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Twenty-third Annual Student Research and Creative Activities Symposium - April 17, 2015

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Recommended Citation

Steering Committee, Symposium, "Twenty-third Annual Student Research and Creative Activities Symposium - April 17, 2015" (2015). *Student Research and Creative Activities Symposium 1993-2018*. 23. https://neiudc.neiu.edu/studentsymposium/23

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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. Hahs, 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," <u>Nicholas J. Langenberg</u> (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: <i>REPO MAN</i> , PUNK ROCK, AND CULT FILM CULTURE," <u>Benjamin van Loon</u> (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," <u>Francesca Miroballi</u> (Communication, Media and Theatre), Shayne Pepper*, Communication, Media, and Theatre
11:40 AM	"THE PERVERTED SPECTATOR," <u>Kathryn L. Hudson</u> , <u>Benjamin Arakawa</u> , (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 Stawiarski (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 Rezvanian, Accounting Business Law Finance
Discussants after break: Scott Hegerty, Economics

9:00 AM	"PREDICTING RETAIL THEFT USING ACCOUNTING, STATISTICS AND COMPUTER SCIENCE," <u>Daniel H Miller</u> (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," <u>John Muzzi</u> , <u>Jose Molina</u> and <u>Steven Barron</u> (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," <u>Lucas</u> <u>Haupt</u> (Economics), Michael Wenz*, Economics
11:00 AM	BREAK
11:20 AM	"ENERGY STORAGE INNOVATIONS," <u>George N. Mason</u> (Nontraditional Degree Programs-Economics), Richard Schwinn*, Economics
11:40 AM	"MONETARY POLICY AND THE TAYLOR RULE ACROSS COUNTRIES," <u>Javier Robles</u> , <u>Undarmaa Batkhuyag</u> and <u>Ernesto Perez</u> (Economics), Hardik A. Marfatia*, Economics
12:00 PM	"THE ILLINOIS SOLAR FIELD LP," <u>Michael Varga</u> (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

	Session 3			
12:20 PM	"THE PLEASURE OF GROWING OLD," <u>Peter Sipes</u> (Linguistics), Richard Hallett*, Linguistics			
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			
11:40 AM	"UNDOCUMENTED COLLEGE STUDENTS: AN ANALYSIS OF SELF- DETERMINATION AND THE PROCESSES OF RESILIENCE AND ACCULTURATION," <u>Krina R. Gandhi</u> (Social Work, University Honors Program), Jin Kim*, Social Work			
11:20 AM	"ADOLESCENTS' ATTITUDES TOWARDS SUICIDE," <u>Ebaa Wahdan</u> (Social Work), Jin Kim*, Social Work			
11:00 AM	BREAK			
10:20 AM	"THE EFFECTS OF PERSONALITY ON HEALTHY EATING HABITS AMONG PEOPLE EXPERIENCING HOMELESSNESS," <u>Lindzy N. Staples</u> (Social Work), Jin Kim*, Social Work			
10:00 AM	"CORRELATION BETWEEN MORTGAGE RE-DEFAULT RATES, LOSS OF EMPLOYMENT, AND FINANCIAL MANAGEMENT IN CHICAGO," <u>Kristin Warnock</u> (Social Work), Angel Resto*, Social Work			
9:40 AM	"THE IMPACT OF HOME DELIVERED MEALS PROGRAM ON SENIORS' SELF-SUFFICIENCY AND NUTRITION IN CHICAGO," <u>Ciara Smith (</u> Social Work), Angel Resto*, Social Work			
9:20 AM	"HIV MEDICAL REGIMEN ADHERENCE: A CORRELATIONAL STUDY ON DRUG AND ALCOHOL ABUSE," <u>Alfonso Trevino</u> (Social Work), Angel Resto*, Social Work			
	Work), Adam Messinger*, Justice Studies, Milka Ramirez*, Social Work			

Student Union 124

Presiding: Kristen Lee Over, English and University Honors Program Discussants before break: Tim Libretti, English Discussants after break: Ryan Poll, English

"BLOO ME? NO.": EVADING LACAN'S "BUTTON TIE" IN JOYCE'S 9:00 AM 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," <u>Aaron J. Leiva</u> (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," <u>Yazin S. Musa</u> (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," <u>Joshua D. Friedberg</u> (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," <u>Jeffrey B. O'Malley (</u> 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," <u>Jeffrey B. O'Malley</u> (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

"WHERE THE POPPIES GROW: AN ARCHIVAL STUDY OF PTSD IN THE US 9:00 AM 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 "EFFECT OF MUSIC ON PSYCHOLOGICAL RESILIENCY DURING A 9:40 AM FRUSTRATON TASK," Christopher R Jones (Psychology), Saba Ayman-Nolley* Psychology "THE EFFECT OF ANTIHISTAMINES ON CAFFEINE INDUCED ANXIETY IN 10:00 AM ADULT ZEBRAFISH," Annmarie M. Gilbert (Psychology), Shannon Saszik*, Psychology "CHROMATIC PROCESSES IN ON AND OFF PATHWAYS IN ZEBRAFISH 10:20 AM (DANIO RERIO), "Tony Shajan (Psychology), Shannon Saszik*, Psychology "THE EFFECT OF MATERNAL IMMUNE ACTIVATION ON FETAL 10:40 AM NEURODEVELOPMENT," Angelina Jaimes¹, Adrienne Antonson^{2*}, Shannon Saszik*1. Rodnev Johnson*2 ¹Department of Psychology, Northeastern Illinois University, Chicago, IL 60625 ²Department 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?," <u>Devin Louden</u> and <u>Lukasz Gorczynski</u> (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 "GESTURES IN INSTRUCTION: EFFECTS ON BILINGUAL STUDENTS" 12:00 PM 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

Ruekert*, Psychology

12:40 PM "THE EFFECT OF AGE AND ETHNICITY ON MORAL REASONING," <u>Michele S. Lee, Sephra Shoptz, Amer Y. Rustum</u> and <u>Hamid A. Rustum</u> (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® MOUSE," Renee A. Chellson¹, Russell J. Moskal^{1,2}, Robert L. Fidis¹, Siobhán B. Cooke*² and TK Puryear*^{1*}, ¹Mouse House Laboratory, Department of Biology, ²Department of Anthropology
- 9:20 AM "ANALYSIS OF THE EFFECTS OF PROLONGED NICOTINE EXPOSURE ON BEHAVIOR AND REPRODUCTION IN *DROSOPHILA MELANOGASTER*,"

 <u>Erene Mihalas-Sanchez</u> (Biology), Mary Kimble*, Biology
- 9:40 AM "RESPIRATORY PATTERNS IN PRAYING MANTISES," <u>Salim Patel</u>¹, <u>Christina Carrion</u>¹, <u>Arielle Greico</u>¹, <u>Emily Fioramonti</u>¹, <u>Greg Prete</u>¹, <u>Veronica Skitle</u>¹, Bart van Alphen*², Frederick Prete*¹, Aaron Schirmer*¹

 ¹Department of Biology, Northeastern Illinois University, Chicago Illinois 60625

 ²Department of Neurobiology and Physiology, Northwestern University, Evanston, II 60208
- 10:00 AM "IDENTIFICATION OF THE *PERIOD* GENE IN THE MANTODEA (PRAYING MANTIS)," <u>Greg Prete</u>, 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," <u>Sarah B. Whidden</u> and <u>Joseph J. Marsili</u> (Biology), <u>Luis L. Allende</u> (Biology, McNair Scholar), Joel Olfelt* and Pamela Geddes* Biology

- 11:40 AM "THE EFFECTS OF COMPETITOR-INDUCED PLASTICITY ON INTENSITY OF PARASITIC INFECTION," <u>Alejandra Villegas</u> and <u>Elisabeth Somchith</u> (Chemistry), Sarah A. Orlofske*, Biology
- 12:00 PM "THE DIVERSITY OF ECHINSOTOMES (PLATYHELMINTHES: TREMATODA) IN CHICAGOLAND AREA AQUATIC COMMUNITIES," <u>Eriberta R. Vasquez</u>, <u>Jennifer E. Kawaguchi</u>, <u>Olivia N. Choi</u> and <u>Robert C. Jadin</u> (Biology), Sarah A. Orlofske*, Biology
- 12:20 PM "UNIONID MUSSELS AS BIOINDICATORS IN AN URBAN STREAM," <u>Annie M. Harris</u> (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," <u>Brenna Dooley</u> (Biology), <u>Alexandra Gokee</u>
 (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 MIRTAZPINE 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," <u>Andrew Apals</u> (Chemistry), Dr. Jin Su*, Chemistry
- 10:20 AM "INNOVATION IN MICROSATELLITE CATALOGUING: FINDING MARKERS IN MIDWESTERN CATTAILS [*Typha* species]," <u>Rivka Strauss</u> (Biology), Courtney Moran (Biology, University Honors Program), Pamela Geddes*, Biology Joel Olfelt*, Biology, Rachel Trana*, Computer Science, Francisco

lacobelli*, Computer Science

10:40 AM	"DOMAIN STURCTURE OF BACTERIAL RED LIGHT PHOTORECEPTORS AS REVEALED BY ATOMIC FORCE MICROSCOPY," Rima Rebiai ¹ , Marie E. Kroeger ² , Zain Malik ¹ , Emina A. Stojković ² , Stefan Tsonchev ¹ , Kenneth T. Nicholson ¹ . Department of Chemistry, Department of Biology
11:00 AM	BREAK
11:20 AM	"STRUCTURE AND FUNCTION OF BACTERIOPHYTOCHROMES IN MYXOBACTERIA," <u>Chris Tong</u> ² , <u>Ayesha Mapara</u> ² , Kevin D. Gallagher ¹ , Phu Duong ¹ , Angela Nugent ¹ , James Hopkins ¹ , Patricia Waltz ¹ , Joseph Varela ¹ , and Emina A. Stojković* ¹ Department of Biology, ² Department of Chemistry
11:40 AM	"TOPIC MODELING USING POINTWISE MUTUAL INFORMATION," <u>John C. Hewitt</u> (Computer Science/Mathematics), Francisco Iacobelli*, Computer Science
12:00 PM	"THE HEXAHEXAFLEXAGON AND ITS ALGEBRAIC STRUCTURE," <u>Julien de Castelnau</u> (Mathematics), Peter Kimmel*, Computer Science, Tanya Cofer*, Mathematics
12:20 PM	"SMART MULTITASKING WITH SMARTPHONES," <u>Deena G. Rubin</u> (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," <u>Rukiye Ayyildiz</u> (Human Resource Development), Dr. Gabriel Cortez*, Educational Leadership and Development
- 9:20 AM "THE DIFFERENCE IN CLASSROOM INSTRUCTION VS. ONE ON ONE INSTRUCTION," <u>Caroline N. Gorte</u> and <u>Yvette Hernandez</u> (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," <u>Brandi E. Crawford</u>, <u>Nahi A. Lichtenstein</u> and <u>Edgar I. Torres</u> (Psychology), Breckie Church*, Psychology
- 10:20 AM "THE EFFECT OF AGE, SES, AND MOOD ON FOOD PREFERENCE," <u>Brittany</u>
 <u>J. Skorek, Renee M. Benjamin, Genesis N. Martinez, Kimberly Villalta</u> and <u>Maria N. Kolligris</u> (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," <u>Kathleen M. Nilles</u> and <u>Corina M. Vaccarello</u> (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," <u>Universal Prayther</u> (Health, Physical Education, Athletics, and Recreation, McNair Scholar), Jennifer. Banas^{1*}, 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," <u>Zohel</u>
 <u>Zabih, Angel Rivera</u>, and <u>Olivia Yousif</u> (Justice Studies), Adam M. Messinger*,
 Justice Studies
- 9:40 AM "LAW AND PUBLIC OPINION: AN INVESTIGATION THROUGH SAME-SEX MARRIAGE," <u>Joshua R. Einbinder</u> (Philosophy, University Honors Program), Daniel Milsky*, Philosophy
- "QUALITY OF WORK LIFE FOR PART-TIME FACULTY: A STUDENT RESEARCH PROJECT," <u>Jessica Alaniz</u>², <u>Joanna Gromow</u>¹, <u>Karina Lopez</u>², <u>Martin O'Brien</u>³, Adekunle Adebayo¹, Maranda Franks⁴, Rocio Garcia^{5, 6}, Juan Gonzalez^{1, 6}, Samantha Hernandez¹, Natalie Klimczak⁷, Marie Martin⁷, Ayuk Nfundoak^{8, 6}, Aldo Silvestre¹, Tomas Uriostegui⁵, Marcos Feldman*¹, ¹Sociology, ²Social Work, ³Nontraditional Degree Programs, ⁴Justice Studies, ⁵Latino and Latin American Studies, ⁶McNair Scholar, ⁷Psychology, ⁸Political Science
- 10:20 AM "THE STRUGGLE OF THE EX-OFFENDER AFTER TIME SERVED," <u>Joshua Brooks</u> (Justice Studies), T.Y. Okosun*, Justice Studies
- 11:00 AM BREAK
- 11:20 AM "SUDANESE REFUGEE EXPERIENCE: A TRUE STORY OF SURVIVAL AND STRUGGLE," <u>Peter M. Bul</u> (Political Science), Nancy A. Matthews*, Justice Studies and Women's & Gender Studies
- 11:40 AM "DISPUTING HATE CRIME LAWS," <u>Stephanie Modrzejewski</u>¹, Dyln Barkstrom, Psychology, Daria Latocha¹, Carmin Casales¹, Dominick Dworak¹, Zaim Zagora¹, Adam M. Messinger*¹, ¹Justice 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," <u>Paw Ku</u> (Justice Studies), <u>Sevtap Guldur</u> (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?," <u>Sukruthai Rojchanapradist</u> (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," <u>Ehsan Alatawi</u> (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), Shahrazad Mahootian*, Linguistics
12:40 PM	"HE 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

Presider: 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," <u>Blanca Hurley</u> (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," <u>Lenesha McGee</u> (Sociology), Christina Gomez*, Sociology and Latino & Latin American Studies
10:00 AM	"TRANSNATIONAL BRIDGES: IMPORTING DOMESTIC WORK," <u>Liliana</u> <u>Macias</u> (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," <u>David Lagunas (</u> 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 <i>LIKE SON</i> ," <u>Victoria E. Salsa</u> (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," <u>Esmeralda Mora Begres</u> (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," <u>Siobhan</u> <u>Moffitt</u> (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," <u>Alexis T. Kalady</u> (Psychology, University Honors Program), Christopher Merchant*, Psychology
- 3. "SYNTHESIS AND CHARACERTIZATION OF A BIOTIN-CONJUGATED PEPTIDE FOR STUDYING MECHANISM OF ISLET β-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," <u>Anna Kocheulova</u> (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," <u>Bianka Sikaffy</u>, 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," <u>Brittany Frankel</u> (Social Work), Angel Resto*, Social Work
- 7. "TURNOVER RATE AMONG CHILD WELFARE CASEWORKERS," <u>Charles R. Reinke</u> (Social Work), Job Ngwe*, Social Work
- 8. "TOO HAPPY TO BE ANGRY," <u>Fatima Amin</u>, <u>Ana Cintron</u>, <u>Dean Warren Northern</u>, and <u>Luz Rosales</u> (Psychology), Shannon Saszik*, Psychology
- 9. "UNDERSTANDING THE INVOLVEMENT OF TPR-1 IN PROTEIN MAINTENANCE AND CELLULAR PROTECTION IN C ELEGANS," <u>DeElegant Robinson</u>, <u>Edith Morales</u>, and Marc Brehme (Biology), Cindy Voisine*, Biology
- 10. "AMYOTROPHIC LATERAL SCLEROSIS IN *C. ELEGANS:* THE EFFECTS OF TDP-43 EXPRESSION ON NEURONAL HEALTH," <u>Emily Rendleman</u> (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. "REVICTIMIZATION OF CHILD ABUSE," <u>Erynn A. Besser</u> (Psychology), Alvin David Farmer, Jr.*, Psychology
- 13. "POTENTIAL PARAMETERS THAT PREDICT CARDIOVASCULAR EFFECTS OF DRUGS," <u>Grace Xiyu Wang</u> (Chemistry), Cheryl Kordik*, Department of Chemistry, McHenry County College
- 14. "CAN ABUSERS OF DOMESTIC VIOLENCE BE REHABILITATED?," <u>Jadhira Sanchez</u> (Social Work), Jin Kim*, Social Work
- 15. "EFFECT OF SEROTONIN LEVELS ON AGGRESSION," <u>Alicia M. Aleman, Jared T. Needham</u>, <u>Douglas M. Nowik</u>, <u>Dalia M. Salgado</u> and <u>Carmen Verastique</u> (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," <u>Jennifer E. Kawaguchi</u>, <u>Olivia N. Choi</u> and <u>Robert C. Jadin</u> (Biology), <u>Sarah A. Orlofske</u>*, Biology
- 19. "THE EFFECTIVENESS OF THE GIRLS IN THE GAME PROGRAM ON HEALTH, LEADERSHIP, AND SPORTS OF FEMALE TEENS IN CHICAGO," <u>Joanna Kosiba</u> (Social Work), Angel Resto*, Social Work
- 20. "CULTURAL BARRIERS AND COLLEGE READINESS: THE CASE OF LATINO YOUTH IN CHICAGO," <u>Lucia Munoz</u> (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," <u>Madelein Flores</u> (Social Work), Jin Kim, Social Work
- 23. "CHILDREN'S VIEW OF FAMILY ACTIVITIES: A CROSS CULTURAL EXAMINATION OF THEIR DRAWINGS," <u>Marla Jean Douma</u> (Psychology), Saba Ayman-Nolley*, Psychology
- 24. "AGGRESSION AND SEROTONIN LEVELS IN ZEBRAFISH," <u>Melanie Allen, David Follick, Sanja Veljkovik, Nikolay Gantchev</u> and <u>Tony Shajan</u> (Psychology), Shannon Sazik*, 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," <u>Nicole Thrasher</u> (Social Work), Angel Resto*, Social Work
- 27. "BACTERIOPHYTOCHROMES AND LIGHT-CONTROLLED MORPHOGENESIS IN MYXOBACTERIA," <u>Phu Duong</u>, <u>Angela Nugent</u>, <u>Kevin D. Gallagher</u>, <u>Dorina Bizhga</u>, <u>Patricia Waltz</u> and <u>James Hopkins</u> (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," <u>Genesis C. Reyes</u> and <u>Nicole Thomas</u> (Geography and Environmental Studies), <u>Sahreen Ali</u> (Accounting), Robyn Flakne*, Geography and Environmental Studies
- 32. "TRAJECTORY OF CHANGE: QUANTIFYING 40 YEARS OF CHANGES IN SELECTED QUALITY OF LIFE INDICATORS," <u>Susan R. Schwendener</u> (Counselor Education), Charles Pistorio*, Counseling in Clinical Mental Health
- 33. "RECIDIVISM, LACK OF EDUCATION, AND UNEMPLOYMENT: THE CASE OF EX-OFFENDERS IN CHICAGO," <u>Tawana Pope</u> (Social Work), Angel Resto*, Social Work
- 34. "EFFECTS OF L-DOPA ON AGGRESSION IN ZEBRAFISH (DANIO RERIO)," <u>Sandra L. Salas</u>, <u>Jocelynn Carey</u>, <u>Caitlyn Milheron</u>, <u>Peter Mun</u> and <u>Taylor Simpson</u> (Psychology), Shannon Saszik*, Psychology
- 35. "THE EFFECT OF DOPAMINE ON ZEBRAFISH BEHAVIOR," <u>Wendy De Leon</u>, (McNair Scholar), <u>Cynthia Gonzalez</u>, <u>Alicia Murillo</u> and <u>Lea Weiner</u> (Psychology), Shannon Saszik*, Psychology
- 36. "THE EFFECT OF DISGUST ON MORAL JUDGMENT," <u>Trevor Seaverns</u> (Psychology/Philosophy), Amanda Dykema-Engblade*, Psychology
- 37. "IMITATION OF MUSICAL INSTRUMENT PLAYING USING ELECTROMYOGRAPHY," <u>Theodore E. Vogel-Wilson</u> (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," <u>Yesenia Taveras Cruz</u> (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," <u>Yating Wei</u> (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," <u>Adesijibomi Owoseni</u>, <u>Christian Lloyd</u> (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 ACTVITIES 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
۷.	The 27th Annual Undergraduate Research	Offiversity of Wisconsin-La Crosse	Αριίι 10-10, 2013
3.	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
	26th Annual OSU Research Symposium and	,	February 18 20,
5.	Research Scholar Conference	Oklahoma State University	2015
	The 24th Annual NC State Undergraduate	Next Cooking Otata Heimaki	A
6.	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
• •	The 22nd Annual Undergraduate Research	Trefridaeterr immele erintereity	7.01117,2010
8.	Conference	Henderson State University	April 10-11, 2015
	The 22nd annual UCI Undergraduate Research		
9.	Symposium The 22nd Annual Undergraduate and Graduate	University of California Irvine	May 16, 2015
10.	Research Symposium	Morgan State University	April 14, 2015
	The 21 st Annual Undergraduate Research		
11.	Conference	University of Massachusetts Amherst	April 24, 2015
40	The 21st Annual Undergraduate Science	C II (14/11)	4 1104 0045
12.	Research Symposium	College of William and Mary	April 21, 2015
13.	20 th Annual Student Conference for Research & Creative Arts	University of Houston-Clear Lake	April 13-16, 2015
	The 20th Annual Denman Undergraduate		
14.	Research Forum	Ohio State University	March 25, 2015
15.	20 th Annual Research and Artistic Showcase	University of Minnesota Duluth	April 21, 2015
	The 18th Annual UW Undergraduate Research		
16.	Symposium	University of Washington	May 15, 2015
	The 18th Annual Symposium for the	School of International Service,	
17.	Undergraduate Research	American University, Washington, DC	April 24, 2015
10	The 18 th Annual Lake Forest College Student	Lake Forest College	April 7 2015
18.	Symposium EWU 18th Annual Student Research & Creative	Lake Forest College	April 7, 2015
19.	Works Symposium	Eastern Washington University	May 15-16, 2015
10.	18 th Annual Student Research and Community	The University of Massachusetts	Way 10 10, 2010
20.	Engagement Symposium	Lowell	April 21, 2015
21.	MU 17th Annual Student Research Symposium	Manchester University	April 24, 2015
	The 17th Annual Symposium for the	Í	, ,
	Undergraduate Research, Creative Endeavor,		
22.	and Service-Learning	University of Wisconsin, Madison	April 16, 2015
23.	18th Annual Undergraduate Research Symposium	The University of Kansas	April 25, 2015
	17th Annual Undergraduate Research	The control of the co	= 0, = 0 10
24.	Symposium	Boston University	October 17 2014
05	The 16th Annual Undergraduate Research	The University of New Hampshire,	A
25.	Conference	Durham	April 10-25, 2015

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	16th Appual Indorgraduata Daggarah		
26.	16th Annual Undergraduate Research Symposium	University of North Carolina-Chapel	April 15, 2015
20.	16th Annual Undergraduate Research	Oniversity of North Carolina Onaper	April 10, 2010
27.	Symposium	University of Florida	March 18, 2015
	14th Annual Undergraduate Research &	- Chirolony of Frontag	111011110, 2010
28.	Creativity Conference	Kutztown University of Pennsylvania	April 27, 2013
	The 18th Annual University of Minnesota		,
29.	Summer Undergraduate Research Symposium	University of Minnesota	August 7, 2014
	The 13th annual UMM Undergraduate Research	•	
30.	Symposium	University of Minnesota Morris	April 18, 2015
31.	15th Annual Student Research Symposium	The University of Louisiana at Monroe	March 12, 2015
	14th Annual Undergraduate and Graduate		
32.	Student Research Conference	Christopher Newport University	April 11, 2015
	The 11th Annual Symposium of Undergraduate		,
33.	Research and Public Service	Stanford University	April 25, 2015
	11 th Annual TAMUS Pathways Student Research		
34.	Symposium	Texas A & M University at Galveston	November 8, 2013
	12th annual Undergraduate Research		
35.	Conference	Boise State University	April 20202015
	The 2015 National Conference on		
36.	Undergraduate Research (NCUR)	Virginia Polytechnic Institute	April 16-18, 2015
07	11th Annual Undergraduate Research	Missouri University of Science and	A '145 0045
37.	Conference	Technology	April 15, 2015
38.	UA Student Innovation Symposium	The University of Akron	April 9 th , 2015
	The 8th Annual Undergraduate Research &	The University of New Mexico,	
39.	Creativity Conference	Albuquerque	April 10, 2012
40.	The 1th Annual Undergraduate Research Day	University of Houston	October 9, 2014
	The 10th Annual Undergraduate Research	University of North Carolina at Chapel	
41.	Conference	Hill	April 10-12, 2015
	10th Annual Undergraduate Research Spring		Wednesday, April
42.	Symposium	Georgia Institute of Technology	22, 2015
40	The 9th Annual Undergraduate Research	Vincinia Otata I Ini vansitu	Manak 07 0045
43.	Conference The 9 th Annual Utah Conference on	Virginia State University	March 27, 2015
44.	Undergraduate Research (UCUR)	Utah State University	February 27, 2015
44.	9th Annual Summer Undergraduate Research	Otan State Oniversity	rebluary 21, 2015
45.	Conference	The University of Iowa	July 30, 2014
- 10.	Comerciae	The oniversity of lower	Saturday, April 11,
46.	9th Annual Undergraduate Research Symposium	William Paterson University	2015
_	The 9th Annual Symposium for the		
	Undergraduate Research, Scholarship, and		
47.	Creative Activity	University of California, Riverside	April 29-30, 2015
	8th annual SDSU Student Research Symposium		
48.	(SRS)	San Diego State University	March 6, 2015
49.	8th Annual Undergraduate Research Day	Concord University	April 16, 2015
	The 8th Annual Undergraduate Research	The University of Texas-Pan	March 26-27,
50.	Conference	American	2015
	7th Annual Northeast Undergraduate Research		
51.	and Development Symposium	University of New England	March 7-8, 2015
	4th Annual MSU Denver Undergraduate		
	Research Conference: A Symposium of	Metropolitan State University of	
52.	Scholarly Works and Creative Projects	Denver	May 1, 2015
	The 3rd Annual Georgia Undergraduate	Calumbus Otata History	November 14-15-
53.	Research Conference	Columbus State University	2014

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

Ai-Ru Yen

A. David Farmer, Jr. Aaron Schirmer Adam Messinger

Aimee Hilado Villalpando Amanda Dykema-Engblade

Ana Fraiman Andrew Brake Angel Resto

Angela Vidal-Rodriguez

Audrey Natcone
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Christopher Owen
Chunwei Xian
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Shahrzad Mahootian Shannon Saszik Shayne Pepper Shelley Bannister Siobhan Cooke Sylvia Atsalis Tim Libretti T.Y. Okosun Tanya Cofer Terrence Puryear Therese Schuepfer Toshikazu Foley William Sieger

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 24th Annual Northeastern Illinois University Student Research and Creative Activities Symposium in 2016.