

# Catholic University Research Day

**April 15, 2016**



**THE CATHOLIC UNIVERSITY OF AMERICA**

## *Poster Presentations*

**Note: Poster presenters whose last names begin with A-PE will display their posters in Heritage Hall; those whose last names begin with PH-Z will display their posters in the foyer of McGivney Hall.**

- Antonette Academia, *Corporate Social Responsibility and the Rights of Workers: A Comparative Case Study of Brazil and Qatar FIFA World Cup and the Violations of Workers' Rights*
- Mana Al Reshan, *Authentication and Secure Session Establishment in Body Area Networks Using Multiple Biometrics and Physiological Signals*
- Meriem Alaoui, *The Sun's wrath: it starts with magnetic reconnection*
- Ahmed Alghamdi, *Securing Broadcast Authentication in Wireless Sensor Networks Against Denial of Service Attacks*
- Majed Alharbi, *Improving Coup Packet Delivery Performance for IOT Using Multiple Timers*
- Majedah Alkharji, *Enhanced Cryptographic Solution for Security Issues on Saudi Arabian Universities Environment*
- Afnan Alniamy, *Authentication and Secure Session Establishment in Body Area Networks Using Multiple Biometrics and Physiological Signals*
- Neeti Ananthaswamy, *HIV Vaccine Design: In Search of a Cure*
- Agnes J. Ancheta, *An Underflight Calibration of a Sun-Observing Satellite's Spectrometer with the EUNIS-2013 Sounding Rocket*
- Jude Anike, *Carbon nanotube yarns sensors: phenomenon and application.*
- Israel Arauz-Rosiles, *The Roots of Humanism: Reclaiming Humanism as a Catholic Form of Thought*
- Vania Arzadon, *The Long-Run Impact of Education Aid on Human Capital Outcomes: Evidence from the Philippines*
- Samantha Aurilia, *Tangled Up in Sexism: Franchises and Representation of Female Characters*
- Koorosh Azhandeh, *Hybrid Routing and Resolution for Information Centric Networking*
- Abdullah Bakhshwin, *Self-sensing Composite pipe*

- Sandra Barrueco, *Pope Francis and the Latino Community*
- Elizabeth Barry, *The Battle on the Home Front: Understanding Parenting Stress and Military Wives*
- Matthew Berkeley, *Map-making with space dust*
- Rudra Bhatta, *Green energy harvesting with PbTe microwires*
- Wendy Blome, *Shared vicarious trauma among professional social workers: A qualitative study of the Palestinian experience*
- Kathryn Bojczyk, *Action Research in Education: Lessons from the Field*
- Conor Boland, *A Light in the Dark: The Syon Brethren and the Lay Apostolate*
- Allison Bond, *Relationships between Community Violence and Social Support with Motivations to Read among Urban Children*
- Miriam Elizabeth Bowman, *How Does Organizational Culture and Climate Influence Job Stress and Job Satisfaction in Child Welfare Social Workers?*
- Gino Bretana, *Universal Urbanism vs. Contextual Urbanism*
- Cynthia Brewer, *Structural evidence of a ketimine as the product of an amino acid and an aldehyde. An intermediate in the racemization of amino acids.*
- Devon Brophy, *Culture in the Modern Age*
- Nicholas Brown, *Copyright & Conductor Scores: Technology for Fair Use in the New York Philharmonic Digital Archives*
- Vy Bui, *A Performance Study of Earth Networks Total Lighting Network (ENTLN) and Worldwide Lightning Location Network (WWLLN)*
- Vy Bui, *Explore Real-time Big Data Processing with Apache Storm using Twitter Public Stream Data*
- Timmesha Butler, *In-School Wrap Around Services: Exploratory Study Promoting Educational Success of African American Males.*
- Thomas Campbell, *An Impactor Mission to Europa: A Vibrometric Approach for Estimating the Ice's Thickness*
- Nicole Caulfield, *An Unknown War: The Difference of Suicidal Ideation between Active Duty Personnel and Veterans*

- Jennifer Charles, *Developing a self-assessment of mental health provider-based stigma: Incorporating client and family experiences.*
- Ji Chen, *Spring Operated Wearable Enhancer for Arm Rehabilitation after Stroke*
- Sung Cho, *Destinies' Child: Say His Names in Matthew 1-2*
- Marisa Coene, *Strain Gauge Sensors Using Piezoresistive Carbon Nanotube Yarn: Fabrication and Calibration*
- Megan Colline, *Prison Overcrowding and Mandatory Sentencing in the United States*
- Christian Constantine, *A lot of sugar can make chromosomes go rogue*
- Leigh Cordeiro, *Manifestations of Multicultural Education in Common Core State Standards Learning Materials: An Exploratory Descriptive Analysis of CCSS Suggested K-3 Stories*
- Santiago Correa, *Birefringence Analysis of In Situ Biofabricated Chitosan Membranes in Microfluidics*
- Michael Cozzi, *On the Virtue of Social Clubs in the Aristotelian Tradition*
- Lucas Crock, *The Impact of Medication on Treatment Outcomes for the Resilience Builder Program.*
- MaryGrace Cruser, *An Analysis of the Relationship between Working Memory, Verbal and Facial Recognition, and Social Functioning*
- Bishnu Dahal, *Electrical and Magnetic Properties of Cobalt Telluride Nanostructures*
- Laura Daughtery, *A Case Study: The Ecomap and Cultural Ecogram Application in Strengthening Health Care Services for an African American Grandparent with Diabetes Type 2*
- Anna Davis, *Access to Early Childhood Mental Health Services among Vulnerable Children in Private Faith-Based Schools*
- Courtney DelPo, *Computational Modeling to Predict Interactions Between Proteins and Cellular Signaling Molecules*
- Duilia de Mello, *Big Data of the Huge Universe (BIDHU) project: When galaxies collide*
- Bridget Dennin, *The 50 Longest Running Shows On Broadway*

- Rajendra Dulal, *Ferromagnetic Fe<sub>2</sub>CrAl Nanowires*
- Katharine Edbrooke, *France and its Immigrants*
- Andreza Eufrazio, *Harvesting of waste heat by ceramic thermoelectric materials*
- Kaitlyn Feeley, *Why aren't all children succeeding in school?: The negative effects of childhood poverty and the role of social workers*
- Mary Fesalbon, *Discussing Emotional Events: Measuring Emotion Talk between Mothers and their 7-year-old Children*
- Kevin Forbes, *Did Geomagnetic Activity Challenge Electric Power Reliability during Solar Cycle 23? Evidence from the Electricity Balancing Market in England and Wales*
- Kevin Frecker, *A Twenty-First Century Dilemma: Cultural Borrowing and the Music of the Catholic Church*
- Seyedehsaba Gharavi Neisiani, *A flexible framework for process-based hydraulic and water quality modeling of stormwater green infrastructure performance*
- Kelly Gill, *The Impact of Trait Emotion Regulation and Memory on Social Inference Skills*
- Stephen Gorbos, *New Music by Stephen Gorbos: Vox Animarum for solo cello*
- Stephen Gorbos, *From Elizabethan Poets to Contemporary Composers: Two New Compositions for Solo Cello*
- Helen Gorman, *Homeschoolers as Writing-Cultured*
- Francesca Gualano, *Interaction Mapping of a Signaling Network*
- Francesca Gualano, *On the Well-Posedness of the Gurevich-Zybin System and the Modeling of Dark Matter Dynamics*
- Kevin Gunn, *Comparing Religious Studies and Theology Faculty Citations and Library Holdings, 2002-2012: an Update*
- Serene Habayeb, *Participation in a Social Competence Intervention in a Private Clinical Setting and the Impact of Co-occurring Clinical Symptomatology in ASD*
- Kirk Herman, *Identification of Moving Wave Sources in a Solid Using Inverse Modeling and Uncertainty Quantification*

- Rosa Heryak, *Associations between Psychological Distress and Specific Aspects of Mindful Eating among College Students*
- Majd Hijazi, *Post Occupancy Evaluation of a Net-Zero Energy Building in Mixed-Humid Climate*
- Kimberly Hoffman, *Digital Toolkit: Essentials for the Scholar/ Researcher of Today + Tomorrow*
- Sean Houchins, *Effects of Mindfulness versus Loving-Kindness Meditation on Emotions and Sympathetic Nervous System Activity*
- Dennis Hoyer, *Mindful sport performance enhancement for Division III collegiate coaches: A pilot study*
- Yeping Hu, *Politicized Islam, Jihad and ISIS*
- Carol Huttar, *The Future of Fertility and Oncology: A Virtual Approach to Education*
- Quoc Huynh, *Wearable Sensors for Measurement and Detection of Daily Activities in Elderly Populations*
- Ilana Huz, *Symptom Reduction in Highly Anxious Youth with the Resilience Builder Program®*
- Thomas Ingram, *Self-harm behaviors among participants in Alcoholics Anonymous and Dual Diagnosis/ Alcoholics Anonymous*
- Mary Kate Interrante, *Mindfulness as a Moderator of the Association between Stress and Alcohol Use in Collegiate Athletes*
- Fahad Jambi, *Sorting yeast cells with microfluidic Platform*
- Jeffrey Jenkins, *A Telescopic Approach to Quantitative Brain Imaging*
- Alyssa Jespersen, *Breaking and fixing the genome: What difference does a million+ years make?*
- Jennifer Johnson, *Working Memory and Visual Distraction Predict Flight Simulator Performance*
- Martin Johnson, *For your consideration: Reviewing the Movie Review folders of the National Catholic Office for Motion Pictures*
- Nnanya Kalu, *Lipid Composition Regulates Anthrax Toxin Uptake*

- Clare Kenney, *Interactions Between PH Domains and Inositol Pyrophosphates*
- Hyojin Kim, *Measurement and Verification of an Occupancy-Based Climate Control Technology for Energy Savings and Indoor Air Quality*
- Vladimir Kirnosov, *Automatic Three-dimensional Reconstruction of Coronal Mass Ejection from STEREO A/B White-light Coronagraph Images*
- Eun Koh, *Generational impact of single-parent scholarships: Educational achievement of children in single-parent families*
- Regis Komperda, *Deconstructing Constructivism: Modeling Causal Relationships Among Constructivist Learning Environment Factors and Student Outcomes in Introductory Chemistry*
- Christopher Kramer, *Analysis and Mitigation Design of Acoustics for Performance Halls*
- Daniel Kuehler, *Piano Showcase Concert*
- Megan La Belle, *Influencing Juries in Litigation "Hot Spots"*
- Van Lam, *The effect of collagen microstructure on breast cancer cell migration*
- Tri Le, *Controlling competition between anammox bacteria and denitrifiers for nitrite to obtain discharge limits after mainstream deammonification*
- Huy Le, *Piezoresistive Response of CNT Yarns under Compression and Tension Including the Effect of Lateral Constraint on the Yarn*
- Mary Leary, *Affirmative Consent as Part of a "Consent Culture"*
- Patrick Lee, *Brain Cortical Activation and Tracing Performance during Tactile and Visual Guidance Movements*
- Ann Lipscombe, *Abstracting The Body*
- Stephen Lloyd, *Novel adjoint-control-equation based framework for inversion of unknown acoustic sources in a heterogeneous elastic solid.*
- Xiaolong Luo, *Bacterial Chemotaxis in Static Gradients Generated with Biofabricated Semi-permeable Biopolymer Membranes in Microfluidics*
- James Luskin, *Characterization of Porous Material and a Sound Suppression System using a Shock Tube*
- Rebecca Martens, *A lot of sugar can make chromosomes go rogue*

- Sergio Martinez, *Breaking down poverty cycles in developing countries - Exploration of Investment Funds conditioned on social commitments*
- Megan Masciola, *Parent-Child Communication: A Framework and Study Design for Addressing Prevention of Teen Risky Behaviors*
- Osagie Matthew, *Natural Gas Fired SOFC-GT-ST-ORC Quadruple Cycle for Power Generation*
- Rebecca McCarron, *A Family Affair: The Lady Anne Boleyn as a Member of the Boleyn Family*
- William McDonough, *An Atomic-Resolution Protein Models to Understand Cancer Signaling*
- Angela McRae, *Piqued Curiosity*
- Fahad Milaat, *Cooperative Detection of GPS Spoofing in VANET*
- Greg Miller, *Molecular Switches for Life and Death*
- Erin Mistretta, *Mindful Sport Performance Enhancement for High School Athletes*
- Michael Mobaraki, *Signal competition in protein traffic*
- Ali Momen, *Can Computer Agents Improve Basic Learning Through Social Presence?*
- Rebecca Moore, *Punks in the Archive: Social Activist Archivy and Community-Based Archival Collections*
- Danielle Needle, *These walls can talk: communication embedded in cell membranes*
- Quang Nguyen, *The Hybrid Methods for Electromagnetics Modeling of Large Scale Structures*
- Tuan Nguyen, *MIMO (multiple input multiple output) antenna system design for the next generation (5G) communication system.*
- Thanh Nguyen, *Digital Holographic Microscopy*
- Kateri Noble, *Associations Among Meditation Practice, Mindfulness, and Rumination in Experienced Meditators*
- Savanna Nolan, *Teaching the Teachers: Comparing How Law Students & Library Students Are Taught Legal Research*



- Maria Notarianni, *"I love you– just not like that:" Sexual Identity in the Media*
- Emily Oldham, *(Sit), Stand, Kneel: The Effect of the Introduction of Pews on Christian Worship in the Middle Ages*
- Emily O'Loughlin, *The Building Mosaic: A Place for Performance and Perception*
- Kelly Omotade, *SPICED Game Design for Enhanced STEM Outreach*
- Dominic Padova, *In Vitro Micropatterning of Pre-Osteoblast-Seeded Thin, Collagen Hydrogels*
- Christopher Papp, *Martian Mission for Future Settlement*
- David Pelton, *The Yards Hotel & Naval Museum*
- Jonathan Penepent, *Distinguishing Major Depressive Disorder and Bipolar Disorder in unmedicated adolescent females*
- Rokas Perskaudas, *Facets of Mindfulness and Psychological Health in Athletes: Implications for Mindfulness Interventions*
- Phu Pham, *Deploying Air Bubbles in Two-Layer Microfluidic Devices for In Situ Fabrication of Biopolymer Membranes*
- Akbar Pirmoz, *Progressive Collapse Response Analysis of Posttensioned Steel Frames*
- Gordon Pisani, *Loudspeaker Design*
- Evis Plaku, *Robots and Roadmaps: How teaching machines to think big picture can mean much faster and better routes*
- Alexander Quicksell, *Drone Structural Integrity: Senior Project*
- Katherine Rahill, *The Effects of Personally Adaptive Avatars on Game Performance*
- Rafi Rahman, *Edward Wilmot Blyden: A Black Church Advocate for Interreligious Dialogue*
- Hadiar Rahman, *Expression of a human multidrug transporter (ABCG2) in yeast cells: a novel approach combining genetics and biochemistry*
- Kesley Ramsey, *Parent Support and Adolescent Suicide Attempts*
- Verda Rana, *The Role of Maternal Self-Efficacy in the Home Learning Environment and Child Literary Skills*

- Richard Raymond, *Correlates of Self-Compassion in a Sample of Meditation Practitioners*
- Sergio Restrepo, *Text on Itself: José Luis Castillejo's Black and White Garden as Tautological Writing*
- Abby Ridge Anderson, *Understanding and Treating Childhood Suicidality*
- Caroline Riley, *Between you and I ... or me? A Study of Language Change Before Our Eyes*
- Merrill Roberts, *Modeling Solar Polar Jets: Data Analysis and Simulated in Situ Measurements*
- Erika Rodkey, *Predictors of Social Problems in Children with Intellectual and Developmental Disabilities*
- Caitlin Rothwell, *Initial findings of increased resilience following group psychotherapy in a low SES school setting*
- John Paul Ryan, *Tunnel vision: Examining the link between auditory preoccupation and alertness on the Washington, D.C. metro system*
- Paulo Sanchotene, *Beyond Judicial Activism: the tensions between Rule of Law and Political Ideology*
- Samuel Schor, *Working to Solve Child Abuse & Neglect*
- Michelle Seals, *Adaptive Security Architecture*
- Michael Seibert, *Measurements of Hydrogen Enriched Combustion of Jet Fuel in Open Flame*
- Marc Sepantaie, *Secure Communication Systems Using Synchronized Lorenz Strange Attractor on Reconfigurable Hardware*
- William Sergison, *Circulatory Environments as a Method Towards Association*
- Sameer Shah, *A sugar sensing pathway influences the behavior of chromosome segregation in S. cerevisiae*
- Patricio Simari, *Plato's Hammer: The Art, Science, and Philosophy of Computing and Where It Might Take Us*
- Kristofer Smith, *Deploying CloudEdge to Improve the Quality of Experience in Wireless Access Networks*

- Daniel Soranzo, *I Love You, but I Love Myself More.*
- Emmaris Soto, *Galaxies Unveiled*
- Yi Su, *Unified Quantitative Modeling for Integrated Multi-Objective Project Management with Singularity Functions*
- Donald Sullins, *Children with Same-sex Parents*
- Donald Sullins, *Abortion and Mental Health: New Evidence in the Debate*
- Meagan Tomasso, *Investigating Protein Interactions that control cellular trafficking*
- Trevor Torpin, *Comparison of an Anomalous Low State with a Normal Low State in LMC X-3 with MAXI, Swift, and XMM-Newton*
- Frances Anne Tosto, *Determining Articular Cartilage Explant Microstructural Response to Mechanical and Biochemical Surface Disruption*
- Nghia Tran, *Detecting and Tracking Human Walking in the Forest Environments*
- Daniela Vargas, *The Social Responsibility of Architecture in Urban Development as seen from an Artistic Point of View and an Economic Point of View*
- Thanh Vo, *Microfluidic Generated Static Gradients of Biomolecules for Studying Cell Dynamics*
- Grayson Wagstaff, *Of Two Minds: Catholic mysticism in the Concerto by Manuel de Falla and possible interpretation of a piece inspired by Falla's work*
- Jennifer Williamson, *An improved methodology for calibrating residential building energy models using hourly utility data*
- Michaela L. Zajicek-Farber, *Connections between Family Centered Care and Medical Homes of Children with Neurodevelopmental Disabilities: Experiences of Diverse Families.*
- Brooks Zitzmann, *Living and Learning Christian Spirituality in Social Work Practice*