

23rd Annual Department of Plastic Surgery Research Day

University of Pittsburgh • University Club • 123 University Place • Pittsburgh • 15213

Friday, June 26, 2026

7:00 AM – 7:30 AM	Breakfast (Ballroom B)
7:30 AM – 7:45 AM	Introduction and Opening Remarks: J. Peter Rubin, MD, MBA
7:45 AM – 8:45 AM	“Bridging the Translation Gap in Craniofacial Biology” Eric C. Liao, MD, PhD Visiting Professor Director, Center for Craniofacial Innovation Surgery Vice Chair of Academic Affairs Presidential Scholar Endowed Chair Children's Hospital of Philadelphia Professor of Surgery, University of Pennsylvania
8:45 AM – 9:00 AM	Break/Vendor Exhibits (Gold Room)
9:00 AM – 9:45 AM	Session 1: Clinical Research (Craniofacial)
9:45 AM – 10:30 AM	Session 2: Clinical Research (Breast)
10:30 AM – 10:45 AM	Break/Vendor Exhibits (Gold Room)
10:45 AM – 11:30 AM	Session 3: Artificial Intelligence/Machine Learning
11:25 AM – 12:00 PM	Session 4: Clinical Research (Recon)
12:00 PM – 1:00 PM	Lunch and Presentation: “Magnifying Impact Through Career Engineering” Eric C. Liao, MD, PhD Visiting Professor
1:00 PM – 1:45 PM	Session 5: Clinical Research (Burn)
1:45 PM – 2:30 PM	Session 6: Education/Quality Improvement
2:30 PM – 2:45 PM	Break/Vendor Exhibits (Gold Room)
2:45 PM – 3:35 PM	Session 7: Basic Science
3:35 PM – 3:45 PM	Concluding Remarks: Dr. Jesse Goldstein and Dr. Kacey Marra
3:45 PM – 5:45 PM	Rooftop Reception and Award Presentations



Eric C. Liao, MD, PhD

Director, Center for Craniofacial Innovation
Surgery Vice Chair of Academic Affairs
Presidential Scholar Endowed Chair
Children's Hospital of Philadelphia
Professor of Surgery, University of Pennsylvania

Dr. Eric Liao is the founding Director of the Center for Craniofacial Innovation at the Children's Hospital of Philadelphia. Dr. Liao is a pediatric plastic surgeon-scientist who leverages convergent advances in fetal care, human genetics and developmental biology to initiate first-in-child trials and treatments. As a surgeon, Dr. Liao cares for patients born with orofacial clefts and complex craniofacial conditions. Dr. Liao also leads the Department of Surgery as the Vice Chair of Academic Affairs, where he is dedicated to nurturing trainees and faculty toward impactful academic careers.

Prior to joining CHOP, Dr. Liao was a Professor of Surgery at Harvard Medical School, lead the Mass General Department of Surgery as Vice Chair of Research, and lead Shriners Children's Boston as Chief of Staff. Dr. Liao pioneered the zebrafish model to investigate the developmental basis of craniofacial anomalies, elucidated the genetic basis of arhinia (SMCHD1), oblique facial cleft (SPECC1L), frontonasal dysplasia (ALX1) and other complex congenital craniofacial problems. Dr. Liao works to address critical knowledge gaps in human genetics to determine pathogenicity of gene variants, by using the zebrafish model as a high throughput functional assay. Through this work, Dr. Liao has been leading teams in longstanding NIH and Shriners funded research programs, with over \$15 million awarded to Dr. Liao as PI since 2008.

Dr. Liao is a graduate of Stanford University (B.S., M.S.), Harvard Medical School / M.I.T. (M.D., Ph.D.), and trained in plastic surgery at Massachusetts General Hospital. He is Board certified by the American Board of Plastic Surgery. Dr. Liao's clinical and academic achievements have earned numerous prestigious awards, including American Surgical Association Research Fellowship, March of Dimes Basil O'Connor Scholar Award, and the Presidential Endowed Chair at Children's Hospital of Philadelphia.

Primary Faculty:

T. Oguz Acartürk, MD
Clinical Associate Professor

Elizabeth A. Bailey, MD, MSHP, MEd
Assistant Professor

Dana E. Bregman, MD
Assistant Professor

Michael R. Bykowski, MD, MS
Assistant Professor

Liliana Camison, MD
Assistant Professor

Alexander J. Davit III, MD
Associate Professor and Vice Chief,
Division of Pediatric Plastic Surgery

Carolyn De La Cruz, MD
Associate Professor
Vice Chair of Professional Development and Mentorship

Francesco M. Egro, MBChB, MSc, MRCS
Associate Professor
Chief of Plastic Surgery at UPMC Mercy

Asim Ejaz, PhD
Assistant Professor

Jesse A. Goldstein, MD
Professor
Endowed Chair for Pediatric Plastic Surgery Research

Gayle M. Gordillo, MD
Professor
Senior Medical Director of UPMC Wound Services and
Pressure Injury Prevention and Outcomes

Jeffrey A. Gusenoff, MD
Professor
Director, Foot Fat Grafting Institute

Isaac B. James, MD, MS
Assistant Professor
Chief of Plastic Surgery, UPMC St. Margaret

Nicole J. Jarrett, MD, FACS
Assistant Professor
Chief, Division of Hand Surgery

Justine Kim, MD
Assistant Professor

Joseph E. Losee, MD, MBA, FACS, FAAP
Professor and Executive Vice Chair
Dr. Ross H. Musgrave Endowed Chair of Pediatric Plastic
Surgery

Ernest K. Manders, MD
Professor Emeritus

Kacey G. Marra, PhD
Professor
Vice Chair of Research

Andrea A. Moreira, MD
Associate Professor
Chief of Plastic Surgery at Magee Women's Hospital

Vu T. Nguyen, MD
Professor and Vice Chair of Education
Heath Sciences Endowed Chair in Plastic Surgery
Education

Brodie A. Parent, MD, MS
Assistant Professor
Chief of Plastic Surgery, UPMC Passavant

J. Peter Rubin, MD, MBA, FAACS
UPMC Endowed Professor and Chair
Distinguished Professor of Plastic Surgery

Lindsay Schuster, DMD, MS
Associate Professor

Mario G. Solari, MD
Assistant Professor
Vice Chair of Clinical Operations

Guy M. Stofman, MD
Clinical Professor

Teun Teunis, MD, PhD
Assistant Professor

Dawn J. Wang, MD, MS
Assistant Professor

Jason J. Yoo, MD
Assistant Professor, Acting Chief of Plastic Surgery at the
VA Pittsburgh Healthcare System

Friday, June 26, 2026	
7:00 AM – 7:30 AM	Breakfast
7:30 AM – 7:45 AM	Introduction and Opening Remarks: J. Peter Rubin, MD, MBA
7:45 AM – 8:45 AM	<p>“Bridging the Translation Gap in Craniofacial Biology” Eric C. Liao, MD, PhD University of Pennsylvania Director, Center for Craniofacial Innovation Surgery Vice Chair of Academic Affairs Presidential Scholar Endowed Chair Children’s Hospital of Philadelphia Professor of Surgery</p>
8:45 AM – 9:00 AM	Break/Vendor Exhibits
Session 1	Clinical Research (Craniofacial)
9:00 AM – 9:05 AM	<p>CranioRate at One Year: Multi-Institutional Outcomes and Improved Automated Severity Assessment in Craniosynostosis <u>Alžběta Novotná, MD</u>; Michael Hernandez, BS; Mokshagna Sai Karanam, MS; Tiffany Jeong, BA; Shelby Nathan, MD; Tobi Somorin, MD; Janina Kueper, MD; Jake Wagoner, BS; Nawazish Khan, MS; Wenzheng Tao, PhD; Luke Schreiber, BS; Loretta Bowman, MS; Ross Whitaker, PhD; Shireen Y. Elhabian, PhD; Jesse A. Goldstein, MD</p>
9:05 AM – 9:10 AM	<p>Fever Without Infection: De-escalating Diagnostic Workups in 313 Pediatric Craniosynostosis Patients Over 21 Years Michael Hernandez, BS; Ethan, Richlak, BS; Sophia E. Choi, BS; Tiffany Jeong, BA; Alžběta Novotná, MD; Shelby Nathan, MD; Jesse A. Goldstein, MD</p>
9:10 AM – 9:15 AM	<p>Speech Outcomes with Modified Furlow Palatoplasty: A 20-Year, Single-surgeon Experience <u>Nicolás M. Kass, MD</u>; Tobi Somorin, MD; Angel Dixon, MD; Joseph Mocharnuk, MD, MS; Megan Pencek, MD; Matthew Ford, CCC-SLP; Liliana Camison-Bravo, MD; Michael Bykowski, MD; Jesse A. Goldstein, MD; Joseph E. Losee, MD</p>
9:15 AM – 9:20 AM	<p>Racial Disparities in Craniosynostosis Presentation Persist After Adjusting for Severity of Cranial Dysmorphology: A Multicenter Analysis <u>Tiffany Jeong, BA</u>; Sean Lee, BS; Michael Hernandez, BS; Alžběta Novotná, MD; Zhazira Irgebay, MD; Mokshagna Karanam, MS; Nawazish Khan, MS; Shelby Nathan, MD; Shireen Y. Elhabian, PhD; Jesse A. Goldstein, MD</p>
9:20 AM – 9:25 AM	<p>Cranial Morphology as a Predictor of Operative Management in Late Presenting Isolated Sagittal Craniosynostosis Tiffany Jeong, BA; Michael Hernandez, BS; Michelle Antony, BS, BA; Alžběta Novotná, MD; <u>Viraj Govani, BS</u>; Janina Kueper, MD; Shelby Nathan, MD; Nawazish Khan, MS; Mokshagna Karanam, BS; Ross Whitaker, PhD; Shireen Y. Elhabian, PhD; Jesse A. Goldstein, MD</p>
9:25 AM – 9:45 AM	Discussion

Session 2	Clinical Research (Breast)
9:45 AM – 9:50 AM	Breast Volume Estimation Utilizing the Eclipse™ System and Implant Selection in Mastectomy Patients: A Retrospective Study Benjamin B. Scott, MD; Alexa Rivera Río Hernández, MD; Alberto A. Vera, MD; Sripadh B. Sharma, MD, PhD; John A. Vargo, MD; Vu T. Nguyen, MD
9:50 AM – 9:55 AM	Sensory Rehabilitation in Reconstructive Surgery: Evidence Synthesis and a Translational Framework for Breast Reconstruction Rachel Mpanu-Mpanu, BA; Nicholas Ranellone, BS; Abigail Royfman, BS; Maria J. Escobar-Domingo, MD, MPH; Janina Kueper, MD; Elizabeth Bailey, MD, MSHP, MEd; Andrea Moreira, MD
9:55 AM – 10:00 AM	Choosing Mesh in Implant-Based Breast Reconstruction: A Cost-Effectiveness Analysis Maria J. Escobar Domingo, MD, MPH; Abigail Royfman, BS; Solomon Seckler, MD; Brian Chen, MD; Suzanne Coopey, MD; J. Peter Rubin, MD, MBA; Andrea Moreira, MD
10:00 AM – 10:05 AM	Rurality is Associated with Surgical Timeline Disparities in Breast Cancer Patients Undergoing Immediate Breast Reconstruction Lola Ortiz-Whittingham, BS; Michael Mazarei, BA; Shayan M. Sarrami, MD; Carolyn De La Cruz, MD
10:05 AM – 10:10 AM	A Comparison of Postoperative Quality of Life in Breast Cancer Patients Undergoing SLNB Alone versus ALND and Lymphatic Reconstruction Michael Mazarei, BA; Shayan M. Sarrami, MD; Elnaz Asadi, BS; Lauriane Pinto, MD; Yadira Villalvazo, MD; Carolyn De La Cruz, MD
10:10 AM – 10:30 AM	Discussion
10:30 AM – 10:45 AM	Break/Vendor Exhibits
Session 3	Artificial Intelligence/Machine Learning
10:45 AM – 10:50 AM	A Machine Learning Framework for Automated, Quantitative Craniofacial Phenotyping in Mus Musculus Janina Kueper, MD; Alan Miller, MS; Wenzheng Tao, PhD; Alžběta Novotná, MD; Tiffany Jeong, BS; Michael Hernandez, BS; Nawazish Khan, BS; Krithika Iyer, BS; Jake Wagoner, BS; Shireen Y. Elhabian, PhD; Jesse. A Goldstein, MD
10:50 AM – 10:55 AM	Development and Validation of The Skin Graft Loss Risk Estimator: An Interpretable Machine Learning-Driven Tool for Individualized Assessment in Burn Patients Hilary Y. Liu, BS; Abbas M. Hassan, MD, PhD; Leigh J. Spera, MD; Francesco M. Egro, MBChB, MSc, MRCS
10:55 AM – 11:00 AM	Can Large Language Models Detect and Quantify Cognitive Bias in Medical Scientific Reports? Elou S. Kingma, MD; Teun Teunis, MD, PhD; David Ring, MD, PhD

11:00 AM – 11:05 AM	<p>Patient Perspectives on Artificial Intelligence Integration in Plastic Surgery Care: A Cross-Sectional Survey Study</p> <p>Anna E. Bazell, BS; <u>Dzana Katana, PhD</u>; Sihan Hao, BS; Alexander R. Madanat, BS; David R. Meyer, BS; Solomon Seckler, MD; Hong Hao Xu, MBA; Maria J. Escobar-Domingo, MD; Francesco M. Egro, MBChB, MSc, MRCS; J. Peter Rubin, MD, MBA; Carolyn De La Cruz, MD</p>
11:05 AM – 11:10 AM	<p>Cost-Effectiveness Analysis of Flap-Based Reconstruction Versus Skin Grafting for Burn Contracture Reconstruction</p> <p><u>Christopher J. Fedor, MSc</u>; Sarah M. Tepe, DO; Mare G. Kaulakis, BS; Kelson Huynh, BSc; Kenneth Smith, MD; Francesco M. Egro, MBChB, MSc, MRCS</p>
11:10 AM – 11:30 AM	Discussion
Session 4	Clinical Research (Recon)
11:30 AM – 11:35 AM	<p>Cost-Effectiveness of Pyogenic Flexor Tenosynovitis Initial Washout Performed in the Emergency Department versus the Operating Room</p> <p>Guldane Zehra Kocyigit, MD; <u>Destin Groff, MD</u>; Nirbhay Jain, MD; Solomon Seckler, MD; Maria J. Escobar-Domingo, MD, MPH; Sripadh Sharma, MD, PhD; Dana Bregman, MD</p>
11:35 AM – 11:40 AM	<p>Predictors of Adverse Outcomes from Salivary Leaks after Microvascular Head and Neck Reconstruction</p> <p><u>Hong Hao Xu, MBA</u>; Jacob Y. Katsnelson, MD; Fuat Baris Bengur, MD; Guldane Zehra Kocyigit, MD; Armin Aryannejad, MD; Adriana M. Duncan, BS; Matthew T. Bottegal, MS; Seungwon Kim, MD; Mario G. Solari, MD</p>
11:40 AM – 11:45 AM	<p>Long-Term Outcomes of Autologous Fat Grafting for Pedal Fat Pad Atrophy</p> <p>Chinemeh Eyiba, BS; Alexander J. Commerci, MD; Anjali C. Raghuram, MD, MBA; Beth R. Gusenoff, DPM; Jeffrey A. Gusenoff, MD</p>
11:45 AM – 12:00 PM	Discussion
12:00 PM – 1:00 PM	Lunch and Presentation: Eric Liao, MD, PhD “Magnifying Impact Through Career Engineering”
Session 5	Clinical Research (Burn)
1:00 PM – 1:05 PM	<p>Hand, Wrist, and Upper Extremity Burns in Low- and Middle-Income Countries: Findings from the Global Burn Registry</p> <p>Erik Reiche, MD; Daniel Najafali, MD; Megan Najafali, MHS; Hilary Y. Liu, BS; Sarah M. Tepe, DO; Saeid Rezaei, MD; José Antonio Arellano, MD; Victor E. Stams, MD; Sameer A. Patel, MD; Quincy K. Tran, MD, PhD; Francesco M. Egro, MBChB, MSc, MRCS</p>
1:05 PM – 1:10 PM	<p>Reconstruction of Extensive Burn Defects with Multiple Flaps: A Case Series</p> <p><u>Mare G. Kaulakis, BS</u>; Hilary Y. Liu, BS; José Antonio Arellano, MD; Christopher J. Fedor, MSc; Sarah M. Tepe, DO; Kelson Huynh, BSc; Guy M. Stofman, MD; Francesco M. Egro, MBChB, MSc, MRCS</p>

1:10 PM – 1:15 PM	The Social Anatomy of Frostbite: Homelessness and Disparities in Burn Care Sarah M. Tepe, DO; Christopher J. Fedor, MSc; Mare G. Kaulakis, BS; Kelson Huynh, BSc; Francesco M. Egro, MBChB, MSc, MRCS
1:15 PM – 1:20 PM	The Changing Role of Flap Reconstruction in the Era of Skin Substitutes for Lower Extremity Burns: A Decade Long Experience of a Single Institution Fuat Baris Bengur, MD; Sarah M. Tepe, DO; Christopher J. Fedor, MSc; Mare G. Kaulakis, BS; Kelson Huynh, BSc; Francesco M. Egro, MBChB, MSc, MRCS
1:20 PM – 1:25 PM	Burn Outcomes in Patients with Psychiatric Comorbidities: A National Database Study Simon Rodriguez, BS; Mare G. Kaulakis, BS; Christopher J. Fedor, MSc; Hilary Y. Liu, BS; Sarah M. Tepe, DO; Viktoria Voragen, BA; Mahi Pachgade, BS; Kelson Huynh, BSc; Jenny A. Ziembicki, MD; Francesco M. Egro, MBChB, MSc, MRCS
1:25 PM – 1:45 PM	Discussion
Session 6	Education/Quality Innovation
1:45 PM – 1:50 PM	A Novel Methodology for Reducing Surgical Instrument Waste in Breast Reduction: A Two-Pronged Approach Solomon Seckler, MD; Maria J. Escobar Domingo, MD, MPH; Malke Asaad, MD; Anjali Raghuram, MD, MBA; Guldane Zehra Kocyigit, MD; Vu T. Nguyen, MD; J. Peter Rubin, MD, MBA
1:50 PM – 1:55 PM	Evaluating Bias in Plastic Surgery Board Certification: Demographic Trends and Examination Outcomes Anna E. Bazell, BS; Yadira Villalvazo, MD; Rongrong Wang, PhD; Christina Lalama, MS; Lauriane Pinto, MD; Kacey Marra, PhD; Carolyn De La Cruz, MD
1:55 PM – 2:00 PM	Faces and Feelings: Psychosocial Functioning in Children with Craniofacial Differences Ethan Richlak, BS; David Kornmehl, DMD; Viraj Govani, BS; Christopher Chae, BS; Aileen Cui, BS; Michelle Antony, BS; Ryan Bish, BS; Tiffany Jeong, BA; Michael Hernandez, BS; Aniekanabasi Ufot, MD; Chrishaun Alexander, BS; Darya Fadavi MD; Noor Allanqawi, DMD; Jesse A. Goldstein, MD; Alexis Rodgers, PhD
2:00 PM – 2:05 PM	Assessing Communication Efficiency in Academic Surgical Research Laboratories Sihan Hao, BS; Anna E. Bazell, BS; Jordan Beck, BS; Abigail H. Santora; Kacey G. Marra, PhD; Dzana Katana, PhD
2:05 PM – 2:10 PM	Hurry Up and Wait: Analyzing the Domino Effect of First Case Start Time Delays in the Plastic Surgery Operating Room Anna E. Bazell, BS; Sihan Hao, BS; Jordan Beck, BS; Michael Mazarei, BS; Xavier Candela, MD, MBA; Annie Bright, BS; Carolyn De La Cruz, MD
2:10 PM – 2:30 PM	Discussion
2:30 PM – 2:45 PM	Break/Vendor Exhibits

Session 7	Basic Science
2:45 PM – 2:50 PM	<p>Metformin Shows Comparable Efficacy to Standard Pharmacologic Therapy in Frostbite Injury</p> <p>Alexa Rivera del Río Hernández, MD; José A. Arellano, MD; Naresh Mahajan, PhD; Samantha Bosco, BS; Kelson Huynh, BSc; J. Peter Rubin, MD, MBA; Asim Ejaz, PhD; Francesco M. Egro, MBChB, MSc, MRCS</p>
2:50 PM – 2:55 PM	<p>A Regenerative Bridge to Convert Avascular Wounds into Graft-Ready Wound Beds</p> <p>Chiaki Komatsu, MD; Armin Aryannejad, MD; Vanessa Mroueh, MD; Mario Solari, MD</p>
2:55 PM – 3:00 PM	<p>Defining DNA Damage, Apoptosis, and Transcriptomic Responses in Nitrogen Mustard-Induced Human Skin Injury</p> <p>Naresh Mahajan, PhD; Alexa Rivera del Río Hernández, MD; José A. Arellano, MD; Hamid Malekzadeh, MD; Yusuf Surucu, MD; Fuat Baris Bengur, MD; Shawn Loder, MD; Ethan Banks; Samantha Bosco, BS; Jeffrey A. Gusenoff, MD; Francesco M. Egro, MBChB, MSc, MRCS; J. Peter Rubin, MD, MBA; Asim Ejaz, PhD</p>
3:00 PM – 3:05 PM	<p>Extracorporeal Perfusion of Ovine Fasciocutaneous Free Flaps as a Bridge to Reconstructive Tissue Integration</p> <p>Armin Aryannejad, MD; Chiaki Komatsu, MD; Vanessa Mroueh, MD; Katelin Samski, PhD; Luke Simpson, MSc; Guldane Zehra Kocyigit, MD; Kacey Marra, PhD; Mario G. Solari, MD</p>
3:05 PM – 3:10 PM	<p>Comparative Evaluation of Saline-Washed Versus Unwashed Nanofat Grafting for Facial Skin Rejuvenation: A 12-Month a Prospective Randomized Controlled Trial</p> <p>Guldane Zehra Kocyigit, MD; Shawn Loder, MD; Maddox Smith, BS; Naresh Mahajan, PhD; Samantha Bosco, BS; Naman Verma; Andreea Gavrilesco, MD; Alex Vagonis, MD; Eleanor Shirley, MS; Patsy Simon, BS, RN, CCRC, CCRA, ACRP-PM; Lauren Kokai, PhD; Kacey G. Marra, PhD; J. Peter Rubin, MD, MBA</p>
3:10 PM – 3:15 PM	<p>Morselized Autologous Adipose and Nanofat as Anti-Adhesive Barriers Over Cartilage for Revision Rhinoplasty: A Porcine Auricular Model</p> <p>Maddox Smith, BS; Samantha Bosco, BS; Michael Mazarei, BA; Guldane Zehra Kocyigit, MD; Anna Bazell, BS; J. Peter Rubin, MD, MBA; Shawn J. Loder, MD; Kacey G. Marra, PhD; Isaac B. James, MD, MS</p>
3:15 PM – 3:30 PM	Discussion
3:30 PM – 3:45 PM	Concluding Remarks and Adjournment
3:45 PM – 5:45 PM	Rooftop Reception and Award Presentations