



CALIFORNIA SPATIAL REFERENCE CENTER (CSRC)/ CALIFORNIA REAL TIME NETWORK (CRTN): EXECUTIVE COMMITTEE ELECTIONS (JUNE 2025) & CRTN CONSORTIUM MAY 15, 2025

Maria Turingan

CSRC Coordinating Council Meeting

Meeting Location: Martin Johnson House, Scripps Oceanography, UCSD

Hosted by the California Land Surveyors Association (CLSA)
and Scripps Oceanography, UC San Diego

UC San Diego



SCRIPPS INSTITUTION OF
OCEANOGRAPHY



PREVIEW



- 1) **California Spatial Reference Center (CSRC)**
 - UCSD Support Group at Scripps Oceanography, UCSD
 - Three Core Groups: Coordinating Council, Executive Committee, CRTN Consortium
 - Executive Committee Elections
- 2) **California Real Time Network (CRTN)**
 - CRTN Consortium
 - CRTN Usage
- 3) **CSRC/CRTN Funding**
- 4) **CSRC/CRTN Social Media**



CSRC AT UCSD, SCRIPPS OCEANOGRAPHY

- **CSRC is part of the Part of the UC and UCSD, a non-profit, public research university**

UC San Diego



- **Regents of the University of California**
- **University of California San Diego (UCSD)**
- **Scripps Institution of Oceanography (SIO)**
- **Institute of Geophysics and Planetary Physics, IGPP Department**
- **UCSD**, founded in 1960, is recognized as one of the top 15 research universities worldwide
- **Scripps Institution of Oceanography**, founded in 1903, has been one of the most reputable institutions for global earth science, oceanographic research, and education
- **Scripps Orbit and Permanent Array Center (SOPAC)** research group at Scripps Oceanography operates CSRC/CRTN and provides staff, facilities and infrastructure



IGPP Department, April 2023



CSRC/SOPAC Group at CRTN Station SIO5, 2021



CSRC – UCSD SUPPORT GROUP

- **CSRC, began in 1999 as a UCSD Support Group**, providing public outreach and other support for the University's mission
- **For over 25 years, CSRC has brought together**
 - Land Surveyors, GIS Professionals
 - Scientific and Academic Researchers
 - State and Local Governments
 - Geodetic and Geophysical Communities
 - Major Partners: NOAA's National Geodetic Survey (NGS), the California Department of Transportation, and NOTA EarthScope
- **CSRC was dedicated in 2001 at Scripps Oceanography**
- **Southern California Integrated GPS Network (SCIGN) unveiled in 2001** - CSRC helped the Jet Propulsion Laboratory (JPL), the Southern California Earthquake Center (SCEC), the US Geological Survey (USGS) install permanent GPS stations throughout Southern California



CSRC Inception Ceremony



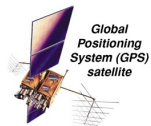
UNDERSTANDING EARTHQUAKE HAZARDS IN URBAN AREAS

SCIGN—New Southern California GPS Network Advances the Study of Earthquakes

Southern California is a giant jigsaw puzzle, and scientists are now using GPS satellites to track the pieces. These puzzle pieces are continuously moving, slowly straining the faults in between. That strain is then eventually released in earthquakes. The innovative Southern California Integrated GPS Network (SCIGN) tracks the motions of these pieces over most of southern California with unprecedented precision. This new network greatly improves the ability to assess seismic hazards and quickly measure the larger displacements that occur during and immediately after earthquakes.



SCIGN stations receive radio signals from GPS satellites overhead...





CSRC – THREE CORE GROUPS

1) CSRC Coordinating Council

- Approximately 60 volunteers representing CSRC stakeholders and organizations

2) CSRC Executive Committee

- 15 core volunteers
- Serves as the board to steer CSRC

3) California Real Time Network Consortium

- Provides funding support to CRTN/CSRC
- Directs CRTN

<http://sopac-csrc.ucsd.edu/index.php/COORDINATING-COUNCIL/>
<http://sopac-csrc.ucsd.edu/index.php/EXECUTIVE-COMMITTEE/>
<http://sopac-csrc.ucsd.edu/index.php/CONSORTIUM-MEMBERS/>



CSRC recognized Dr. Yehuda Bock with the Founder's Award, April 2023

Member



CSRC – EXECUTIVE COMMITTEE MEMBERS ELECTED



Position	Member	Organization
Chairperson	Humberto Gallegos	California Baptist University
Vice-Chairperson	Steven Martin	Mark Thomas and College of the Canyons
Secretary	Timothy McKinney	Michael Baker International
Treasurer	Rich Maher	KDM Meridian
Member	Adrian Aguirre	Dragados USA, Inc.
Member - Interim	Kevin Maxwell	Caltrans
Member	Taleah Quemada	Long Beach Energy Resources
Member	Pat Tami	California DWR



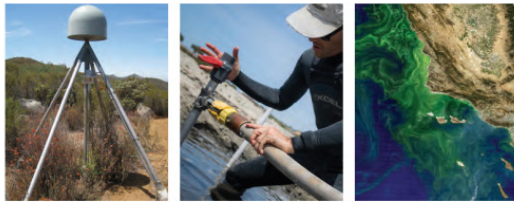
CSRC – EXECUTIVE COMMITTEE MEMBERS NON-ELECTED



Position	Member	Organization
CSRC Director	Dr. Yehuda Bock	Scripps Oceanography, UCSD
Immediate Past Chairperson	Kimberley Holtz	Port of Long Beach
Chancellor of UCSD (or designee)	Dr. John Orcutt	Scripps Oceanography, UCSD
Director of IGPP, Scripps, UCSD	Dr. Peter Shearer	Scripps Oceanography, UCSD
NOAA's National Geodetic Survey (NGS)	Dr. Dana Caccamise	NOAA NGS
California Geodetic Coordinator	Scott Martin	CA Geodetic Coordinator & AAGS President
CSRC Executive Manager	Greg Helmer	Psomas



CSRC – EXECUTIVE COMMITTEE ELECTIONS JUNE 2022



CALIFORNIA SPATIAL REFERENCE CENTER



STRATEGIC PLAN // DECADE THREE // AUGUST 30, 2021

SOPAC



Are you interested in serving on the
Executive Committee (EC)?

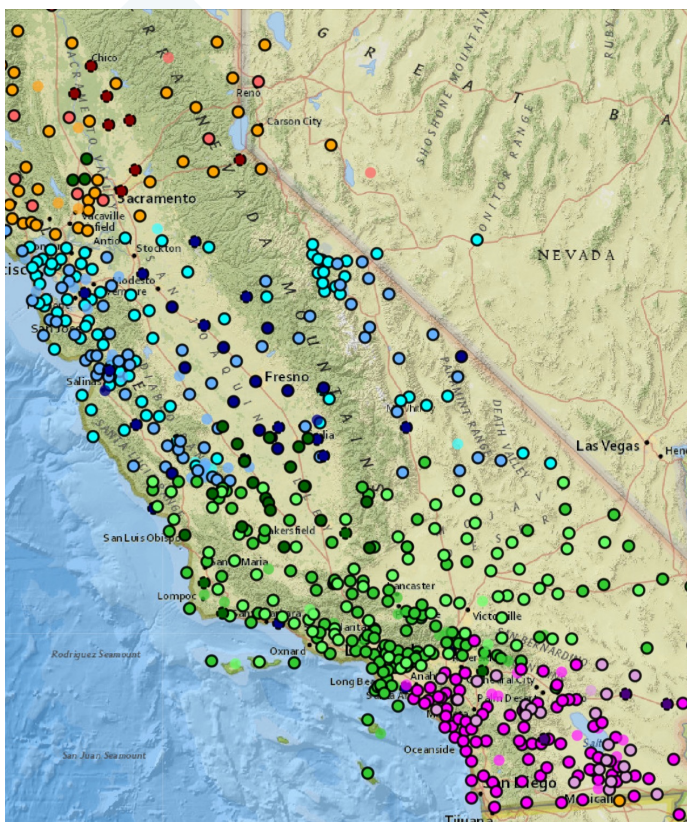
Four EC Positions Open July 2025
(*incumbent*):

- 1) Chairperson (*Humberto Gallegos*)
- 2) Vice Chairperson (*Steve Martin*)
- 3) EC Member (*Adrian Aguirre*)
- 4) EC Member (*Pat Tami*)

CSRC Strategic Plan (2021): see http://sopac-csrc.ucsd.edu/wp-content/uploads/2021/09/CSRC_NextDecadeStrategicPlan2021_Reduced.pdf



CALIFORNIA REAL TIME NETWORK (CRTN) CONSORTIUM



- 1) **PG&E, Eric Albanese**
- 2) **Los Angeles Department of Water and Power, John Tosto**
- 3) **Blue White Robotics, Ron Berenstein (working in Agriculture, Fresno)**
- 4) **Metropolitan Water District, Brian Wiseman**
- 5) **California Land Surveyors Association**
- 6) **City of Los Angeles, Michael Van Egdom, Dept of Public Works, Engineering**
- 7) **Riverside County Flood Control and Water Conservation, J. Tremba, J. McNeil**
- 8) **San Diego County, Department of Public Works, Neil Kussat**
- 9) **Riverside County Transportation Department, David McMillan**
- 10) **Port of Long Beach, Kimberley Holtz**
- 11) **California Department of Transportation, Kevin Maxwell**
- 12) **Los Angeles County, Public Works, Steve Hennessee**
- 13) **California Spatial Reference Center, Chairperson, Humberto Gallegos**
- 14) **Scripps Institution of Oceanography, UCSD, Yehuda Bock**

<http://sopac-adj.ucsd.edu/crtn-map/>

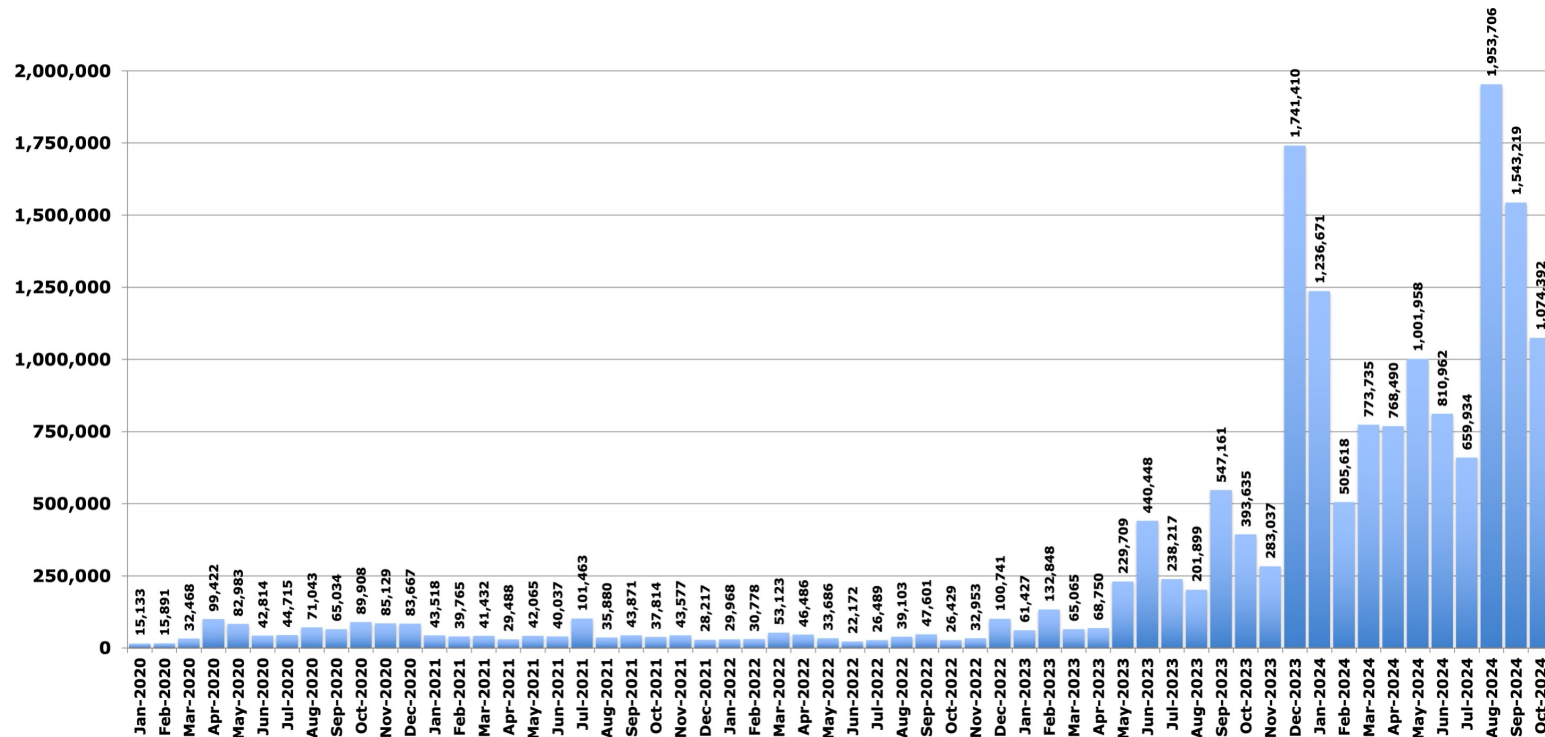
UC San Diego





CALIFORNIA REAL TIME NETWORK (CRTN) USAGE

- Number of individual organizations/users who have requested a CRTN account: Approximately 3,300
- Average Number of CRTN NTRIP connections per month from January 2020 – October 2024: 284,089
- Total Number of Connections October 2024: 1,074,392



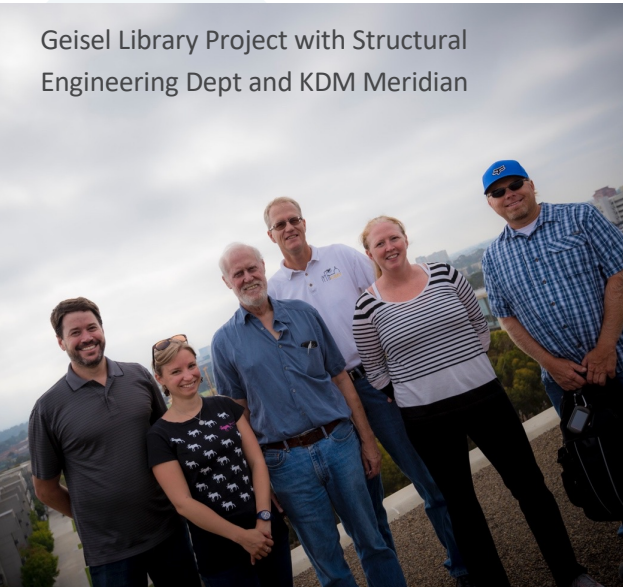
Matt, Glenn, and



CSRC/CRTN – FUNDING



Geisel Library Project with Structural Engineering Dept and KDM Meridian



Matt, Glenn, and Yehuda at CRTN

1) Research Grants (primary)

- **CSRC/CRTN operations are leveraged by and depends on SOPAC research grants primarily from NASA, NOAA's National Geodetic Survey, and NGA**
- Funding fluctuates due to federal funding, competition for research funding, and grant cycles from 2-5 years

2) Contracts

- **CSRC/CRTN is also funded by contracts with the Department of Water Resources** (California Dept. Water Resources, through a subcontract with PSOMAS)
- **Two Caltrans Agreements:** a service contract and a research contract.

3) California Real Time Network (CRTN)

- CRTN Consortium Membership and CRTN Contributions for Services and Donations



CSRC/CRTN SOCIAL MEDIA



CSRC recognized Dr. Yehuda Bock with the Founder's Award, April 2023; Greg Helmer, Sharona Bock, Yehuda Bock, and Dana Caccamise

Matt, Glenn, and Yehuda at CRTN

- https://linktr.ee/csrc_crtn
- <https://www.facebook.com/photo/?fbid=210087488762761&set=a.122560977515413>
- <https://www.instagram.com/p/Cyl-ol8MVV4/>
- <https://www.linkedin.com/feed/update/urn:li:activity:7120861298900271105/>
- https://twitter.com/CSRC_CRTN/status/1715099344867606933



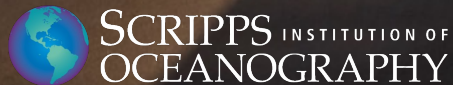
**Fall Meeting
Northern California
Oct/Nov 2025 (Thursday)**

**Spring Meeting
Scripps Oceanography, UC San Diego
May 2026 (Thursday)**

Questions and Thank you

**Contact: maria@ucsd.edu or
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Lucas 9 yrs old