

**Northeastern Illinois University and  
The College of Arts and Sciences**

**Present**

**TWENTY-THIRD ANNUAL  
STUDENT RESEARCH AND  
CREATIVE ACTIVITIES SYMPOSIUM**

**April 17, 2015**



## **SYMPOSIUM PROGRAM**

8:00 – 8:30 AM Registration/Coffee  
Student Union, Second Floor

8:30 – 8:50 AM Program Commencement  
Alumni Hall

Welcome and Introduction  
Dr. John Albazi, Symposium Coordinator

Greetings  
Dr. Sharon K. Haahs, President  
Northeastern Illinois University

### **Participants**

College of Arts and Sciences  
College of Business and Management  
College of Education  
College of Graduate Studies and Research  
Ronald Williams Library  
University Honors Program  
McNair Scholars Program  
Student Center for Science Engagement

### **Symposium Steering Committee Members**

John Albazi, College of Arts and Sciences  
Sylvia Atsalis, Student Center for Science Engagement  
Pamela Geddes, College of Arts and Sciences  
Robert Heitzinger, Creative Activities  
Kristen Lee Over, Honors Program  
Rasoul Rezvanian, College of Business & Management  
Kimberly Sanborn, Nontraditional Degree Programs  
Mary Thill, Library  
Angela Vidal-Rodriguez, McNair Scholars Program  
Mickie Wong-Lo, College of Education  
Nancy Wrinkle, College of Graduate Studies and Research  
Chunwei Xian, Accounting Business Law Finance

This year's Symposium is sponsored by the Office of Academic Affairs, the College of Arts and Sciences, and the Office of Institutional Advancement.

## **RESEARCH AND CREATIVE ACTIVITIES**

**FA-160 (Recital Hall, Fine Arts Building)**

**Presiding: Robert Heitzinger, Music**

**Discussants before break: William Sieger, Art**

**Discussants after break: William Sieger, Art and Christopher Owen, Music**

- 9:00 AM "SINGING TO SURVIVE: SIX ORIGINAL SONGS FROM JOSH FRIEDBERG," Joshua D. Friedberg (English), Ryan Poll\*, English
- 9:30 AM "DAVID," Nicholas J. Langenberg (English, University Honors Program), Julie Iromuanya\*, English
- 9:50 AM "MY CRAZY CHRISTIAN LIFE: STORIES ABOUT A COMING-OF-AGE CHRISTIAN FEMINIST," Rebekah Troche, (English, University Honors Program), Julie Iromuanya\*, English
- 10:10 AM "MARGINALIZED INTENSITY: *REPO MAN*, PUNK ROCK, AND CULT FILM CULTURE," Benjamin van Loon (Communication, Media & Theater), Shayne Pepper\*, Communication, Media and Theater
- 10:30 AM "LIFE AND MUSIC OF KAROL SZYMANOWSKI," Konrad Pawelek (Music), Peter Chang\*, Music
- 11:00 AM BREAK
- 11:20 AM "RACIAL AND ETHNIC MINORITY STUDENTS, AND BARRIERS TO STUDY ABROAD PARTICIPATION," Francesca Miroballi (Communication, Media and Theatre), Shayne Pepper\*, Communication, Media, and Theatre
- 11:40 AM "THE PERVERTED SPECTATOR," Kathryn L. Hudson, Benjamin Arakawa, (English), Olivia Cronk\*, English
- 12:00 PM "THE STATE OF SAMUEL BARBER RESEARCH IN THE 21ST CENTURY." Sasha S. Rashidee (Music), Peter Chang\*, Music
- 12:20 PM "THE RUBBER MAN: ANONYMITY, GENDER PERFORMANCE AND SUBCULTURE IN *AMERICAN HORROR STORY: MURDER HOUSE*," Samantha Stawiariski (Communication, Media and Theatre), Shayne Pepper\*, Communication, Media and Theatre

## **RESEARCH PRESENTATIONS**

### **Session 1**

**COBM 149 (College of Business and Management Building)**

**Presiding before break: Chunwei Xian, Accounting Business Law Finance**

**Discussants before break: Ai-Ru Yen, Accounting**

**Presiding after break: Rasoul Rezvani, Accounting Business Law Finance**

**Discussants after break: Scott Hegerty, Economics**

- 9:00 AM "PREDICTING RETAIL THEFT USING ACCOUNTING, STATISTICS AND COMPUTER SCIENCE," Daniel H Miller (Accounting), Chunwei Xian\*, Accounting, Business Law, and Finance
- 9:20 AM "DO ASSET PRICES INFLUENCE ECONOMIC GROWTH IN EMERGING ECONOMIES: A CASE STUDY OF INDIA," John Muzzi, Jose Molina and Steven Barron (Economics), Hardik Marfatia\*, Economics
- 9:40 AM "POSITIVE LEADERSHIP APPROACH AS A FUTURE OF LEADERSHIP," Klaudia Lewonczyk (MBA Candidate), Qaiser F. Waraich\*, Management and Marketing
- 10:00 AM "FORECASTING PERFORMANCE IN MAJOR LEAGUE BASEBALL," Lucas Haupt (Economics), Michael Wenz\*, Economics
- 11:00 AM BREAK
- 11:20 AM "ENERGY STORAGE INNOVATIONS," George N. Mason (Nontraditional Degree Programs-Economics), Richard Schwinn\*, Economics
- 11:40 AM "MONETARY POLICY AND THE TAYLOR RULE ACROSS COUNTRIES," Javier Robles, Undarmaa Batkhuyag and Ernesto Perez (Economics), Hardik A. Marfatia\*, Economics
- 12:00 PM "THE ILLINOIS SOLAR FIELD LP," Michael Varga (Economics), Hardik Marfatia\*, Economics.

### **Session 2**

**Student Union 003**

**Presiding: Angela Vidal - Rodriguez, McNair Scholars Program**

**Discussants before break: Luis Ortiz, Social Work, Jin Kim, Social Work**

**Discussants after break: Andrew Brake, Social Work, Job Ngwe, Social Work**

- 9:00 AM "LESBIAN, GAY, BISEXUAL, TRANS\*, AND QUEER (LGBTQ) RELATIONSHIP CONFLICT AND SUPPORT," Claire Y. Warne and Morgan D. Bielitzki (Social

Work), Adam Messinger\*, Justice Studies, Milka Ramirez\*, Social Work

- 9:20 AM "HIV MEDICAL REGIMEN ADHERENCE: A CORRELATIONAL STUDY ON DRUG AND ALCOHOL ABUSE," Alfonso Trevino (Social Work), Angel Resto\*, Social Work
- 9:40 AM "THE IMPACT OF HOME DELIVERED MEALS PROGRAM ON SENIORS' SELF-SUFFICIENCY AND NUTRITION IN CHICAGO," Ciara Smith (Social Work), Angel Resto\*, Social Work
- 10:00 AM "CORRELATION BETWEEN MORTGAGE RE-DEFAULT RATES, LOSS OF EMPLOYMENT, AND FINANCIAL MANAGEMENT IN CHICAGO," Kristin Warnock (Social Work), Angel Resto\*, Social Work
- 10:20 AM "THE EFFECTS OF PERSONALITY ON HEALTHY EATING HABITS AMONG PEOPLE EXPERIENCING HOMELESSNESS," Lindzy N. Staples (Social Work), Jin Kim\*, Social Work
- 11:00 AM BREAK
- 11:20 AM "ADOLESCENTS' ATTITUDES TOWARDS SUICIDE," Ebaa Wahdan (Social Work), Jin Kim\*, Social Work
- 11:40 AM "UNDOCUMENTED COLLEGE STUDENTS: AN ANALYSIS OF SELF-DETERMINATION AND THE PROCESSES OF RESILIENCE AND ACCULTURATION," Krina R. Gandhi (Social Work, University Honors Program), Jin Kim\*, Social Work
- 12:00 PM "THE EFFECTS OF YOUTH SERVICE ORGANIZATIONS ON AT RISK YOUTH: A B.U.I.L.D. INC. PROGRAM EVALUATION," Reynaldo Cordova (Social Work), Luis O. Ortiz\*, Social Work
- 12:20 PM "THE PLEASURE OF GROWING OLD," Peter Sipes (Linguistics), Richard Hallett\*, Linguistics

### **Session 3**

#### **Student Union 124**

**Presiding: Kristen Lee Over, English and University Honors Program**

**Discussants before break: Tim Libretti, English**

**Discussants after break: Ryan Poll, English**

- 9:00 AM "BLOO .... ME? NO.": EVADING LACAN'S "BUTTON TIE" IN JOYCE'S *ULYSSES*," Mark C. Gunter (English, University Honors Program, McNair Scholar), Bradley Greenburg\*, English

- 9:20 AM "CREATING MONSTERS FROM CREATURES: EXPLORING DISABILITY AND DIFFERENCE IN MARY SHELLEY'S FRANKENSTEIN," Aaron J. Leiva (English), Ryan H. Poll\*, English
- 9:40 AM "CIVILIZING THE DEAD," Nicholas Jirsa (English), Kristen Lee Over\*, English
- 10:00 AM "LOVE HURTS IN THE MASSA'S HOUSE: AN EXPLORATION OF THE COMPLEXITY OF MASTER/SLAVE INTERRACIAL LIASONS AND THEIR EFFECTS ON THE DEVELOPMENT OF IDENTITY IN ENSLAVED WOMEN AND THEIR DESCENDANTS," Yazin S. Musa (English), Julie Iromuanya\*, English
- 10:20 AM "SIGHT UNSEEN: THE INESCAPABLE LEGACY OF AFRICAN FOLKLORE TRADITION," Keisha Price (English), Julie Iromuanya\*, English
- 10:40 AM "THE FLUKE THAT WASN'T: RECONSIDERING THE SUCCESSS OF RAY CHARLES'S COUNTRY MUSIC LANDMARK," Joshua D. Friedberg (English), Ryan Poll, English
- 11:00 AM BREAK
- 11:20 AM "ON THE FAULTINESS OF MIRRORS: THE FLUIDITY OF IDENTITY IN GENE LUEN YANG'S AMERICAN BORN CHINESE," Jeffrey B. O'Malley (English, University Honors Program), Ryan Poll\*, English
- 11:40 AM "NAVIGATING GLOBALIZATION IN EZRA POUND'S PISAN CANTOS: AN AESTHETICS OF IMAGINATIVE MAPPING, OR, PERIPLUM," Jeffrey B. O'Malley (English), Ryan Poll\*, English
- 12:00 PM "MATERIAL CULTURE AND THE ART OF BEATNIK POET," d.a.levy Ed Vidmar (English), Ryan Poll\*, English
- 12:20 PM "THE SOUTHERN GOTHIC IN *THE TEXAS CHAINSAW MASSACRE*," Christopher L. Hoppe (English), Bradley Greenburg\*, English
- 12:40 PM "ILLUSTRATING AND INTERPRETING THE INVISIBLE IN GRAPHIC NARRATIVE," Kathryn L. Hudson (English), Ryan Poll\*, English

#### Session 4

Student Union 103 (Golden Eagles room)

Presiding before break: Saba Ayman-Nolley, Psychology

Discussants before break: Lori Cuevas and A. David Farmer, Psychology

Presiding after break: Maureen Erber, Psychology

Discussants after break: Lisa Hollis-Sawyer and Amanda Dykema-Engblade, Psychology

- 9:00 AM "WHERE THE POPPIES GROW: AN ARCHIVAL STUDY OF PTSD IN THE US MILITARY, FROM WWI TO THE VIETNAM WAR," René Marie Talbot (Nontraditional Degree Programs, University Honors Program), Therese Schuepfer\*, Psychology
- 9:20 AM "PARENTAL DIVORCE AND COLLEGE STUDENTS," Katherine A. Jensen and Sarah R. Miller (Psychology), A. David Farmer, Jr.\*, Psychology
- 9:40 AM "EFFECT OF MUSIC ON PSYCHOLOGICAL RESILIENCY DURING A FRUSTRATION TASK," Christopher R Jones (Psychology), Saba Ayman-Nolley\* Psychology
- 10:00 AM "THE EFFECT OF ANTIHISTAMINES ON CAFFEINE INDUCED ANXIETY IN ADULT ZEBRAFISH," Annmarie M. Gilbert (Psychology), Shannon Saszik\*, Psychology
- 10:20 AM "CHROMATIC PROCESSES IN ON AND OFF PATHWAYS IN ZEBRAFISH (*DANIO RERIO*)," Tony Shajan (Psychology), Shannon Saszik\*, Psychology
- 10:40 AM "THE EFFECT OF MATERNAL IMMUNE ACTIVATION ON FETAL NEURODEVELOPMENT," Angelina Jaimes<sup>1</sup>, Adrienne Antonson<sup>2</sup>, Shannon Saszik\*<sup>1</sup>, Rodney Johnson\*<sup>2</sup>  
<sup>1</sup>Department of Psychology, Northeastern Illinois University, Chicago, IL 60625  
<sup>2</sup>Department of Animal Sciences, University of Illinois at Urbana-Champaign, Urbana, IL 61801
- 11:00 AM BREAK
- 11:20 AM "WHAT ROLE DOES GESTURE PLAY IN THE EMBODIMENT OF MATH CONCEPTS?," Devin Loudon and Lukasz Gorczynski (Psychology), Breckie Church\*, Psychology
- 11:40 AM "HOW DO SUBJECT VARIABLES LIKE SOCIOECONOMIC STATUS AND GENDER MEDIATE THE EFFECTS OF GESTURE PRODUCED DURING INSTRUCTION OF MATH," Dina Latif and Cole Burns (Psychology), Breckie Church\*, Psychology
- 12:00 PM "GESTURES IN INSTRUCTION: EFFECTS ON BILINGUAL STUDENTS' LEARNING AND MUSCLE ACTIVATION," Mayra Saucedo (Psychology), Linda Rueckert\* Psychology
- 12:20 PM "THE EFFECT OF AN AUDIENCES' LAUGHTER ON FACIAL MIMICRY," Melanie K. Allen, Stephanie Voelker and Yesenia Taveras (Psychology), Linda Rueckert\*, Psychology

12:40 PM "THE EFFECT OF AGE AND ETHNICITY ON MORAL REASONING," Michele S. Lee, Sephra Shoptz, Amer Y. Rustum and Hamid A. Rustum (Psychology), Breckie Church\*, Psychology

**Session 5**

**Student Union 214**

**Presiding before break: Pamela Geddes, Biology**

**Discussants before break: Jennifer Slate and Elyse Bolterstein, Biology**

**Presiding after break: David Rutschman, Mathematics**

**Discussants after break: Cindy Voisine and Pam Geddes, Biology**

9:00 AM "EVALUATING THE EFFECT OF EMBRYONIC FOLIC ACID TREATMENTS ON PALATE/CRANIOFACIAL DEVELOPMENT AND BEHAVIOR IN THE DAY-12 HSD:ICR CD-1<sup>®</sup> MOUSE," Renee A. Chellson<sup>1</sup>, Russell J. Moskal<sup>1,2</sup>, Robert L. Fidis<sup>1</sup>, Siobhán B. Cooke<sup>\*2</sup> and TK Puryear<sup>\*1\*</sup>, <sup>1</sup>Mouse House Laboratory, Department of Biology, <sup>2</sup>Department of Anthropology

9:20 AM "ANALYSIS OF THE EFFECTS OF PROLONGED NICOTINE EXPOSURE ON BEHAVIOR AND REPRODUCTION IN *DROSOPHILA MELANOGASTER*," Erene Mihalas-Sanchez (Biology), Mary Kimble\*, Biology

9:40 AM "RESPIRATORY PATTERNS IN PRAYING MANTISES," Salim Patel<sup>1</sup>, Christina Carrion<sup>1</sup>, Arielle Greico<sup>1</sup>, Emily Fioramonti<sup>1</sup>, Greg Prete<sup>1</sup>, Veronica Skittle<sup>1</sup>, Bart van Alphen<sup>\*2</sup>, Frederick Prete<sup>\*1</sup>, Aaron Schirmer<sup>\*1</sup>  
<sup>1</sup>Department of Biology, Northeastern Illinois University, Chicago Illinois 60625  
<sup>2</sup>Department of Neurobiology and Physiology, Northwestern University, Evanston, IL 60208

10:00 AM "IDENTIFICATION OF THE *PERIOD* GENE IN THE MANTODEA (PRAYING MANTIS)," Greg Prete, Emily Fioramonti, Christina Carrion and Salim Patel (Biology), Frederick Prete\* and Aaron Schirmer\*, Biology

10:20 AM "CONSTRUCTION OF A MICROSATELLITE ENRICHED GENOMIC LIBRARY AND ANALYSIS OF NEW MICROSATELLITE PRIMERS FOR *RHODIOLA*," Jose L. Hermosillo, Gwendolyn A. Murphy and Marisela Rodriguez (Biology), Mary Kimble\* and Joel Olfelt\*, Biology

11:00 AM BREAK

11:20 AM "HYBRIDIZATION OF *TYPHA LATIFOLIA* AND *TYPHA ANGUSTIFOLIA* IN THE US MIDWEST," Sarah B. Whidden and Joseph J. Marsili (Biology), Luis L. Allende (Biology, McNair Scholar), Joel Olfelt\* and Pamela Geddes\* Biology



- 11:40 AM "THE EFFECTS OF COMPETITOR-INDUCED PLASTICITY ON INTENSITY OF PARASITIC INFECTION," Alejandra Villegas and Elisabeth Somchith (Chemistry), Sarah A. Orlofske\*, Biology
- 12:00 PM "THE DIVERSITY OF ECHINOSTOMES (PLATYHELMINTHES: TREMATODA) IN CHICAGOLAND AREA AQUATIC COMMUNITIES," Eriberta R. Vasquez, Jennifer E. Kawaguchi, Olivia N. Choi and Robert C. Jadin (Biology), Sarah A. Orlofske\*, Biology
- 12:20 PM "UNIONID MUSSELS AS BIOINDICATORS IN AN URBAN STREAM," Annie M. Harris (Biology), Jennifer Slate\*, Biology
- 12:40 PM "IS THERE EVIDENCE OF EUTROPHICATION IN VOLO BOG NATURE PRESERVE? A PALEOLIMNOLOGICAL STUDY WITH DIATOMS," Charles C Sandusky (Biology), Jennifer Slate\*, Biology

### Session 6

#### Student Union 215

**Presiding: Sylvia Atsalis, Student Center for Science Engagement (SCSE)**

**Discussants before break: Jing Su, Chemistry, Laura West, SCSE**

**Discussants after break: Emina A. Stojković, Biology, Paloma Vargas, SCSE**

- 9:00 AM "THROUGH HARDSHIPS TO MASTERING ORGANIC CHEMISTRY: INTERACTIVE LEARNING AND STUDENT CENTERED LABS WITH MASTERY LAB AND CHEM-WIKI," Brenna Dooley (Biology), Alexandra Gokee (Chemistry), Ana Fraiman\*, Chemistry
- 9:20 AM "SYNTHESIS AND OPTIMIZATION USING HPLC, DEVELOPMENT AND VALIDATION OF A STABILITY-INDICATING METHOD FOR THE DETERMINATION OF LABORATORY SYNTHESIZED FENOFIBRIC ACID RAW MATERIAL USING REVERSED-PHASE LIQUID CHROMATOGRAPHY," Shahzaib Mehdi Syed (Chemistry), John Albazi\*, Chemistry
- 9:40 AM "METHOD DEVELOPMENT AND VALIDATION FOR THE DETERMINATION OF ENANTIOMERS OF MIRTAPINE AND WARFARIN IN THEIR PHARMACEUTICAL RAW MATERIALS USING REVERSED-PHASE LIQUID CHROMATOGRAPHY," Nermeen Hanini (Chemistry), John Albazi\*, Chemistry
- 10:00 AM "SYNTHESIS AND PURIFICATION OF INGAP PEPTIDE AND ANALOGS AS NEW ANTI-DIABETIC DRUGS," Andrew Apals (Chemistry), Dr. Jin Su\*, Chemistry
- 10:20 AM "INNOVATION IN MICROSATELLITE CATALOGUING: FINDING MARKERS IN MIDWESTERN CATTAILS [*Typha* species]," Rivka Strauss (Biology), Courtney Moran (Biology, University Honors Program), Pamela Geddes\*, Biology Joel Olfelt\*, Biology, Rachel Trana\*, Computer Science, Francisco

Iacobelli\*, Computer Science

- 10:40 AM "DOMAIN STRUCTURE OF BACTERIAL RED LIGHT PHOTORECEPTORS AS REVEALED BY ATOMIC FORCE MICROSCOPY," Rima Rebiai<sup>1</sup>, Marie E. Kroeger<sup>2</sup>, Zain Malik<sup>1</sup>, Emina A. Stojković<sup>2</sup>, Stefan Tsonchev<sup>1</sup>, Kenneth T. Nicholson<sup>1</sup>. <sup>1</sup>Department of Chemistry, <sup>2</sup>Department of Biology
- 11:00 AM BREAK
- 11:20 AM "STRUCTURE AND FUNCTION OF BACTERIOPHYTOCHROMES IN MYXOBACTERIA," Chris Tong<sup>2</sup>, Ayesha Mapara<sup>2</sup>, Kevin D. Gallagher<sup>1</sup>, Phu Duong<sup>1</sup>, Angela Nugent<sup>1</sup>, James Hopkins<sup>1</sup>, Patricia Waltz<sup>1</sup>, Joseph Varela<sup>1</sup>, and Emina A. Stojković\*<sup>1</sup>  
<sup>1</sup>Department of Biology, <sup>2</sup>Department of Chemistry
- 11:40 AM "TOPIC MODELING USING POINTWISE MUTUAL INFORMATION," John C. Hewitt (Computer Science/Mathematics), Francisco Iacobelli\*, Computer Science
- 12:00 PM "THE HEXAHEDRAL FLEXAGON AND ITS ALGEBRAIC STRUCTURE," Julien de Castelnau (Mathematics), Peter Kimmel\*, Computer Science, Tanya Cofer\*, Mathematics
- 12:20 PM "SMART MULTITASKING WITH SMARTPHONES," Deena G. Rubin (Computer Science, Mathematics), Rachel F. Adler\*, Computer Science
- 12:40 PM "TOPOLOGICAL COMPLEXITY OF CONFIGURATION SPACES," Ricky Salgado, Emiliano Velazquez (Mathematics), Hellen Colman\*, Department of Mathematics, Wilbur Wright College

### **Session 7**

**Student Union 216**

**Education and Psychology**

**Presiding: Mickie Wong-Lo, Special Education**

**Discussants before break: Phyllis Le Dosquet, Special Education, Ramon Viera, Psychology**

**Discussants after break: Eun Hye Kwon, Health, Physical Education, Recreation, and Athletics, Saba Ayman-Nolley, Psychology**

- 9:00 AM "AN EXAMINATION OF MUSLIM STUDENTS' EXPERIENCES AT NORTHEASTERN ILLINOIS UNIVERSITY," Rukiye Ayyildiz (Human Resource Development), Dr. Gabriel Cortez\*, Educational Leadership and Development
- 9:20 AM "THE DIFFERENCE IN CLASSROOM INSTRUCTION VS. ONE ON ONE INSTRUCTION," Caroline N. Gorte and Yvette Hernandez (Psychology), Breckie Church\*, Psychology

- 9:40 AM "THE EFFECTS OF GESTURE ON CHILDREN LEARNING PRE-ALGEBRAIC MATH," Nicole L. Breving, Celeste D. Hoecker, Emily N. Garcia, Franny M. Plaia and Patricia Delgado (Psychology), Breckie Church\*, Psychology
- 10:00 AM "THE EFFECT OF AGE AND VARIATION IN THE MORAL DILEMMA ON MORAL REASONING," Brandi E. Crawford, Nahi A. Lichtenstein and Edgar I. Torres (Psychology), Breckie Church\*, Psychology
- 10:20 AM "THE EFFECT OF AGE, SES, AND MOOD ON FOOD PREFERENCE," Brittany J. Skorek, Renee M. Benjamin, Genesis N. Martinez, Kimberly Villalta and Maria N. Kolligris (Psychology), Ruth Church\*, Psychology
- 11:00 AM BREAK
- 11:20 AM "THE EFFECTS OF ANXIETY ON SOCIAL BEHAVIOR," Conor M. Smith (Psychology), Shannon Saszik\*, Psychology
- 11:40 AM "EFFECT OF SEROTONIN LEVELS AND AGGRESSIVE BEHAVIORS IN INDIVIDUALS WITH AUTISM: USING ZEBRAFISH AS A MODEL," Sunny Despotovic (Psychology), Shannon Saszik\*, Psychology
- 12:00 PM "THROUGH GIFTED EYES: GIFTED CHILDREN & TEENS SHARE THEIR PERSONAL STORIES THROUGH FILM," Kathleen M. Nilles and Corina M. Vaccarello (Special Education), Dr. Michele Kane\*, Special Education
- 12:20 PM "LINGUISTICS AND THE STATISTICAL ANALYSIS OF TONE: EXAMPLES FROM MANDARIN CHINESE AND ITS TONES, EXAMPLES FROM SPANISH AND FROM ENGLISH, WHICH ARE NOT TONE LANGUAGES, AND SOME MANDARIN CHINESE TONGUE TWISTERS," James L Jones (Linguistics), Lewis Gebhardt\*, Linguistics, Paul O'Hara\*, Mathematics, Denise Cloonan\*, World Languages and Cultures
- 12:40 PM "HEALTH POPULATION IN REGARDS TO DIET AND ASSOCIATED CONSEQUENCES," Universal Prayther (Health, Physical Education, Athletics, and Recreation, McNair Scholar), Jennifer. Banas<sup>1\*</sup>, Health, Physical Education, Athletics, and Recreation

### Session 8

#### Student Union 217

**Presiding: Kim Sanborn, Nontraditional Degree Programs**

**Discussants before break: Erick Howenstein, Geography and Environmental Studies, Olivia Perlow, Sociology**

**Discussants after break: Audrey Natcone and Shelley Bannister, Justice Studies**

- 9:00 AM "FUELISH CHOICES: NUDGING TRANSPORTATION DECISIONS," Nancy Hirsch (Nontraditional Degree Programs/Geography and Environmental Studies, University Honors Program), Dr. Caleb Gallemore\*, Geography and

## Environmental Studies

- 9:20 AM "INVESTIGATING LGBTQ HATE CRIMES ON CAMPUS AT NEIU," Zohel Zabih, Angel Rivera, and Olivia Yousif (Justice Studies), Adam M. Messinger\*, Justice Studies
- 9:40 AM "LAW AND PUBLIC OPINION: AN INVESTIGATION THROUGH SAME-SEX MARRIAGE," Joshua R. Einbinder ( Philosophy, University Honors Program), Daniel Milsky\*, Philosophy
- 10:00 AM "QUALITY OF WORK LIFE FOR PART-TIME FACULTY: A STUDENT RESEARCH PROJECT," Jessica Alaniz<sup>2</sup>, Joanna Gromow<sup>1</sup>, Karina Lopez<sup>2</sup>, Martin O'Brien<sup>3</sup>, Adekunle Adebayo<sup>1</sup>, Maranda Franks<sup>4</sup>, Rocio Garcia<sup>5, 6</sup>, Juan Gonzalez<sup>1, 6</sup>, Samantha Hernandez<sup>1</sup>, Natalie Klimczak<sup>7</sup>, Marie Martin<sup>7</sup>, Ayuk Nfundoak<sup>8, 6</sup>, Aldo Silvestre<sup>1</sup>, Tomas Uriostegui<sup>5</sup>, Marcos Feldman<sup>\*1</sup>,  
<sup>1</sup>Sociology, <sup>2</sup>Social Work, <sup>3</sup>Nontraditional Degree Programs, <sup>4</sup>Justice Studies, <sup>5</sup>Latino and Latin American Studies, <sup>6</sup>McNair Scholar, <sup>7</sup>Psychology, <sup>8</sup>Political Science
- 10:20 AM "THE STRUGGLE OF THE EX-OFFENDER AFTER TIME SERVED," Joshua Brooks (Justice Studies), T.Y. Okosun\*, Justice Studies
- 11:00 AM BREAK
- 11:20 AM "SUDANESE REFUGEE EXPERIENCE: A TRUE STORY OF SURVIVAL AND STRUGGLE," Peter M. Bul (Political Science), Nancy A. Matthews\*, Justice Studies and Women's & Gender Studies
- 11:40 AM "DISPUTING HATE CRIME LAWS," Stephanie Modrzejewski<sup>1</sup>, DylIn Barkstrom, Psychology, Daria Latocha<sup>1</sup>, Carmin Casales<sup>1</sup>, Dominick Dworak<sup>1</sup>, Zaim Zagora<sup>1</sup>, Adam M. Messinger\*<sup>1</sup>, <sup>1</sup>Justice Studies
- 12:00 PM "THE UNDERREPORTING OF HATE CRIMES MOTIVATED BY SEXUAL ORIENTATION BIAS IN THE UNITED STATES," Miguel Nunez, Michael Delatorre and Olivia O'Donovan (Justice Studies, Steve Williams (Undeclared), Adam M. Messinger\*, Justice Studies
- 12:20 PM "KNOW THE LAW UNDER YOUR ROOF-FAIR HOUSING," Paw Ku (Justice Studies), Sevtap Guldur (Political Science), Nancy Matthews\*, Justice Studies and Women's & Gender Studies

### Session 9

#### Student Union 218

**Presiding before and after break: Shahrzad Mahootian, Linguistics**

**Discussant before break: Lewis Gebhardt, Linguistics**

### Discussant after break: Richard Hallett, Linguistics

- 9:00 AM "A STUDY OF A STUDENT'S LAW CLUB COMMUNITY: AN ANALYSIS OF LINGUISTIC RELATIVITY AND LINGUISTIC DETERMINISM," Enas A Albasiri, (Linguistics), Judith Kaplan-Weinger\*, Linguistics
- 9:20 AM "BINOMIAL PAIR USAGE AND ITS CONNECTION TO GENDER EQUALITY," Amanda Treutler (Linguistics), Lewis Gebhardt\*, Linguistics
- 9:40 AM "TABOOS AND EUPHEMISMS IN CHICAGO PAKISTANI COMMUNITY," Abdullah Al Musallam (Linguistics), Judith Kaplan-Weinger\*, Linguistics
- 10:00 AM "SHAPED TRUTH: AN EXPLORATION OF DOMESTIC MEDIA," George H. Borawski (Linguistics), Richard Hallett\*, Linguistics
- 10:20 AM "A CASE STUDY OF THE LEXICAL ACQUISITION FOR AN ARABIC-SPEAKING GRADUATE STUDENT IN THE US," Majed A. Alasasleh (Linguistics), Richard W. Hallett\*, Linguistics
- 10:40 AM "HOW DO F\*\*\*ING SWEAR WORDS IN DIFFERENT D\*\*N LANGUAGES IMPACT THE EMOTIONS OF BILINGUALS?," Sukruthai Rojchanapradist (Linguistics), Shahrzad Mahootian\*, Linguistics
- 11:00 AM "ANALYZING THE PRACTICE OF THE PSYCHOLOGICAL STRATEGIST: THE PSYCHOLOGICAL STRATEGY ON BUILDING OR RESTORING AN EMPIRE," Herman Salgado, Jr (Linguistics), Judy Kaplan-Weinger\*, Linguistics
- 11:20 AM "EARLY LEXICAL DEVELOPMENT AND FACTORS THAT AFFECT IT: EVIDENCE FROM ARABIC-ENGLISH SPEAKING CHILDREN," Ehsan Alatawi (Linguistics), Shahrzad Mahootian\*, Linguistics
- 11:40 AM "THE PHENOMENON OF ARABIZI ON TWITTER AND INSTAGRAM AMONG SAUDI USERS," Rawan Bonais (Linguistics), Shahrzad Mahootian\*, Linguistics
- 12:00 PM "SAUDI ARABIC-ENGLISH CODESWITCHING: MORPHO-SYNTACTIC ANALYSIS," Sarah Alamri (Linguistics), Shahrzad Mahootian\*, Linguistics
- 12:20 PM "ARAB CELEBRITIES CODE SWITCHING: STRUCTURE AND FUNCTION," Soha Aljomaa (Linguistics), Shahrzad Mahootian\*, Linguistics
- 12:40 PM "THE PERCEPTIONS AND COMPREHENSION OF HIGH SCHOOL STUDENTS IN A NON-NATIVE ENGLISH SPEAKING TAUGHT ONLINE CLASSROOM," Patrick M. Baldwin (Linguistics), Richard Hallett\*, Linguistics
- 1:00 PM "LANGUAGE CONTACT IN THE SLOVENIAN LITTORAL," Pegi Bakula (Linguistics), Richard Hallett\*, Linguistics

## Session 10

Student Union SU-219

President: Mary Thill, Library

Discussants before break: Christina Gomez, Sociology, Kimberly Shotick, Library

Discussants after break: Lucrecia Artalejo, World Languages and Cultures, Michelle Guittar, Library

- 9:00 AM "RESHAPING LATINIDAD," Blanca Hurley (Sociology and Latino & Latin American Studies), Christina Gomez\*, Sociology and Latino & Latin American Studies
- 9:20 AM "SPANISH AND ENGLISH MEDIA REPORTING ON 2014 WAVE OF UNDOCUMENTED CENTRAL AMERICAN CHILDREN," Guadalupe Zuñiga (Sociology), Christina Gomez\*, Sociology and Latino & Latin American Studies
- 9:40 AM "UNDERSTANDING INTERRACIAL MARRIAGES: AFRICAN AMERICAN AND LATIN@ PERSPECTIVES," Lenesha McGee (Sociology), Christina Gomez\*, Sociology and Latino & Latin American Studies
- 10:00 AM "TRANSNATIONAL BRIDGES: IMPORTING DOMESTIC WORK," Liliana Macias (Latino and Latin American Studies), Emily Garcia\*, English and Latino and Latin American Studies
- 10:20 AM "CANDLES OF AMBITION AND CHAINS OF POWER," Maria, C. Padilla (Spanish), Emily Garcia\*, English
- 10:40 AM "EXAMINING MENTAL HEALTH AND USE OF CLINICAL SERVICES AMONG SENIOR REFUGEE POPULATIONS RESETTLED IN CHICAGO," Zitlalli Z. Roman (Social Work, McNair Scholar Program), Aimee Hilado Villalpando\*, PhD, LCSW\*, Jin Kim\*, Social Work Program
- 11:00 AM BREAK
- 11:20 AM "DUALITY IN MY IDENTITY," David Lagunas (Secondary Education/Spanish, University Honors Program), Lucrecia Artalejo\*, World Languages and Cultures
- 11:40 AM "YOUR HISTORY IS NOT WHO I AM: SELF-IDENTIFICATION OUTSIDE OF TRADITION AND ANCESTRY IN FELICIA LUNA LEMUS'S *LIKE SON*," Victoria E. Salsa (Secondary Education/English), Emily Garcia\*, English and Latino and Latin American Studies
- 12:00 PM "DEFENSORA INDÍGENA DESDE SU CELDA: EL DIVINO NARCISO POR SOR JUANA INÉS DE LA CRUZ," Esmeralda Mora Begres (Latin American Literature and Cultures), Lucrecia Artalejo\*, World Languages and Cultures
- 12:20 PM "DIFUNDIENDO CONCIENCIA: EL PAPEL Y SIGNIFICADO DE LOS PERSONAJES LGBTQ EN LA NARRATIVA DE ISABEL ALLENDE," Siobhan Moffitt (Spanish), Lucrecia Artalejo\*, World Languages and Cultures

## **POSTER PRESENTATIONS**

### **LOBBY IN FRONT OF AUDITORIUM**

**10:00 AM to 11:00 AM (Set-Up Period)**

**11:00 AM to 1:20 PM (Presentation Period)**

**Presiding: John Albazi, Chemistry**

1. "RELATIONSHIP BETWEEN PERCEPTION OF PARENT'S POLITICAL IDEOLOGY AND IDENTITY DEVELOPMENT ON YOUNG ADULT POLITICAL ATTITUDES," Agnieszka Kucharski (Psychology), Christopher Merchant\*, Psychology
2. "EMOTION, PERCEPTION, AND MUSICAL PREFERENCE," Alexis T. Kalady (Psychology, University Honors Program), Christopher Merchant\*, Psychology
3. "SYNTHESIS AND CHARACTERIZATION OF A BIOTIN-CONJUGATED PEPTIDE FOR STUDYING MECHANISM OF ISLET  $\beta$ -CELL REGENERATION DURING DIABETES TREATMENT," Anita Alhasan (Chemistry), Jing Su\*, Chemistry
4. "RISK BEHAVIORS AND COPING STRATEGIES: DIFFERENCES BETWEEN FIRST AND SECOND GENERATION IMMIGRANTS AND NON- IMMIGRANTS IN US," Anna Kocheulova (Psychology), Christopher Merchant\*, Psychology
5. "THE IMPACT OF SOCIAL JUSTICE, LEADERSHIP SKILLS, AND TEAM BUILDING OF AFTER SCHOOL PROGRAMS ON ACADEMIC ACHIEVEMENT, CRIME AND VIOLENCE IN URBAN COMMUNITIES IN CHICAGO," Bianka Sikaffy, Social Work, Angel Resto\*, Social Work
6. "THE GREENWOOD PREVENTION GROUP: IT'S IMPACT ON EDUCATION, THE USE OF CANNABIS AND PRESCRIPTION DRUG ABUSE, AND THE PREVALENCE OF VIOLENCE OF LOW INCOME HISPANICS IN GLENVIEW, ILLINOIS," Brittany Frankel (Social Work), Angel Resto\*, Social Work
7. "TURNOVER RATE AMONG CHILD WELFARE CASEWORKERS," Charles R. Reinke (Social Work), Job Ngwe\*, Social Work
8. "TOO HAPPY TO BE ANGRY," Fatima Amin, Ana Cintron, Dean Warren Northern, and Luz Rosales (Psychology), Shannon Saszik\*, Psychology
9. "UNDERSTANDING THE INVOLVEMENT OF TPR-1 IN PROTEIN MAINTENANCE AND CELLULAR PROTECTION IN *C. ELEGANS*," DeElegant Robinson, Edith Morales, and Marc Brehme (Biology), Cindy Voisine\*, Biology
10. "AMYOTROPHIC LATERAL SCLEROSIS IN *C. ELEGANS*: THE EFFECTS OF TDP-43 EXPRESSION ON NEURONAL HEALTH," Emily Rendleman (Biology), Cindy Voisine\*, Biology
11. "METHOD DEVELOPMENT FOR THE DETERMINATION OF NYMALIZE (NIMODIPINE) RAW MATERIAL BY USING REVERSED- PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY," Enas Almughmisi (Chemistry), John Albazi\*, Chemistry

12. "REVICITIMIZATION OF CHILD ABUSE," Erynn A. Besser (Psychology), Alvin David Farmer, Jr.\*, Psychology
13. "POTENTIAL PARAMETERS THAT PREDICT CARDIOVASCULAR EFFECTS OF DRUGS," Grace Xiyu Wang (Chemistry), Cheryl Kordik\*, Department of Chemistry, McHenry County College
14. "CAN ABUSERS OF DOMESTIC VIOLENCE BE REHABILITATED?," Jadhira Sanchez (Social Work), Jin Kim\*, Social Work
15. "EFFECT OF SEROTONIN LEVELS ON AGGRESSION," Alicia M. Aleman, Jared T. Needham, Douglas M. Nowik, Dalia M. Salgado and Carmen Verastique (Psychology), Shannon Saszik, Psychology
16. "METHOD DEVELOPMENT AND VALIDATION OF SYNTHESIZED OXCARBAZEPINE AND ITS DEGRADANTS USING REVERSE PHASE LIQUID CHROMATOGRAPHY," Eyup Zengin (Chemistry), John Albazi\*, Chemistry
17. "MENTAL HEALTH AND ECONOMIC SELF-SUFFICIENCY IN REFUGEES LIVING IN CHICAGO," Jenessa Ramos (Social Work), Angel Resto\*, Social Work
18. "TRANSMISSION OF STRIGEIDAE (PLATYHELMINTHES: TREMATODA) IN WISCONSIN AND ILLINOIS FRESHWATER PONDS," Jennifer E. Kawaguchi, Olivia N. Choi and Robert C. Jadin (Biology), Sarah A. Orlofske\*, Biology
19. "THE EFFECTIVENESS OF THE GIRLS IN THE GAME PROGRAM ON HEALTH, LEADERSHIP, AND SPORTS OF FEMALE TEENS IN CHICAGO," Joanna Kosiba (Social Work), Angel Resto\*, Social Work
20. "CULTURAL BARRIERS AND COLLEGE READINESS: THE CASE OF LATINO YOUTH IN CHICAGO," Lucia Munoz (Social Work), Angel Resto\*, Social Work
21. "METHOD DEVELOPMENT AND VALIDATION OF TRAZODONE HYDROCHLORIDE WAS DONE TO ASSAY ACTIVE INGREDIENT AND TO DETERMINE THE IMPURITIES AND DEGRADANTS IN THE TRAZODONE HYDROCHLORIDE DRUG PRODUCT USING REVERSED PHASE-LIQUID CHROMATOGRAPHY," Mohammed Nizamuddin Syed (Chemistry), John Albazi\*, Chemistry
22. "LIVING ARRANGEMENTS, LIFE TRANSITION, TYPE OF DISABILITY, AND CAREGIVER STRESS," Madelein Flores (Social Work), Jin Kim, Social Work
23. "CHILDREN'S VIEW OF FAMILY ACTIVITIES: A CROSS CULTURAL EXAMINATION OF THEIR DRAWINGS," Marla Jean Douma (Psychology), Saba Ayman-Nolley\*, Psychology
24. "AGGRESSION AND SEROTONIN LEVELS IN ZEBRAFISH," Melanie Allen, David Follick, Sanja Veljkovic, Nikolay Gantchev and Tony Shajan (Psychology), Shannon Saszik\*, Psychology
25. "A CORRELATIONAL STUDY ABOUT RESIDENTIAL SERVICES AVAILABLE TO YOUTH WITH COGNITIVE IMPAIRMENTS AND DEVELOPMENTAL DELAYS AND ITS IMPACT ON PHYSICAL AGGRESSIVE BEHAVIOR," Michelle Mallari (Social Work),



Angel Resto\*, Social Work

26. "MOTIVATIONAL INTERVIEWING AND THE IMPACT ON SKILL AND KNOWLEDGE OF STAFF MEMBERS AT SUPPORTIVE HOUSING PROVIDER IN CHICAGO," Nicole Thrasher (Social Work), Angel Resto\*, Social Work
27. "BACTERIOPHYTOCHROMES AND LIGHT-CONTROLLED MORPHOGENESIS IN MYXOBACTERIA," Phu Duong, Angela Nugent, Kevin D. Gallagher, Dorina Bizhga, Patricia Waltz and James Hopkins (Biology), Emina A. Stojkovic\*, Biology
28. "MODELING AMYOTROPHIC LATERAL SCLEROSIS IN C ELEGANS: EVALUATING HOW TDP-43 EXPRESSION IMPACTS MOTOR AND SENSORY NEURON FUNCTION," Quan Nguyen (Biology), Cindy Voisine\*, Biology
29. "AFTER-SCHOOL PROGRAMMING IMPACT ON GIRL'S SELF-CONFIDENCE, SELF-ESTEEM, & BODY IMAGE IN CHICAGO, ILLINOIS," Reena Christian (Social Work), Angel Resto\*, Social Work
30. "INNOVATION IN MICROSATELLITE CATALOGUING: FINDING MARKERS IN MIDWESTERN CATTAILS (TYPHA SPECIES)," Rivka Strauss (Computer Science/Biology), Courtney Moran (Biology), Pamela Geddes\*, Biology, Joel Olfelt\*, Biology, Rachel Trana\*, Computer Science, Francisco Iacobelli\*, Computer Science
31. "THE DECADE OF GREEN," Genesis C. Reyes and Nicole Thomas (Geography and Environmental Studies), Sahreen Ali (Accounting), Robyn Flakne\*, Geography and Environmental Studies
32. "TRAJECTORY OF CHANGE: QUANTIFYING 40 YEARS OF CHANGES IN SELECTED QUALITY OF LIFE INDICATORS," Susan R. Schwendener (Counselor Education), Charles Pistorio\*, Counseling in Clinical Mental Health
33. "RECIDIVISM, LACK OF EDUCATION, AND UNEMPLOYMENT: THE CASE OF EX-OFFENDERS IN CHICAGO," Tawana Pope (Social Work), Angel Resto\*, Social Work
34. "EFFECTS OF L-DOPA ON AGGRESSION IN ZEBRAFISH (DANIO RERIO)," Sandra L. Salas, Jocelynn Carey, Caitlyn Milheron, Peter Mun and Taylor Simpson (Psychology), Shannon Saszik\*, Psychology
35. "THE EFFECT OF DOPAMINE ON ZEBRAFISH BEHAVIOR," Wendy De Leon, (McNair Scholar), Cynthia Gonzalez, Alicia Murillo and Lea Weiner (Psychology), Shannon Saszik\*, Psychology
36. "THE EFFECT OF DISGUST ON MORAL JUDGMENT," Trevor Seaverns (Psychology/Philosophy), Amanda Dykema-Engblade\*, Psychology
37. "IMITATION OF MUSICAL INSTRUMENT PLAYING USING ELECTROMYOGRAPHY," Theodore E. Vogel-Wilson (Psychology), Linda Rueckert\*, Psychology
38. "THE ROLE OF MATH INSTRUCTION TO HELP SOLVE PROBLEMS," Urooj Fatima, Audrey Sampson, Caitlin Martinez, Dolores Hernandez and Ericka Maya (Psychology), Breckie Church\*, Psychology

39. "PALEODIETARY RECONSTRUCTION OF PARALOUATTA VARONAI THROUGH DENTAL WEAR ANALYSIS," Yesenia Taveras Cruz (Anthropology, McNair Scholar), Siobhán B. Cooke\*, Anthropology
40. "*CAENORHABDITIS ELEGANS* MODEL OF AMYOTROPHIC LATERAL SCLEROSIS: UNDERSTANDING THE ROLE OF TDP-43 EXPRESSION ON HSN MOTOR NEURON FUNCTION," Zelene J. Figueroa (Biology), Cindy Voisine\*, Biology
41. "PETROLEUM COKE AND ITS EFFECTS ON FRESH WATER," Israel Paramo and Ariel Ruiz (Chemistry, Morton College), Sara Helmus, Morton College
42. "METHOD DEVELOPMENT, DEGRADATION STUDY AND VALIDATION OF METOZOLV ODT (METOCLOPRAMIDE HYDROCHLORIDE) USING REVERSE PHASE HIGH PERFORMANCE LIQUID CHROMATOGRAPHY," Yating Wei (Chemistry), John Albazi\*, Chemistry
43. "DIABETES IN THE HISPANIC AND AFRICAN AMERICAN POPULATION," Maria Montoya, Kimberly Rodriguez, and Rehema Silas (Sullivan High School), Frances Evins\* and Patricia Murfay\*, Sullivan High School, Huseyin Colak\*, Educational Inquiry and Curriculum Studies
44. "ASTHMA IN CHICAGO," Adesijibomi Owoseni, Christian Lloyd (Sullivan High School), Frances Evins\* and Patricia Murfay\*, Sullivan High School, Huseyin Colak\*, Educational Inquiry and Curriculum Studies
45. "PHYSICS OF MUSIC," 24 students from Amundsen High School, Eman Sarhan\*, Amundsen High School and Huseyin Colak\*, Educational Inquiry and Curriculum Studies

**THE NEIU STUDENT RESEARCH & CREATIVE ACTIVITIES SYMPOSIUM IS THE SEVENTH-  
LONGEST RUNNING STUDENT SYMPOSIUM AMONG 53 UNIVERSITIES IDENTIFIED  
NATIONALLY**

1.	The 41st Annual Undergraduate Research Conference	New York University	April 24, 2015
2.	The 29th Annual Undergraduate Research Conference	University of Wisconsin-La Crosse	April 16-18, 2015
3.	The 27th Annual Undergraduate Research Conference	Butler University	April 10, 2015
4.	The 26th Annual Undergraduate Research, Scholarship and Creative Activities Conference	University of California, Davis	May 1-2, 2015
5.	26th Annual OSU Research Symposium and Research Scholar Conference	Oklahoma State University	February 18 20, 2015
6.	The 24th Annual NC State Undergraduate Research Symposium	North Carolina State University	April 14, 2015
7.	NEIU 23rd Annual Student Research and Creative Activities Symposium	Northeastern Illinois University	April 17, 2015
8.	The 22nd Annual Undergraduate Research Conference	Henderson State University	April 10-11, 2015
9.	The 22nd annual UCI Undergraduate Research Symposium	University of California Irvine	May 16, 2015
10.	The 22nd Annual Undergraduate and Graduate Research Symposium	Morgan State University	April 14, 2015
11.	The 21 <sup>st</sup> Annual Undergraduate Research Conference	University of Massachusetts Amherst	April 24, 2015
12.	The 21st Annual Undergraduate Science Research Symposium	College of William and Mary	April 21, 2015
13.	20 <sup>th</sup> Annual Student Conference for Research & Creative Arts	University of Houston-Clear Lake	April 13-16, 2015
14.	The 20th Annual Denman Undergraduate Research Forum	Ohio State University	March 25, 2015
15.	20 <sup>th</sup> Annual Research and Artistic Showcase	University of Minnesota Duluth	April 21, 2015
16.	The 18th Annual UW Undergraduate Research Symposium	University of Washington	May 15, 2015
17.	The 18th Annual Symposium for the Undergraduate Research	School of International Service, American University, Washington, DC	April 24, 2015
18.	The 18 <sup>th</sup> Annual Lake Forest College Student Symposium	Lake Forest College	April 7, 2015
19.	EWU 18th Annual Student Research & Creative Works Symposium	Eastern Washington University	May 15-16, 2015
20.	18 <sup>th</sup> Annual Student Research and Community Engagement Symposium	The University of Massachusetts Lowell	April 21, 2015
21.	MU 17th Annual Student Research Symposium	Manchester University	April 24, 2015
22.	The 17th Annual Symposium for the Undergraduate Research, Creative Endeavor, and Service-Learning	University of Wisconsin, Madison	April 16, 2015
23.	18th Annual Undergraduate Research Symposium	The University of Kansas	April 25, 2015
24.	17th Annual Undergraduate Research Symposium	Boston University	October 17 2014
25.	The 16th Annual Undergraduate Research Conference	The University of New Hampshire, Durham	April 10-25, 2015

26.	16th Annual Undergraduate Research Symposium	University of North Carolina-Chapel	April 15, 2015
27.	16th Annual Undergraduate Research Symposium	University of Florida	March 18, 2015
28.	14th Annual Undergraduate Research & Creativity Conference	Kutztown University of Pennsylvania	April 27, 2013
29.	The 18th Annual University of Minnesota Summer Undergraduate Research Symposium	University of Minnesota	August 7, 2014
30.	The 13th annual UMM Undergraduate Research Symposium	University of Minnesota Morris	April 18, 2015
31.	15th Annual Student Research Symposium	The University of Louisiana at Monroe	March 12, 2015
32.	14th Annual Undergraduate and Graduate Student Research Conference	Christopher Newport University	April 11, 2015
33.	The 11th Annual Symposium of Undergraduate Research and Public Service	Stanford University	April 25, 2015
34.	11 <sup>th</sup> Annual TAMUS Pathways Student Research Symposium	Texas A & M University at Galveston	November 8, 2013
35.	12th annual Undergraduate Research Conference	Boise State University	April 20202015
36.	The 2015 National Conference on Undergraduate Research (NCUR)	Virginia Polytechnic Institute	April 16-18, 2015
37.	11th Annual Undergraduate Research Conference	Missouri University of Science and Technology	April 15, 2015
38.	UA Student Innovation Symposium	The University of Akron	April 9 <sup>th</sup> , 2015
39.	The 8th Annual Undergraduate Research & Creativity Conference	The University of New Mexico, Albuquerque	April 10, 2012
40.	The 1th Annual Undergraduate Research Day	University of Houston	October 9, 2014
41.	The 10th Annual Undergraduate Research Conference	University of North Carolina at Chapel Hill	April 10-12, 2015
42.	10th Annual Undergraduate Research Spring Symposium	Georgia Institute of Technology	Wednesday, April 22, 2015
43.	The 9th Annual Undergraduate Research Conference	Virginia State University	March 27, 2015
44.	The 9 <sup>th</sup> Annual Utah Conference on Undergraduate Research (UCUR)	Utah State University	February 27, 2015
45.	9th Annual Summer Undergraduate Research Conference	The University of Iowa	July 30, 2014
46.	9th Annual Undergraduate Research Symposium	William Paterson University	Saturday, April 11, 2015
47.	The 9th Annual Symposium for the Undergraduate Research, Scholarship, and Creative Activity	University of California, Riverside	April 29-30, 2015
48.	8th annual SDSU Student Research Symposium (SRS)	San Diego State University	March 6, 2015
49.	8th Annual Undergraduate Research Day	Concord University	April 16, 2015
50.	The 8th Annual Undergraduate Research Conference	The University of Texas-Pan American	March 26-27, 2015
51.	7th Annual Northeast Undergraduate Research and Development Symposium	University of New England	March 7-8, 2015
52.	4th Annual MSU Denver Undergraduate Research Conference: A Symposium of Scholarly Works and Creative Projects	Metropolitan State University of Denver	May 1, 2015
53.	The 3rd Annual Georgia Undergraduate Research Conference	Columbus State University	November 14-15-2014

**The Symposium Committee would like to thank the following faculty members for serving as Presidents, Discussants, and/or Faculty Sponsors at the Twenty-Third Annual Student Research and Creative Activities Symposium:**

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## **ACKNOWLEDGEMENTS**

The symposium Steering Committee would like to express its sincere thanks to President Sharon Hahs, Provost Richard Helldobler, Vice President Melba Rodriguez, Vice President, Frank Ross, Dean Maureen Gillette, College of Education; Dean Michael Bedell, College of Business and Management; Dean Wamucii Njogu, College of Arts and Sciences, Dean Michael Stern, College of Graduate Studies and Research, and Dean Carlos Melian, Library for their enthusiastic support of the symposium.

The success of the symposium owes much to the Presenters and their Faculty Sponsors. They deserve special thanks.

We are greatly thankful to Ms. Cathie Anderson from the McNair Scholars Program for her tremendous help and assistance.

The Symposium Steering Committee would like to express its gratitude to the Office of Academic Affairs, Office of Institutional Advancement, and the College of Arts and Sciences for sponsoring the event.

## **MESSAGE FROM THE SYMPOSIUM STEERING COMMITTEE**

The committee has several objectives in organizing the Symposium:

1. To provide undergraduate and graduate students who are engaged in research and creative activities an opportunity to interact with each other and present their works before an audience of their peers,
2. To provide a forum for highlighting the research accomplishments and creative activities at Northeastern Illinois University.
3. To encourage students to participate in research and creative activities and to pursue graduate study.
4. To promote and strengthen collaboration in research and creative activities among students and faculty.
5. To enhance communication in areas of student research and creative activities among the College of Arts and Science, Business Management, Education and the College of Graduate Studies and Research.

The Committee hopes that you will enjoy the Symposium and share in the excitement of doing research and creative activities. We hope that you will look forward to participating in the 24<sup>th</sup> Annual Northeastern Illinois University Student Research and Creative Activities Symposium in 2016.