LATEST NEWS

UC San Diego Scientists Create Device for Ultra-Accurate Genome Sequencing of Single Human Cells

An interdisciplinary team of researchers at the University of California San Diego has developed a technology for very accurate sequencing and haplotyping of genomes from single human cells. Their findings were published online in advance of the Proceedings of the National Academy of Sciences (PNAS)* print edition.

"Accurate sequencing of single cells will enable the identification of mutations that cause cancer and genetic disease," said senior author Kun Zhang, a professor of bioengineering in the UC San Diego Jacobs School of Engineering. "At the same time, precise haplotyping will allow for the genotyping of haplotypes, combinations of different genes or alleles as a group from either parent." Read more

Contextual Robotics Institute Director Honored with Endowed Chair in Robotic Systems

Henrik Christensen, an internationally renowned expert in robotics, has been appointed as the inaugural holder of the Qualcomm Chancellor’s Endowed Chair in Robotic Systems at the University of California San Diego.

The chair was made possible by a generous $1 million gift from Qualcomm Incorporated and a $500,000 match from the campus Chancellor’s Chair Challenge, a program created to support the recruitment and retention of quality tenured faculty. Christensen leads the Contextual Robotics Institute at UC San Diego and serves as a professor in the Computer Science and Engineering (CSE) Department of the Jacobs School of Engineering. The gift contributes to the Campaign for UC San Diego. Read more

Additive Rocket Corporation Gets International Press

QI Innovation Space participant Additive Rocket Corporation (ARC) has received international attention by way of a feature article published late last month in the Sydney Morning Herald. Reporter Cara Waters interviewed ARC co-founder and CEO Andy Kieatiwong about his internship at Elon Musk’s Space X, as well as the childhood inspiration for his start-up, which prints metal rocket engines for satellite manufacturers, launch service providers and government agencies. Kieatiwong, who has expertise in additive manufacturing and optimization of fluid and heat flow, is currently in Adelaide, Australia, where he will spend three months as part of the TechStars defence accelerator. Read the entire article here.

Did you know QI publishes a twice monthly email newsletter about research communication? Research Refined is
UC San Diego Cyber-Archaeologist Participates in 'Dialogue of Civilizations'

University of California San Diego anthropology professor Thomas E. Levy is back in San Diego after participating in the fourth International Conference on Dialogue of Civilizations, held in Ahmedabad, India and co-organized by the National Geographic Society, Archaeological Survey of India (ASI) and India’s Ministry of Culture.

Begun in 2013, the conference series was created to encourage scholarly discourse about five ancient, literate civilizations of the world: Egypt; Mesopotamia; South Asia; China; and Mesoamerica. Previous Dialogues took place in Guatemala (2013), Turkey (2014) and China (2015). The series is the brainchild of Christopher Thornton, PhD, Senior Director of Grants & Human Journey of the National Geographic Society. Read more

Why Larry Smarr is Pioneering Collaborative Innovation

Note: This is a sneak preview of an article by Lawrence M. Fisher that will appear in the November print edition of Strategy+Business magazine (which will include additional photographs). Strategy+Business kindly agreed to allow us to reprint the story here.

In one laboratory, researchers are developing programs and computer visualizations that can map the complex urban boundaries in India. Nearby, the cofounder of the University of Illinois at Chicago's Electronic Visualization Laboratory is working on high-speed networks and machine learning computing. On the first floor, 78-year-old Don Norman, author of The Design of Everyday Things (Basic Books, 1988), presides over a design lab. In one studio, an archaeologist is creating ultra-high-resolution 3D virtual reproductions of world cultural heritage sites that are under

Introducing InfoReady Tool for Limited Submission Funding Opportunities

The Office of Research Affairs (ORA) is introducing a new online platform for announcing and posting application instructions for limited-submission funding opportunities. Prospective applicants will now submit all materials through a web-based portal, rather than via e-mail. Effective immediately, applicants can search and apply for limited-submission opportunities at https://ucsd.infoready4.com.

Campus announcements of limited-submission opportunities will continue to be distributed via the following mail lists:

1. The UCSD Funding List is used for distribution of funding opportunity announcements relevant primarily to investigators on the General Campus and at Scripps Institution of Oceanography. To subscribe, please go to: https://lists.ucsd.edu/mailman/listinfo/funding-announcements-l.
threat of destruction. Scientists huddle with first responders to combine readings from hundreds of meteorological stations to predict the movement of wildfires. In a corner office, two graduate students hack out code that enables more effective visualization of people’s internal organs to help pre-surgery planning. Read more

Laser Cavities Take on New Shapes and Functionalities

Researchers have demonstrated the first laser cavity that can confine and propagate light in any shape imaginable, even pathways with sharp bends and angles. The new cavity, called a topological cavity, could enable laser components to be packed more densely on a chip, leading to higher speed optical communication technologies that can be fabricated in an efficient and scalable manner using photonic integration techniques.

This paper was published online by the journal Science on Thursday, October 12, 2017. Read more

Northern CA Wildfires Generate 1.5 Million Views of UC San Diego's 'Firemap' Resource

A web-based tool recently developed by UC San Diego researchers to perform data-driven predictive modeling and real-time tracking of fires has already been viewed about one million times and generated more than 115,000 unique visitors since the outbreak of numerous wildfires across Northern California late last weekend.

Some WIFIRE models of this week’s Sonoma and Napa Valley, CA wildfires over a six-hour timespan, showing their fast progression. Each color is half an hour of activity. Source: Daniel Crawl, SDSC/WIFIRE. Called Firemap and developed by the university’s

2. The Biomedical Limited Submissions List is used for distribution of limited-submission opportunity announcements relevant primarily to investigators engaged in biomedical and health-related research. To subscribe, please go to: https://lists.ucsd.edu/mailman/listinfo/biomed-funding-ls-l.

The content of the campus announcements will be largely the same. However, an updated format will reflect the transition to the new system.

* Please Note: Opportunities that were recently announced and remain open, as well as information about past competitions, will remain available at the old limited submission webpage, http://limitedsubmission.ucsd.edu, however new competitions will not be posted there. Application materials for these open competitions should still be submitted via email, as instructed on this webpage.

Should you have any questions regarding the transition, please email limitedsub@ucsd.edu.
‘WIFIRE’ collaboration, the resource enables a ‘what-if’ analysis of fire scenarios ahead of time as well as for real-time fire forecasting. The overall goal of WIFIRE, the result of a multi-year National Science Foundation (NSF) grant, is to make data and predictive models readily available so that the direction and rate of fire spread can be known as early as possible to assist in rescue and containment efforts. Read more.

UC San Diego, Project Concern International Partner to Curb Human Trafficking

The University of California San Diego signed a memorandum of understanding (MoU) with Project Concern International (PCI) yesterday to jointly advance anti-human trafficking efforts in San Diego County.

The MoU was signed by UC San Diego Chancellor Pradeep K. Khosla and PCI’s President & CEO Carrie Hessler-Radelet following “No More, No More,” a human trafficking awareness program hosted by the Social Impact and Innovation (SII) Program at UC San Diego’s Qualcomm Institute. Hessler-Radelet was the keynote speaker for the event, which included performances by UC San Diego theatre students and Buki Domingos, a singer/songwriter and survivor of human trafficking.

“Even though we’d like to think these unspeakable crimes only take place in far-off corners of the globe, we face a very different reality,” Hessler-Radelet said. “It’s time for us to put one of San Diego’s largest underground economies out of business together.” Read more

UC San Diego, edX Launch First Adaptive Online Course to Teach Bioinformatics

Three years ago, UC San Diego computer science professor Pavel Pevzner predicted that today’s massive open online courses (MOOCs) would eventually give way to adaptive Intelligent Tutoring
In doing so, they could also replace traditional classroom lectures to a large extent – by dramatically changing the role of the professor.

Benjamin Bloom, the giant of educational psychology, argued 30 years ago that the classroom is an inefficient way to teach because students learn the same material at different speeds. Pevzner agrees: “My feeling is that we are probably the last generation of professors who will use the traditional classroom as a teaching technology. Twenty years from now, packing students into a large classroom and keeping them there for an hour will probably be seen as cruel and unusual punishment.”

Qualcomm Institute to Save Nearly Half a Million Dollars Per Year With Energy Efficiency Measures

The Qualcomm Institute at the University of California San Diego will save more than $486,650 year-over-year in energy costs thanks to a series of energy-efficiency improvements to Atkinson Hall, where QI is headquartered.

The improvements, which were mainly made to systems in the building that maintain air flow and air cooling and heating, amount to a 39 percent annual energy savings due to reduced electricity use and use of both chilled and hot water. UC spent less than $40,000 in project costs to make the improvements. For their work, QI Facilities Manager Timothy Beach and QI Facilities Coordinator Rene Real were awarded a Best Practice Award for HVAC Design/Retrofit and Commissioning by the California Higher Education Sustainability Conference.

UPCOMING EVENTS

Regulation of International Direct-to-Participant Research: A Perspective on Data Science
November 1, 2017, 11 a.m.
Room 1242, CSE Building (new conference room), UC San Diego
Speaker: Waqar Hasan, Oracle
Read more

Peer Instruction in Computer Science
Nov. 1, 2017, 4 p.m.
Room 1202, CSE Building, UC San Diego
Speaker: Leo Porter, UC San Diego Computer Science and Engineering
Read more

Earth Microbiome Project Mini-Symposium
Nov. 1, 2017, 3-5 p.m.
Calit2 Auditorium, Atkinson Hall, UC San Diego
Read more

Enabling Autonomous Vehicles: High-Definition Mapping of Road Infrastructure
Nov. 2, 2017, 5:30 p.m.
Room 2512, Jacobs Hall, UC San Diego
Speaker: Ravi Teja Sukhavasi, Qualcomm Research
Read more

Acoustic Filter Technology and Design in Modern Cellphones
Nov. 6, 2017, 10-11:30 a.m.
Room 2512, Jacobs Hall, UC San Diego
Speaker: Pierre-Alexandre Girard, Qualcomm
Read more

QI Monthly Mixer Happy Hour
Tuesday, Nov. 7, 9:30-11 a.m.
Calit2 Theater, Atkinson Hall, UC San Diego
Meet and get to know fellow collaborators, staff, building residents and QI-affiliated researchers from across campus. Snacks, coffee and tea will be served. Featured speakers this week:

- "Earthquake Reconnaissance" with Tara Hutchinson, Professor of Structural Engineering, and Eric Lo, QI Staff Engineer
- "Fighting Fire with Data" with John Graham and colleagues on the Firemap team
- Plus a short, interactive session on techniques for ideation and brainstorming
The Hearts and Minds of Data Science
Nov. 8, 2017, 4 p.m.
Room 1202, CSE Building, UC San Diego
Speaker: Cecilia Aragon, University of Washington
Read more

15th Shannon Memorial Lecture: Understanding Generative Adversarial Networks
Nov. 17, 2017, 2 p.m. Lecture; 3 p.m. reception
Calit2 Auditorium Atkinson Hall, UC San Diego
Speaker: David Tse, Stanford University
Read more

Technology, Healthcare and ?
Nov. 25, 2017, 4 p.m.
Location: Room 1202, CSE Building, UC San Diego
Speaker: Hari Garudadri, Qualcomm Institute
Read more

Additional QI events

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