

What is Local Has Global Impact: Focusing Digital Strategies to Extend Research Capabilities

Haipeng Li and Emily Lin
University of California, Merced
Oct. 18, 2017
PRRLA Conference
Hangzhou, China

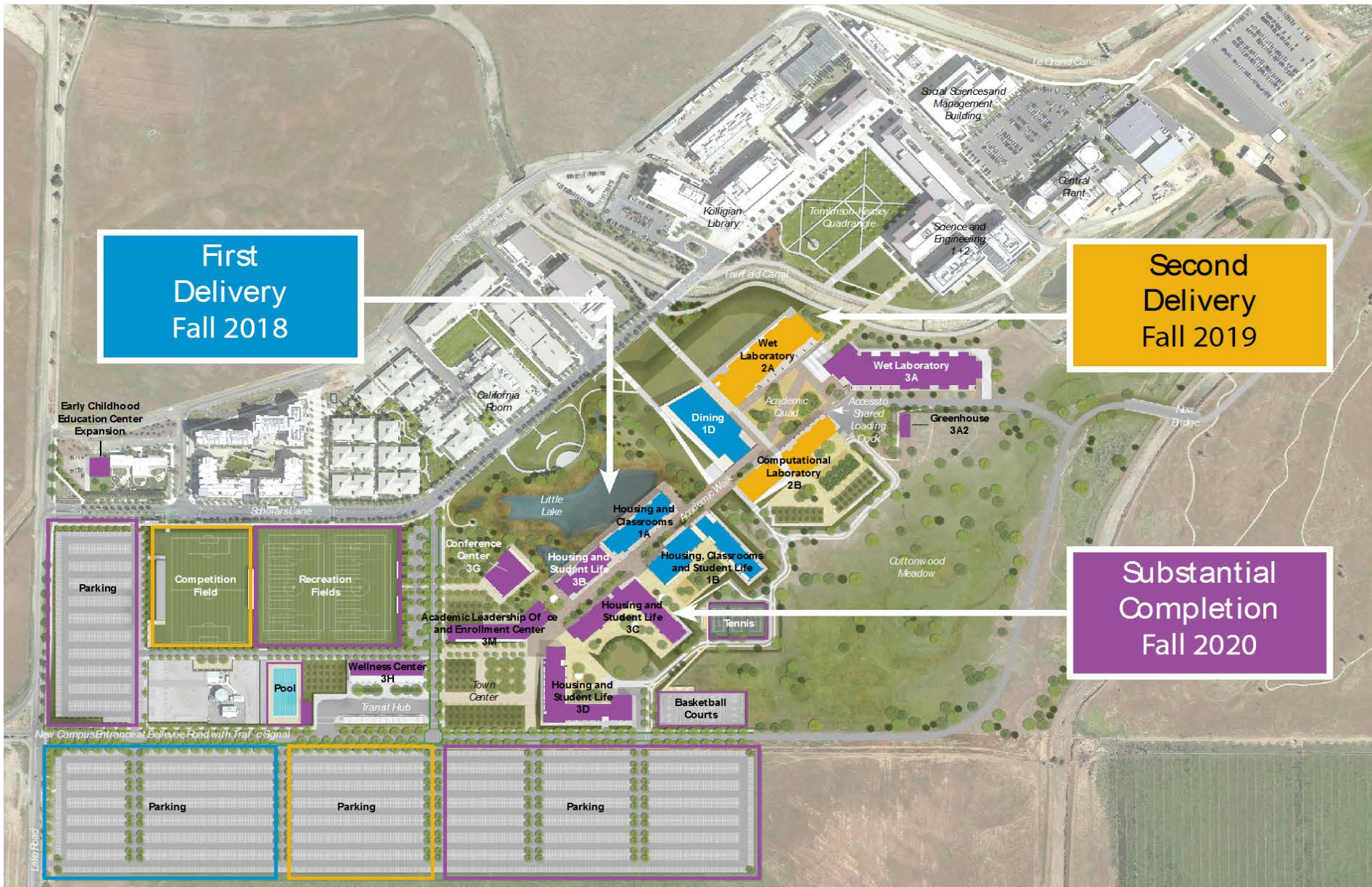
University of California, Merced

- 1st American Research University in the 21 century



UC Merced Expansion: Vision 2020

- Increase student population to 10,000 (9,000 undergraduates and 1,000 graduates)
- 42 new faculty hired last year (2016-2017)
- Hire 100 more faculty in next two years
- \$1.3 billion project
- Add 1.2 million gross square feet of space
- Double the physical size of existing campus



First Delivery
Fall 2018

Second Delivery
Fall 2019

Substantial Completion
Fall 2020

Merced 2020 is a campus expansion initiative that will be delivered in three phases between Fall 2018 and Fall 2020. By 2020, 1.2 million gross square feet of new space for academics, housing, student life, and athletics will be developed in order to address existing campus needs and to enable expanded access to the University. The \$1.3 billion project broke ground in October 2016 and is the largest higher education expansion of its type in North America. Financing was provided by the University of California and Plenary Properties Merced. When complete, the campus will have grown from 104 developed acres to 219 developed acres and every facility will achieve at least a LEED Gold certification.

Campus Expansion & Library Support

- Research Expansion
 - GIS Capacity – SpARC
 - Virtual Reality – LibraryCAVE
 - Digital Curation & Scholarship

Spatial Analysis & Research Center (SpARC)

- Hub for spatial science research, analysis, education, visualization, spatial data archiving, and access to spatial science software and equipment for UC Merced and its partners
- Integrated into faculty & community partner grants for research and other activities with GIS needs
- Supports expanded undergraduate curriculum in geography and spatial sciences
- Full transition to the Library.

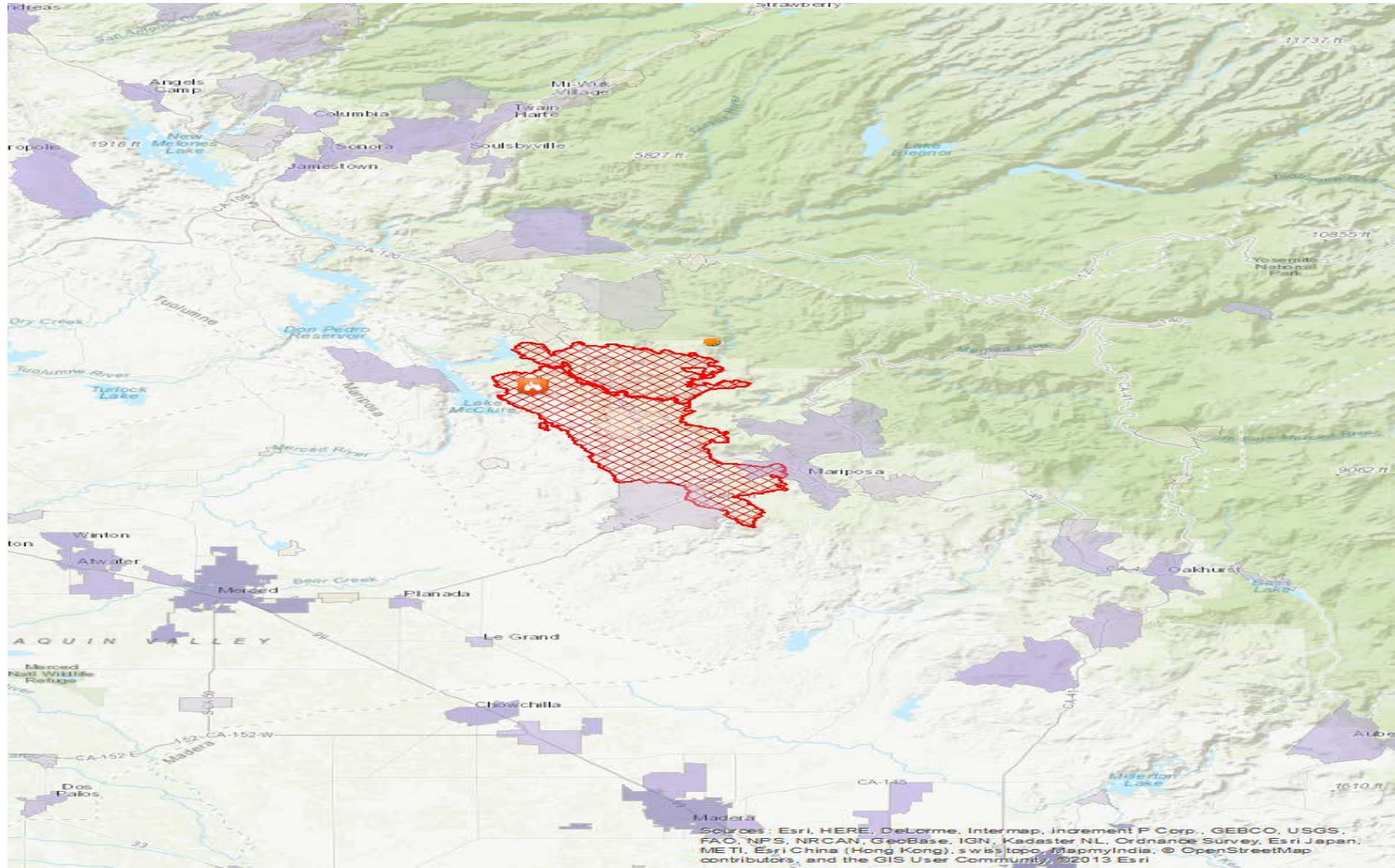
Active and Potential Projects

- UC Water communications maps
- Civilization GIS Database 3500BC to present day
- Moyes Cave Mapping
- Southern Sierra Critical Zone Lab
- Vernal Pools Data Management Support
- South Africa Historic Maps
- Yosemite National Park historic maps and photos
- GIS Management 2020 Project
- Critical Refugees in California
- Mongolian National Park GIS development

Role of GIS

- [The Detwiler Fire](#)
 - Started Sunday July 16, 2017
 - Over 700,000 acres burnt
 - 50 houses destroyed
 - One UCM library staff impacted
 - 76,876 map visits

CA Detwiler Fire 2017



Virtual Reality - LibraryCAVE

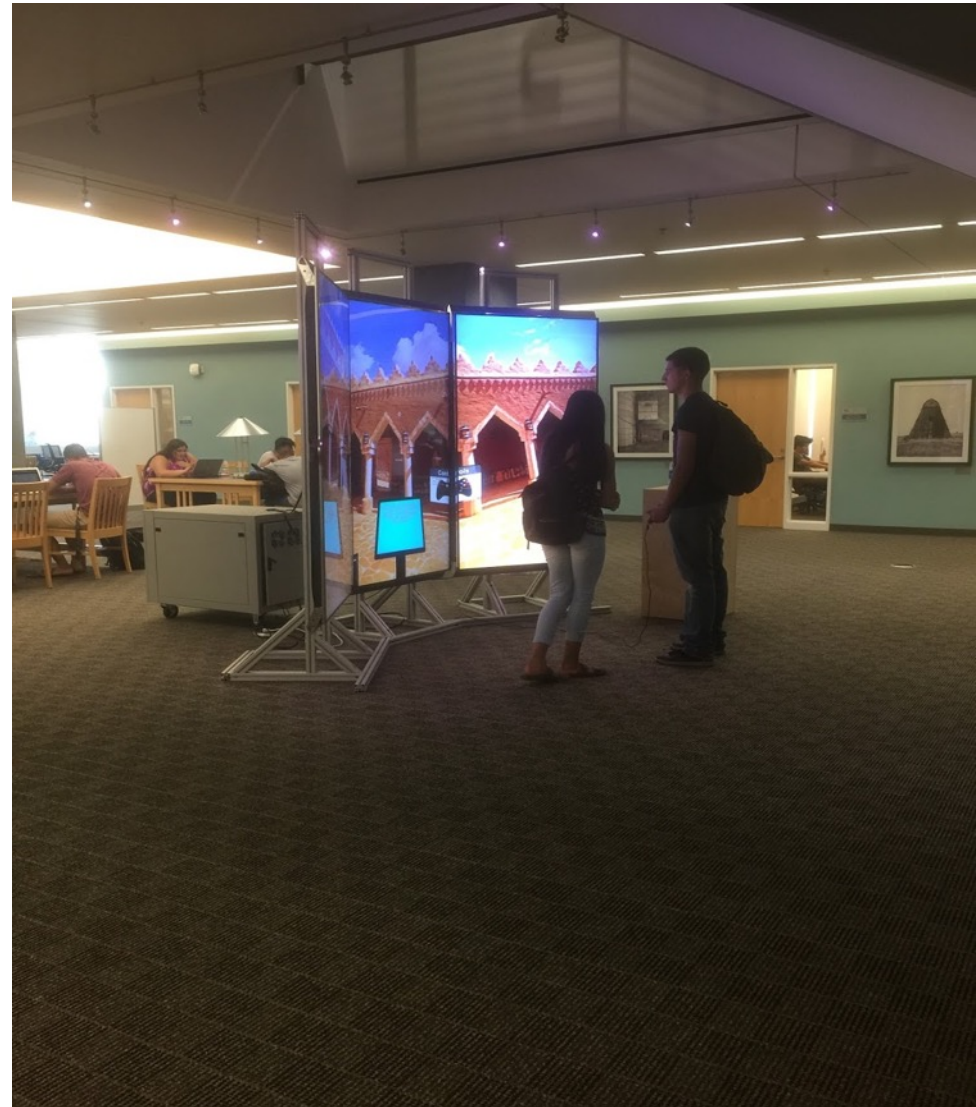
- Partners
 - Faculty
 - Dr. Nicola Lercari
 - Cultural Heritage Modeling
 - Library
 - Location
 - Managing scheduling and equipment
 - Campus IT
 - Hardware and software issues
 - Uploading content

WH110– Modelling for World Heritage

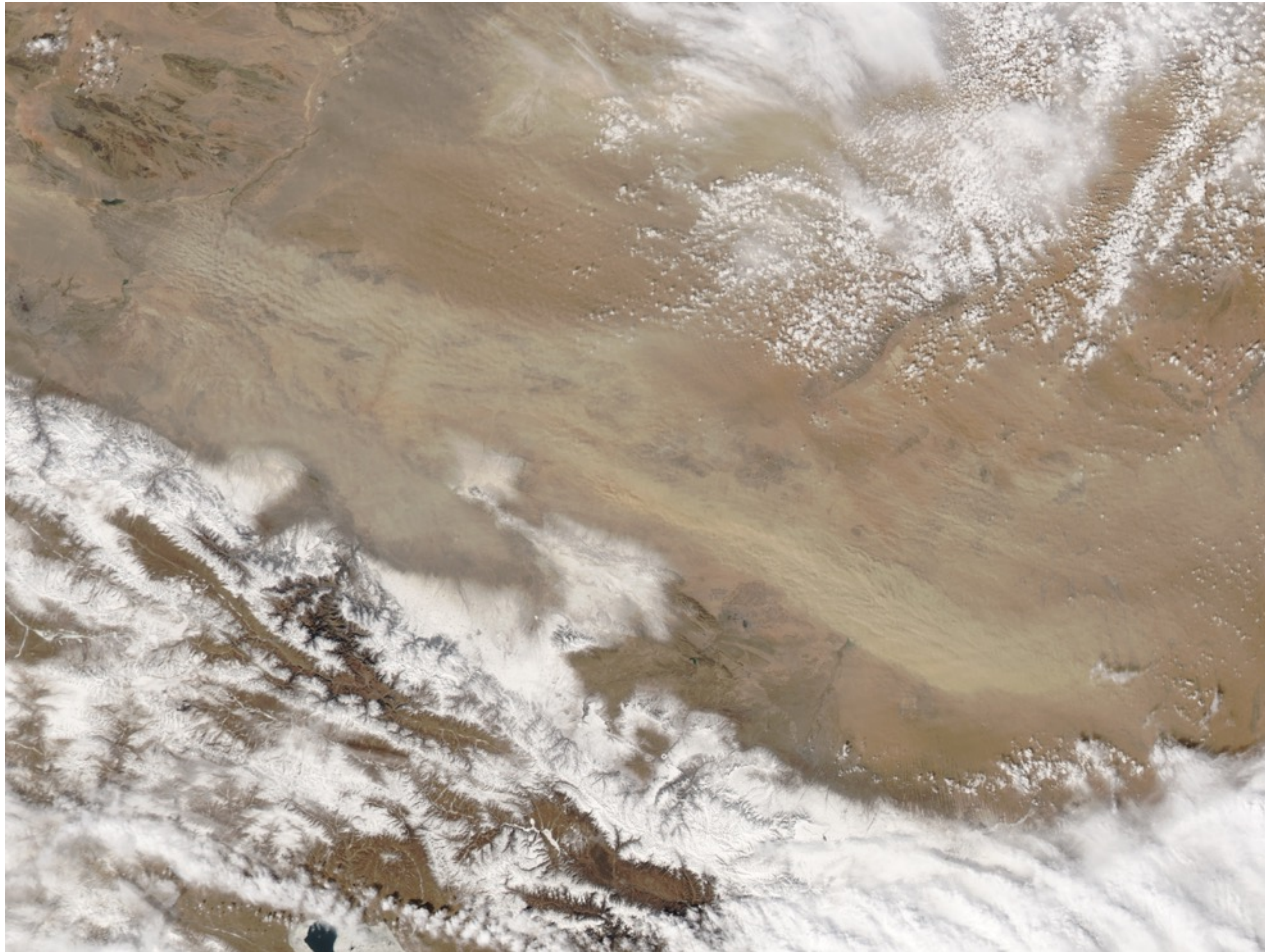


Planned Use for LibraryCAVE

- Class/research use
 - Class projects
- Development
 - Potential donors
- Students
 - Motivate student learning

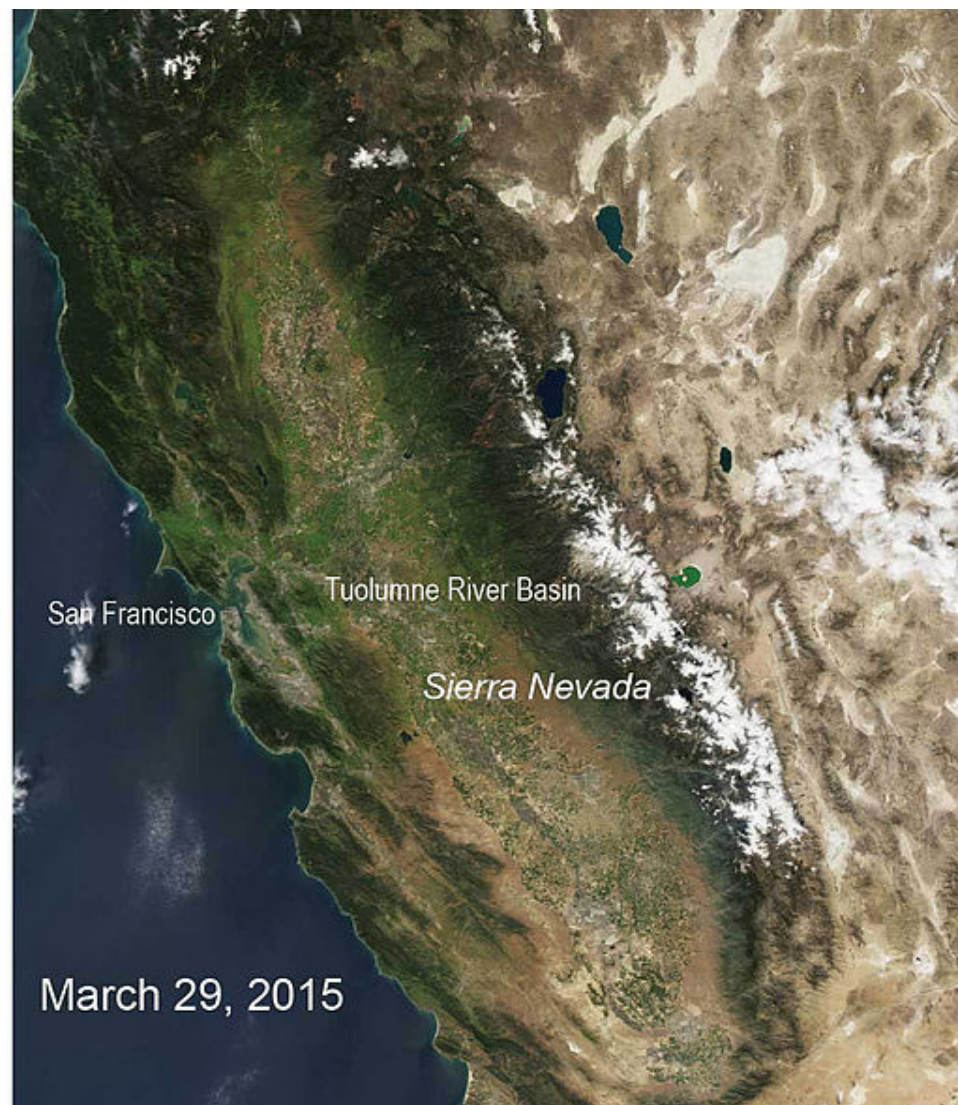


Dust as a Nutrient Source



Dust Above the Gobi Desert. NASA image by Jeff Schmaltz, [LANCE/EOSDIS Rapid Response](#). Caption by Pola Lem.

Aciego, S. M. *et al.* Dust outpaces bedrock in nutrient supply to montane forest ecosystems. *Nat. Commun.* **8**, 14800 doi: 10.1038/ncomms14800 (2017).









Mrs. Franklin D. Roosevelt, and Miss Hickok, accompanied by the Superintendent, several rangers, and two packers, in the high country near Tuolumne Meadows.

YOSEMITE NATIONAL PARK, CALIF.

(Fiscal year 1935)



THIS MOTHER BEAR SEEN HERE READING THE VALLEY TRAIL SIGNS SETS AN EXAMPLE THAT MIGHT PROFITABLY BE FOLLOWED BY MANY HUMAN BEINGS VISITING YOSEMITE. THE SIGNS ARE SUBSTANTIALLY PLACED AND GIVE EVIDENCE OF LASTING SEVERAL YEARS WITHOUT FURTHER CARE.

Names of locations
which are visible in
this photograph

OSHEVAL
PK. I.O.

CONCHILLA
MTN.

EDDYMAN
MTN.

SWIDEF'S
GULCH

CELESTINA
MTN.
MT.
BULLION

CAL. STATE
LOOKOUT

TRUMBULL
PK. I.O.

180 190 200 210 220 230 240 250 260 270 280 290 300

YOSEMITE N.P.

128

Name written
here indicates
location shown
by intervening
topography

HENNESSY RIDGE

L. M. 10-1-34

AZ. COR.





National Park Service

NPGallery Digital Asset Management System

Discover and Explore Digital Assets

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Discover and Explore Digital Assets

A comprehensive library of NPS images, video, audio, maps, presentations, documents and more.

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Search all Parks ▾



Search More Fields ▾

[Limestone bluffs](#)
[Yukon-Charley Rivers National Preserve](#)

TRENDING IMAGES AND TERMS



UC Cooperative Extension Archives

Partnership with UC Division of
Agriculture and Natural Resources
100-year history of CA Agriculture
30-70 l.f. per office



*Seldon Jackson
Ames*

Grapes

Material applied to J. P. Stanton Seedless Raisin Plot in the spring of 1939, 1940 and again in 1941.

AGRICULTURAL EXTENSION SERVICE OFFICE, FRESNO
and
DIVISION OF PLANT NUTRITION, UNIVERSITY OF CALIFORNIA

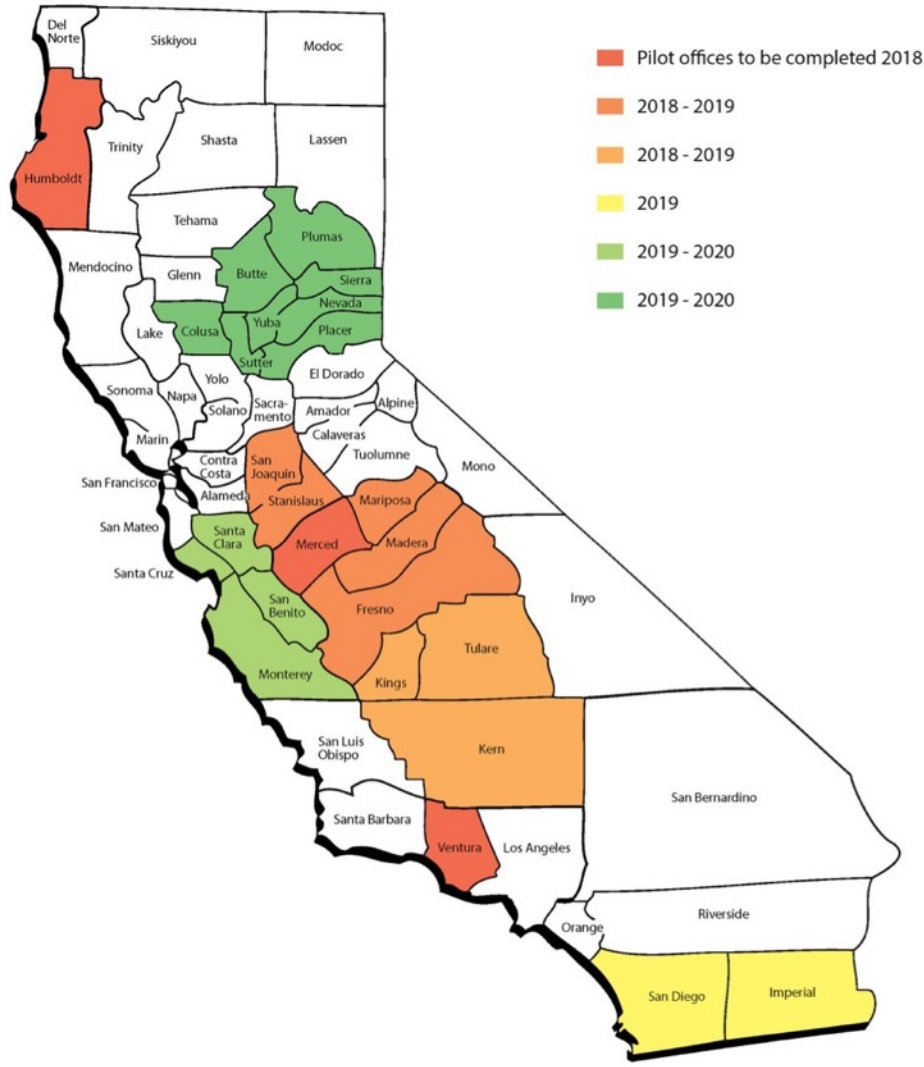
- - - - -

- | | |
|---|--|
| N (Nitrogen) | 1 lb. ammonium sulphate per vine |
| K (Potassium) | 1 lb. sulphate of potash per vine |
| NP
(Nitrogen & Phosphate) | 1-3/4 lbs. per vine of following:
(4 parts ammonium sulphate
(2 parts treble superphosphate
(1 part ground rice hulls |
| NK
(nitrogen & Potash) | 2-1/2 lbs. per vine of following:
(2 parts ammonium sulphate
(2 parts sulphate of potash
(1 part ground rice hulls |
| PK
(Phosphate & Potash) | 1-3/4 lbs. per vine of following:
(2 parts treble superphosphate
(4 parts sulphate of potash
(1 part ground rice hulls |
| NPK
(Nitrogen, Phosphate,
and potash) | 3 lbs. per vine of following:
(2 parts ammonium sulphate
(2 parts sulphate of potash
(1 part treble superphosphate
(1 part ground rice hulls |

Control - No fertilizer applied

Note: - All materials applied in trenches approximate 12" deep on each side of vine row.





This project funded through the Department of Public Health, City and County of San Francisco

CHALLENGE AIDS NOW!



LOOK

TO

THE
**AIDS
HEALTH
PROJECT**

A HEALTH PROMOTIONAL EFFORT

• All services are free of charge

FOR

AIDS PREVENTION

GROUPS IN STRESS MANAGEMENT, SAFE SEX, DEPRESSION PREVENTION
AND OTHER WAYS TO IMPROVE YOUR HEALTH

FOR INFORMATION AND SERVICES CONTACT:

626-6637

ALL SERVICES FREE!

What's happening now is that the big established AIDS groups are going to the small ones under the pretext of working together and learning about "minority outreach." In practice, they end up ripping off their ideas and getting big grants based on their longer track records and their experience with the funding establishment.

From "Cultural Sensitivity In Practice" by Yannick Durrand

So I made an appointment with the Beth Israel Infectious Disease Clinic. And they sent me to the neurologist and the rheumatologist and the GYN and the Hospital of Joint Diseases, and every last one of them had a different approach to what was going on with me... I had to apply through a social worker for welfare. Suddenly, here I am, from making \$30,000 a year, having a good job, to being totally caught up in the bureaucracy, of trying to get money for my son and myself.

From "Fighting for My Life" by Melinda Singleton

ACT UP is a true coalition. Everyone puts up with what my mother would call everyone else's mischigas — craziness. I have come to appreciate what each person can and will contribute because they share a commitment to the saving of lives.

From "AIDS and Politics: Transformation of our Movement" by Maxine Wolfe

Women, AIDS, and Activism also contains a glossary, a national resource list, and annotated video and print bibliographies.

IMPORT

- Asset Library 89
 - Admin 0
 - UCB 0
 - UCD 0
 - UCI 0
 - UCLA 0
 - UCM 56
 - Aggie 0
 - AngelsCamp 0
 - Assembly Newsletters 0
 - ATS_Sandbox 0
 - ATS_Sandbox2 0
 - Costume Designs by Dunya Ramicova 0
 - Don Pedro Project 0
 - Don Pedro Project - EMBARGOED 0
 - Henry O. Nightingale Diaries 0
 - Image rotation test 0
 - LJA-complex QTVR objects to fix 0
 - LJA-metadata-completed 0
 - LJA-no-metadata 0
 - McLean 0
 - Merced County Historical Society 0
 - A felled sugarpine tree 0
 - A finished plank 0
 - A loaded truck 0
 - A new log haul 0
 - Applying sealant 0
 - Applying sealant 0
 - Band Saw Edging 0
 - Boiler House 0
 - Boiler House 0
 - Boiler House Interior 0
 - Boiler House Interior (Operators) 0

Asset Library UCM Merced County Historical Society Crocker Huffman Dam

Crocker Huffman Dam



Used: 44.63 MBytes

- Summary
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Content

Main File [ucm_mchs_2003-112-92.tif](#) 41 MB

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State

Project

Process

No process can be started on this document.

dataset

Providence Creek soil moisture and temperature, snow depth and air temperature

Bales, Roger, University of California, Merced

Meadows, Matt, University of California, Merced

Meng, Xiande, University of California, Merced

Southern Sierra Critical Zone Observatory (SSCZO)

Citation

Bales, Roger; Meadows, Matt; Meng, Xiande; Southern Sierra Critical Zone Observatory (SSCZO) (2013), Providence Creek soil moisture and temperature, snow depth and air temperature, Dataset, <https://dx.doi.org/10.6071/Z7WC73>

REQUIREMENTS

- Space
- Policies
- Relationships & Agreements
- Technology
- Expertise

- Appraisal
- Negotiation
- Legal knowledge (intellectual property rights), institutional policies
- Imaging, capture, conversion
- Technical systems – operating systems, security, APIs, application development
- Organization and file management
- Description and documentation
- Project and people management
- Internet, network protocols; WWW standards and interoperability
- User experience; human cognition; human-computer interaction; artificial intelligence
- Learning and assessment; communications



DATA CARPENTRY

BUILDING COMMUNITIES TEACHING UNIVERSAL DATA LITERACY

Data Carpentry develops and teaches workshops on the fundamental data skills needed to conduct research. Our mission is to provide researchers high-quality, domain-specific training covering the full lifecycle of data-driven research. Data Carpentry is a sibling organization of Software Carpentry. Where Software Carpentry teaches best practices in software development, our focus is on the introductory computational skills needed for data management and analysis in all domains of research. Our lessons are domain specific, from life and physical sciences to social science and build on the existing knowledge of learners to enable them to quickly apply skills learned to their own research. *Our initial target audience is learners who have little to no prior computational experience.* We create a friendly environment for learning to empower researchers and enable data driven discovery.

Recent Blog Posts >> [Round Two of the Carpentries Mentoring Program begins October 25th](#)

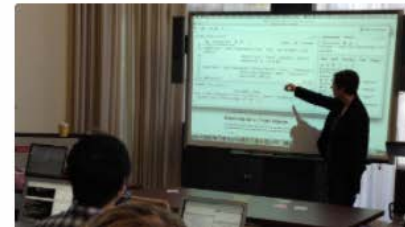
Host a Workshop



Attend a Workshop



Get Involved



The Dat in the Lab project

17 commits

1 branch

0 releases

2 contributors







MIT


Branch: master

New pull request

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 daniellecrobinson	add try-dat.com	Latest commit d606f6c 3 hours ago
 5 Oct 2017_ Dat - UC Davis - Merced.pdf	uplad kickoff presentation	3 hours ago
 CODE_OF_CONDUCT.md	Create CODE_OF_CONDUCT.md	21 days ago
 LICENSE	Initial commit	a month ago
 README.md	add try-dat.com	3 hours ago
 ROADMAP.md	fix checkbox	21 days ago

 README.md

The Dat in the Lab project

The [Dat Project](#) is happy to announce that the [Gordon and Betty Moore Foundation](#) is supporting an exciting collaboration between us and the [California Digital Library](#) (CDL) [UC Curation Center](#) (UC3). We are calling it [Dat in the Lab](#). This grant will support us as we pilot Dat for research data managemnt in close collaboration with two University of California research groups and with the expert support of CDL. We will work with these researchers to develop workflows to manage, sync, version, and publish datasets.

Learn more and follow along on the [Dat project blog](#) and the [UC3 blog](#).

This repository will hold code, curriculum, workflows, and other outputs of the project.

Have you ever tried Dat? Give it a shot at [trv-dat.com](#).

“Invisible work is a salient characteristic of knowledge infrastructures... those who benefit from using these infrastructures are often unaware of the background effort involved in keeping all the parts working smoothly together.”

Christine Borgman, Big Data, Little Data, No Data: Scholarship in the Networked World