
53. Aprotostome
54. Asexual reproduction
55. Examine
56. Expend
57. Finish
58. Consider
59. Present...
60. Legislative body
61. Muscular
62. Teeth
63. Dated
64. Color of ripe cherries
65. Pocket
66. Look after
67. Exhale
68. Expend
69. Present...
70. Finish
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86. legislative body
87. Muscular
88. Teeth
89. Exhale
90. Expend
91. Finish
92. Consider
93. Present...

http://puzzlechoice.com
Tom’s hopes of sneaking in late unnoticed were dashed when he discovered that the professor had already started lecturing - to an empty room.

It’s the Economy, Bernie!

The California Tech
Caltech 40-58
Pasadena, CA 91125