Capstone Design
CONFERENCE 2022
JUNE 6–8, 2022 ▶ DALLAS, TEXAS

Student Posters (ECSW 2.100)

Poster Type	Poster Number	Poster Session	Authors	Poster Title
Student	1	Monday & Tuesday	Dave Worth, Alex McGaw, Connor Murdock, Kiera Chang	Hail Cannon
Student	2	Monday & Tuesday	Sagar Sah, Adeola Salako, Brandon Caltrider, James Ray, Keith Bryant	Portable Solar-Powered Water Desalination System
Student	3	Monday & Tuesday	Evan Alexander, Nicholas Guidoboni, Gabriel Katz, Andres Marquez	Teaching STEM Concepts to Blind Students
Student	4	Monday & Tuesday	Jake Carter, Maritza Aguirre-Diaz, Nathan Chen, Lindsay Ryan	Educational Tongue Musculature Model
Student	5	Monday & Tuesday	John Jamir Consengco, Michelle Sabers, Arman Avagian, Adrian Ruiz Diaz, Abbas Juzar Roopawala	Aquatic and Recreational Center Design
Student	6	Monday & Tuesday	Arian Namavar, Ryan Sakuma	AI Driven Personalized Menu Content for Drive Thru Customers
Student	7	Monday & Tuesday	William Clark, Coleman Bond, Jonathan Cox, Nathaniel Smith, Diego Martinez, Martin Viassolo	LANL Multi-Axis Strain Measurement Device
Student	8	Monday & Tuesday	Jordan Steverson	Anti-Sag Shock-Absorber for Gate Control
Student	9	Monday & Tuesday	Spencer Ciammitti, Emmanuel Enriquez, Diana Meyer, Jocelyn Reynolds, Madelyn Reynolds, and Julia Starkey	REDIEM- Renal Extremity Device to measure Impedance, Edema and Movement
Student	10	Monday & Tuesday	Nicole Statler, Chris Vuong	Joint UArizona UMass Project - Smart Rocks - A Network of Covert Smart Sensors
Student	11	Monday & Tuesday	Emily Grasso	Smart Lysimeter: An Autonomous, Low-Cost, and Portable Lysimeter for Use in a Greenhouse System
Student	12	Monday & Tuesday	Joseph Deneke, Sarah Foss, Christina Ishak, Mikhael Kadyrkaev	Fused Deposition Modeling for Fiber-Reinforced Composites
Student	13	Monday & Tuesday	Emily Batts, Pryor Gibson, Sam Huneycutt, Jasmine Gaston	Proximity and Noise Detection Alarm for Outdoor Applications
Student	14	Monday & Tuesday	Colton McKay, Matt Hummel, Michael Hall, Nathan Lee	6-DOF Robotic Manipulator
Student	15	Monday & Tuesday	Derek Lee, John Cuviello, Evan Cheng, Alec Chen, Angel Alarcon	End-to-end Data Pipeline for Chemical Documents
Student	16	Monday & Tuesday	Payton Brown, Mitchell Gregory, Patrick Andreou, Isaiah Reade	Lithium-Ion Battery Thermal Control System
Student	17	Monday & Tuesday	Henry Beckstein, Leo Lavigne, Evan Millison, Rohan Xavier Sequeira, Yueh-Lin Tsai, Joseph Zeolla	Optimizing Lane Centering Assist Test Equipment
Student	18	Monday & Tuesday	Mitchell Cabral, Clarice Rucklos, Anthony Aliotti, Jasmine Nguyen	Spatial Alignment with Machine Vision Robot
Student	19	Monday & Tuesday	Jessie Chang, Carol Abadeer, Jason Wang, Kacy Diep, Sandra Gaurgious, Tiffany Chan	Canvas Tools For Teachers
Student	20	Monday & Tuesday	Robert Obendorf, Katie Platt, Austin Simon, Cameron Self, Sean Smith	3D Asset Viewer
Student	21	Monday & Tuesday	Ellen Kulla, Alexis Diaz, Jinli Duan, Qiantai Chen, Yuan Wang	AudioScribe
Student	22	Monday & Tuesday	Joseph Walsh, George Kent-Scheller, Paul Stephen Hutchinson Maltaghati	NanoPack
Student	23	Monday & Tuesday	Timothy Pentapaty	Investigation of a Scramjet Inlet for Unstart and Operability
Student	24	Monday & Tuesday	Kavya Balaji, Nikhil Kulkarni, Athena Goldsmith, Rowan Fraser, Nicholas Ho	Augmented Reality-Guided Focused Ultrasound System for Neuroblastoma Therapy
Student	25	Monday & Tuesday	Claire Neivandt, David Girata Narino	Clinical Pain Assessment Using the Thermal Grill Illusion
Student	26	Monday & Tuesday	Edgar J. Acevedo, Aamna Ahsan, Roger W. Decker III, Alyssa Rios, Andria McIntyre, Abbas Rizvi	Instrumented Deep Vein Thrombosis (DVT) Surrogate Leg

Professional Posters (ECSW 1.100)

Poster Type	Poster Number	Poster Session	Authors (* indicates Corresponding Author)	Poster Title
Professional	27	Monday	B. Kris Jaeger-Helton (Northeastern University)*; Susannah Howe (Smith College); John K Estell (Ohio Northern University)	Meeting the Client: Learning the Capstone Student's Perspective through the Three Intelligences Methodology
Professional	29	Monday	Divya P Mittal (Thapar Institute of Engineering and Technology)*; Ramit Koul (Thapar Institute of Engineering and Technology); Utkarsh Chauhan (Thapar Institute of Engineering and Technology); Aryamaan Pandey (Thapar Institute of Engineering and Technology); Vinay Kumar (Thapar Institute of Engineering and Technology)	Design and Development of Open-Source Capstone Project Management Portal
Professional	31	Monday	Nathan M Kathir (George Mason University)*	Engineer-Builder to Capstone Instructor, Challenges and Lesson Learned
Professional	33	Monday	William Ziegler (Binghamton University - State University of New York)*; Andrea Radasanu (Northern Illinois University); Heidi Appel (University of Toledo); Ralph Keen (University of Illinois - Chicago)	Capstone on Top of Capstone: The Honors Dilemma
Professional	35	Monday	Scott Shaffar (San Diego State University)*	Implementing Industry Practices for an Undergraduate Engineering Senior Design Capstone Program
Professional	37	Monday	Aws Al-Shalash (University of Texas at Tyler); Muath Bani Salim (University of Texas at Tyler)*; Nael Barakat (University of Texas at Tyler)	Distinct Challenges to Senior Design Projects
Professional	39	Monday	Dean Nieusma (Colorado School of Mines)*; Kristine Csavina (Colorado School of Mines); John Persichetti (Colorado School of Mines)	Organizational Design and Delivery of an Interdisciplinary, Client-Sponsored, 2-Semester Capstone Experience
Professional	41	Monday	Joshua Gargac (Ohio Northern University)*	Incorporating Industry-based Metrics into a Specifications Grading System for Capstone Assessment
Professional	43	Monday	Brian J. Novoselich (West Point)*; David Knight (Virginia Tech)	Relating Shared Leadership to Team Attributes
Professional	45	Monday	Edward Latorre-Navarro (University of Florida)*; Elizabeth Meier (University of Florida)	Strategies to Fund Community Service Capstone Projects
Professional	47	Monday	Jamie D Gravell (The University of Texas at Dallas); Robert Hart (University of Texas at Dallas)*; Todd W Polk (UT Dallas)	Implementation of Internal Design Reviews in a Capstone Course
Professional	49	Monday	Michelle Clauss (Grove City College); Shraddha Sangelkar (Rose Hulman Institute of Technology)*; Jim Mayhew (Rose Hulman Institute Technology); Vern Ulrich (Grove City College)	Inter-Collegiate Capstone Project Collaboration: A Case-Study
Professional	51	Monday	Matthew J Bietz (University of California, Irvine)*; Hadar Ziv (University of California, Irvine)	Empowering Capstone Students in Client Interactions
Professional	53	Monday	Lee B. Hinkle (Texas State University)*; Mark Welker (Texas State University); Jeff Stevens (Texas State University)	Incorporating Robotics into Electrical Engineering Capstone
Professional	55	Monday	Adriana Talamante (Arizona State University)*; Catherine D. D. Bowman (Arizona State University); Linda T. Elkins-Tanton (Arizona State University); Rona Oran (Massachusetts Institute of Technology); Ravi Prakash (NASA Jet Propulsion Laboratory)	Too Late or Just in Time? Industry Partner Networking and Professional Development Opportunities for Capstone Students
Professional	57	Monday	Sarah A Brownell (Rochester Institute of Technology)*	WIP: Adventures in Creating a Transdisciplinary Community-Engaged Capstone
Professional	59	Monday	Bridget Smyser (Northeastern University)*	What's a Good Project? Comparing Student, Faculty and External Evaluations
Professional	61	Monday	Rachel E. Horenstein (University of Denver)*; Goncalo Martins (University of Denver); Peter J. Laz (University of Denver)	Assessment of "Effective" Communication in Design Courses
Professional	63	Monday	John P. Parmigiani (Oregon State University)*; Jeffrey A. Hoffman (Oregon State University); Sarah Oman (Oregon State University); Joseph Piacenza (Oregon State University); Lynn Merritt Ekstedt (Oregon State University)	The Use of Professional Technical Writers for Evaluating Capstone Student Writing