



ENLACE 2026

Closing Ceremony and Symposium



The UC San Diego *CaliBaja Center for Resilient Materials and Systems* is glad to announce the Closing Ceremony and Symposium for the ENLACE class of 2026. The projects and presentations will be outstanding. Join us!

August 7, 2026
8:00 - 18:00 hrs

University of California San Diego

Location: The Jeannie Hall

Map of location:

<https://maps.app.goo.gl/k6rYpb7bhbeaYT2e8>

Registration: <https://forms.gle/vkgRqJpfDsD3AM4c7>



Director

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There is no cost
associated with
participation
in this event.

Registration deadline: Friday, July 31, 2026

UC San Diego

ENLACE 2026 Closing Ceremony and Symposium

General Agenda

8:00 AM-12:00 PM	Student presentations
12:00-12:30 PM	Lunch
12:30-1:15 PM	Student poster session
1:15-2:00 PM	Plenary speaker
2:00-4:08 PM	Student presentations
4:08-5:30 PM	Conferral of diplomas

Plenary speaker

Dr. Maria Catalina Ovando Chico

Executive Director of Development

Secretaría de Infraestructura, Comunicaciones y Transportes



Dr. Maria Catalina Ovando Chico is currently Executive Director of Development at the Mexican Ministry of Infrastructure, Communications and Transportation (SICT). Previously, she held the position of General Director of Telecommunications and Broadcasting Policy at SICT, headed the Information and Communications Technologies (ICT) Unit at

SICT, and was responsible for managing the Ministry's total ICT assets. From 2015 to 2021, Catalina was professor of Strategic Planning and Technology Management for the graduate program at UPAEP University, in the state of Puebla. In 2020 she was appointed member of the Consultive Council of the Mexican Telecommunications Regulator (IFT) and currently holds an active membership in the "National Researchers System" of Mexico, the IEEE and the "Network of Women on ICT" from the National Association of Universities (ANUIES). Her research activities are centered on digital inclusion, technology adoption, public policy on telecommunications and the impact of digital platforms on productivity sectors. Dr. Ovando Chico earned a PhD Degree in Telecommunications from the *Universidad Politécnica de Madrid* in Spain and a Bachelor's degree in Electronic and Communications Engineering from the *Universidad Iberoamericana de Puebla*.

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Presentations

Time	Presenters	Project Title	Research Advisor
8:00 AM	Daniel Alfredo Dipp López	Developing an AI-powered immersive game for prescribed fire planning and wildfire resilience	Ilkay Altintas
8:08 AM	Gema Sofia Fernández Ruelas	Narrow-linewidth saturated absorption spectroscopy of a strontium gas of atoms	Julio Barreiro
8:16 AM	Ruth Elena Barrera González	Optical interferometer diagnostic for measurement of laser ablation plasma density	Farhat Beg
8:24 AM	Dana Yarezi Córdova Gómez Miguel Angel Valdez Ramírez	2D density characterization of a noble gas using the second harmonic dispersion interferometer	Farhat Beg
8:32 AM	Santiago Arizpe Dueñas Xiomara García Martínez	Density measurements in gas puff Z-pinches using interferometric technique	Farhat Beg
8:40 AM	Fátima Guerrero Hernández Erika Natalia Navarro Torres	Optimization of natural products as blocking agents for isocyanates	Michael Burkart
8:48 AM	Mario Leonardo Velázquez Mercado Paulette Contreras Rodríguez	Evaluation of the impact mechanical properties of elastomeric foams for traumatic brain injury protective gear	Shengqiang Cai
8:56 AM	Rodrigo Díaz Santos	Fiber membrane for evaporation cooling and artificial tree	Renkun Chen
9:04 AM	Salvador Adrián Martínez García	Fiber membrane permeability measurement setup	Renkun Chen
9:12 AM	Analeticia Rodríguez Rubio Laura Scarú Gallegos Linares	Controlled fabrication of Li-ion batteries	Zheng Chen

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9:20 AM	Jesús Kaleb Hernández Salvitano Rogelio Lara Olvera Leonardo Téllez Arriaga Cedric Santiago Martínez Zavala	Autonomous fire detection and suppression via cooperative ground and aerial robots	Jorge Cortes
9:36 AM	Christopher Antonio Yañez Flores Jorge Padrón Ortega	Attributing fleet-level CPU spikes in endpoint telemetry	Subhasis Dasgupta
9:44 AM	Ari Vivienne Sit Miguel Angel Obregón Alegre	Mining full-scale building fire following earthquake compartment tests to infer dynamic state	Tara Hutchinson
9:52 AM	Romina Zoe Solorio Rodríguez Renata Nicole Robles Jaime	How cancer-linked SHP2 mutations alter protein droplet formation	Enfu Hui
10:00 AM	Santiago Vélez Gómez Luis Carlos Quezada Orduña	Performance benchmarking of optimization algorithms using aerostructural design problems	John Hwang
10:08 AM	Mariana Arevalo Madrid Noel Francisco Rodríguez	Simulation-based design optimization of legged robots	John Hwang
10:16 AM	Coffee Break		
10:40 AM	Romina Vélez Barceló	Exploring quantum computing for topology optimization	Hyunsun Kim
10:48 AM	Renata López González Martha Julieta Alonso Corral	Combining terrestrial lidar with UAV photogrammetry data to complete coverage of a 3D digital twin of the UC San Diego campus	Falko Kuester
10:56 AM	Roberto Camberos Velázquez Xiomara Urquidez Lara	Markerless motion capture system and smart k-tape for golf swing assessment	Kenneth Loh
11:04 AM	Diego André Muñoz Rodríguez Edith Guadalupe Elias Miranda	Real-time EEG event detection using neural networks	Vitaliy Lomakin

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11:12 AM	Maithe Hernández Merino Paula Sainz Sampedro	Hierarchical deformation and fracture behaviors of sunflower pollen	Marc Meyers
11:20 AM	Sasha Parés García Diana Itzel Ramírez Morales	Chiral optoelectronics	Tse Nga Ng
11:28 AM	Isabela Ley Luque Natalia Mimbrera Díaz González	Evolution of a neural matching code in insect eyes	Michael Perry
11:36 AM	Rafael Padrón Ochoa Carlos Alfonso Manríquez García	Imaging of quantum properties of laser light: Holographic and ptychographic detection of orbital angular momentum	Tenio Popmintchev
11:44 AM	Arantza Marisa Salomón Almeida Fátima Meza Mota	COVID-19 control optimization	Jorge Poveda
11:52 AM	Kolette Cuervo Hernández María José Decuir Venegas David Antonio Hernández Mejía	Variation in pigmentation among threespine stickleback populations around west coast America	Diana Rennison
12:00 PM	Lunch		
12:30 PM	Poster session		
1:15 PM	Plenary speaker		
2:00 PM	Paulina Montserrat Aguilar Hernández Camila Gómez Reynoso	HyperSpec: Accelerating big data analysis for personalized medicine	Tajana Rosing
2:08 PM	Ulises Adolfo Tamez Duque Oscar Matías Buen Abad Barrera	Enhancing renal proteomics analysis through high-resolution hyperspectral data processing	Tajana Rosing
2:16 PM	Jules León Dominguez Elían Iyari Juárez Vázquez	Creation of polyelectrolyte multilayers for mechanosensitive devices	Donald Sirbulý

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2:24 PM	Angélica Belém Prado de la Luz Denisse Rebollo Rangel	Fabrication of conductive polymer susceptors, using dispersed metallic particles for induction welding of thermoplastic composites	Mehran Tehrani
2:32 PM	Juan Pablo Segura Zárate Juan José Moreno Martínez	Design and fabrication of soft fluidic actuators	Michael Tolley
2:40 PM	Ana Lucia Aguilar Garza José Manuel Murguía de León	Post-wildfire debris flow impact forces on infrastructural elements	Ingrid Tomac
2:48 PM	Bruno Leyva Ceja Santiago Iñaki Rebolledo Reyes	Smart pills for controllable time-dependent drug release in biomedical applications	Joseph Wang
2:56 PM	Isabella Hernández Moreno Gabriel Alejandro Beltran Navarrete	Characterization of PTK7, an alternative WNT receptor	Karl Willert
3:04 PM	Coffee break		
3:20 PM	Natalia Alejandra Gómez Sánchez Nitza Camila Alvarado Gutiérrez	Global profiling and usage analysis of Open Science Data Federation services using the Pelican platform	Frank Wuerthwein
3:28 PM	Bruno Alberto García Quintero Dana Karina Chee Salgado	Prompting strategies for biomedical question answering	Pengtao Xie
3:36 PM	Natalia Sofia Shahtout Andrea Shaddai Reyes Chávez Dariana Mena González	Understanding the mesoscale structure of collagen using cross-polarized microscopy and nonlinear vibrational spectroscopy	Wei Xiong
3:44 PM	Luis Pablo Ainza Baranzini Ethan Jiashi Guo	Development of a cryogenic probe for liquid xenon detectors	Liang Yang
3:52 PM	David Lee Mayen Vania Reyes Cruz	Simulating radio waves for activity recognition in smart homes	Xinyu Zhang

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4:00 PM	Celina Bravo García Mónica Yael Corona Benitez Michele Islas Delfin	Tregs retain suppressive function after receptor SPION labeling	Fanny Chapelin
4:08 PM	Conferral of diplomas		

Posters

	Presenters	Project Title	Research Advisor
1	Gonzalo Guerrero Caballero Samuel Gutiérrez López	Building an AI-ready dataset through a reproducible wildfire simulation pipeline	Ilkay Altintas
2	José Pablo Manríquez Amavizca Miguel Angel Suárez Elizalde	Motion planning and control for robot manipulation	Nikolay Atanasov
3	Alejandro Guadarrama García Germán Mauricio Ventura Hernández	Terahertz spectroscopy of materials	Richard Averitt
4	Sebastián Huerta Sánchez Agatha Adaluz Liewald Suárez	Development of a metal casting framework for manufacturing nonlinear mechanical metamaterials	Nicholas Boechler
5	Katya Guadalupe Orizaga Santoyo Rosa Gisel Soto Saucedo	Fine tuning of macrophage phagocytosis with IL-17D in cell culture	Jack Bui
6	Hugo Flores Pacheco Guillermo Navarro González	Assessing the evidence for cancer dependence on transcript localization for microenvironment engagement	Hannah Carter
7	Celina Bravo García Mónica Yael Corona Benitez Michele Islas Delfin	Tregs retain suppressive function after receptor SPION labeling	Fanny Chapelin

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8	Julissa Lizeth Dominguez Bautista Mariana Toledo Araujo	Characterization of creatine transporter deficiency in patient fibroblasts for the purpose of developing a gene therapy	Stephanie Cherqui
9	Nomar Emiliano Alvarez Castro Irma Dafnely Sifuentes Najera	Modeling the multiple myeloma tumor microenvironment	Leslie Crews
10	Victoria Bernal Castro Andrea Gómez Peguero María Fernanda Padilla Méndez	The effect of vaping on pulmonary inflammation in allergic inflammatory airway disease in mice	Laura Crotty Alexander
11	Guri Yael Romero Zuluaga Ana Rocío Del Valle Fernández	Novel pathways driven by paracrine crosstalk shape the invasive trajectory of glioblastoma	Adam Engler
12	Alfredo González Gómez Victor Joel Sánchez Lozano	Ultrafast laser material processing	Javier E. Garay
13	Yube Valentino Ostos Leonardo Hernández Baumer	Theoretical simulations of semiconductor and scintillator materials using the GEANT4 toolkit	Olivia A. Graeve
14	Yahir Xahuentitla Jennifer Ramirez Rivera	An overview on the effects of different sintering procedures on tantalum carbide	Olivia A. Graeve
15	Gibran Alonso Viramontes Ruiz Astrid Paulina Sánchez Cantú	Luminescent hydroxyapatite scaffolds for osteogenic differentiation and bone remodeling	Olivia A. Graeve
16	Sergio Patricio Pérez Montané Job Santiago Rivas Martínez	Analysis of somatic genetic variation at tandem repeats at single-cell resolution	Melissa Gymrek
17	Lucas Bravo Díaz Liam Antonio Salazar Martínez	Digital signal processing of FIR filters for high-speed data channel equalization	Tzu-Chien Hsueh

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18	Ximena Yael Higuera Castañeda Alexis Pozos González	Digital signal processing of FIR filters for high-speed data channel equalization	Tzu-Chien Hsueh
19	Mariana Arevalo Madrid Noel Francisco Rodríguez	Simulation-based design optimization of legged robots	John Hwang
20	Estefanía Acedo Contreras Itzel Gabriela Díaz Martínez	Investigate the role of transitional dendritic cells in modulating humoral immunity	Juliana Idoyaga
21	Emmily Juliette Flores Gama Nicole Méndez Kotkoff	Comparative characterization and molecular dynamics analysis of two SDR enzymes from burkholderia and paraburkholderia	Adrian Jinich
22	Fátima Tamara Medina Segoviano Milena López Aquino	Characterization and comparison of two putative sorbitol dehydrogenases derived from duplicate genes in <i>Acidiphilium multivorum</i>	Adrian Jinich
23	Yarely Vianney Fernandez Preciado Denisse Itzel Ruelas Ornelas	Coacervates as tools for biology and materials science	Jesse Jokerst
24	Rogelio Hernández Valencia Alondra Yordelit Milla Galicia	Understanding the sources of low dimensional adaptation across environments	Sergey Kryazhimskiy
25	Montserrat Campa Urzua Tabata Torres Vázquez Julio César Pérez Carrillo	Mechanical properties of cardiolipin membranes implicated in the regulation of mitochondrial respiration	Christopher Lee
26	Tsuyo Yurico Acosta Muñoz Isaias Raymundo Barrera Ramirez	Mechanics-informed assembly of 3D electronic and microfluidic mesostructures for biohybrid interfaces	Haiwen Luan
27	Ana Paula Patiño Parada	Neuroimmune changes in the prefrontal cortex in an animal model of ethanol dependence	Chitra Mandyam

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28	Melissa Danaé Aguirre Villalobos Faith Belle Chen	Defining the impact of Down syndrome on the aging brain	William Mobley
29	Juan David Borboa Loor Citlalli Jazmín Hernández Rivera	Investigating the effects of pesticide exposure and diet quality on honeybee brain morphology	James Nieh
30	Jair Misael Guerrero Pelcastre Marino Uriel Macay Sandoval	Laser-modified photonic surfaces for next-generation sensing and colorimetry	Lisa Poulidakos
31	Emma Lilian Jauregui Espinoza Jesús Arturo Ramos Munguia Mariel Dávila Escalera	The influence of injured fibroblast in alveolar epithelial repair	Nabora Reyes de Barboza
32	Viviana Cruz Ibarra Ana Camila Montiel Acedo	Measurement of pancreatic digestive enzyme activity in human blood samples	Geert Schmid-Schoenbein
33	Nicole Issai Aguilar Rivera Valeria Jiménez Jiménez	Label-free multimodal Raman analysis reveals molecular and biochemical alterations in ovarian tumor cells	Lingyan Shi
34	Ana Shaaron Díaz García Sydney Ximena Palomares Avilés Daniela Michelle Terán Cardenas	Developing a composite vaginal phantom for the reliability evaluation of an inflatable dilator	Frank Talke
35	Victor Manuel Ambario Hernández José Martín Cortés Luchi	An MRI-compatible deformable spine phantom for evaluating AR surgical navigation accuracy	Frank Talke
36	Noely Moreno Balderrama Luz Mariana Pérez Reséndiz	Controlling fusion of gold nanoparticles through ligand desorption	Andrea Tao

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37	Fátima Vargas Ramírez Angel Murguía Lara	Characterization of cellular activity in the hippocampus-cortex-striatum axis during a fentanyl overdose	Francesca Telese
38	Dulce Adriana Andrade Ballesteros Dana Valeria Arias López	Characterizing anti-viral immunity in the nematode <i>C. elegans</i>	Emily Troemel
39	Natalia Sofia Shahtout Andrea Shaddai Reyes Chávez Dariana Mena González	Understanding the mesoscale structure of collagen using cross-polarized microscopy and nonlinear vibrational spectroscopy	Wei Xiong
40	Valeria Gabriela Verónica Ríos Hania Vanessa Ventura Cuevas Hassan Alejandro Ojeda Martínez	Neuroblastoma novel treatments: Targeting the RET tyrosine kinase	Peter Zage
41	Alyn Barrios Arteaga Ivanna Mach	Macrophage-mimicking cellular nanoparticles (CNPs) for biomedical applications	Liangfang Zhang



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