



**April 7, 2016**

**LSU**

**Discover**  
Undergraduate Research

Discovery ◉ Creativity ◉ Research

# Welcome to LSU Discover Day 2016!

LSU Discover Day is a university-wide undergraduate showcase that provides a platform for students from all disciplines to share their research and creative projects with the entire university. Student presentations include posters, visual art exhibitions, oral presentations and performances. This event allows the LSU community a chance to publicize and reflect on campus-wide undergraduate student success in discovery, creativity, and research.

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## Schedule of Events

<u>Time</u>	<u>Event</u>	<u>Location</u>
9:00-11:00 a.m.	Oral Presentations	Vieux Carré 325 Red River Room 323 Capital Chamber 329 LSU Student Union
9:00 a.m.-1:30 p.m.	Poster & Visual Display Preview	Royal Cotillion Ballroom LSU Student Union
1:30-3:30 p.m.	Poster & Visual Display Presentations <i>[Student Researchers in Attendance]</i>	Royal Cotillion Ballroom LSU Student Union
4:00 p.m.	Awards Ceremony	Royal Cotillion Ballroom LSU Student Union
5:00-6:30 p.m.	Keynote Address by Astronaut Al Worden* <i>Awarding of two student astronaut scholarships</i>	Nicholson 130 Nicholson Hall
7:00-9:00 p.m.	Performances	Choral Room 115 LSU School of Music

*\*Al Worden received a Bachelor of Military Science degree from the United States Military Academy at West Point, New York, in 1955, Master of Science degrees in Astronautical/Aeronautical Engineering and Instrumentation Engineering from the University of Michigan in 1963, and an honorary doctorate of science in Astronautical Engineering from the University of Michigan in 1971. Worden served as command module pilot for Apollo 15 in 1971, the fourth manned lunar landing mission. In all, Worden logged 295 hours and 11 minutes in space.*

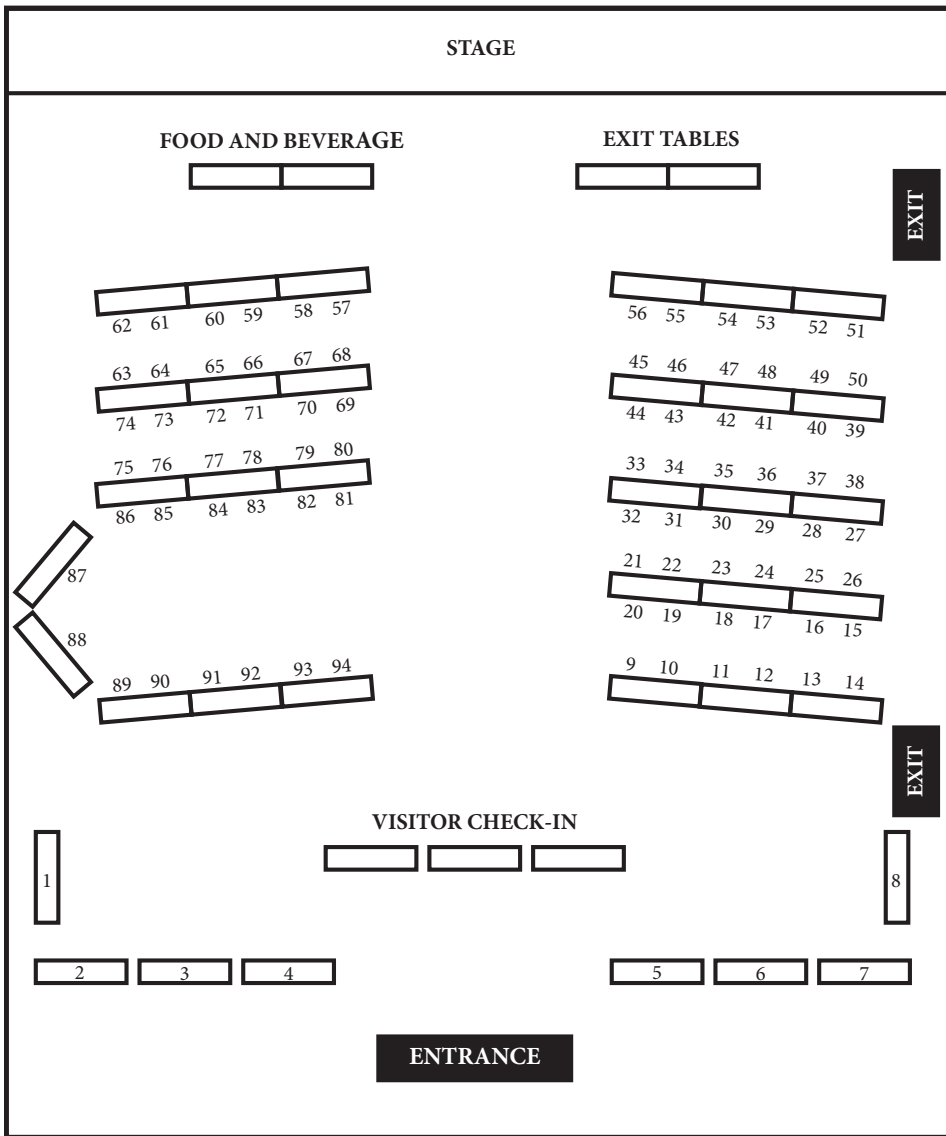
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## About LSU Discover

LSU Discover, a program under the LSU Office of Academic Affairs, promotes and supports undergraduate research and creative opportunities to students from all disciplines at LSU. With a focus on information literacy, original ideas, research methods, research ethics, and communication, the LSU Discover program strives to provide a supportive environment where all undergraduate students can engage in mentored scholarship, original research, and creative endeavors.

To learn more about LSU Discover, visit the website at [lsu.edu/discover](http://lsu.edu/discover).

# Royal Cotillion Ballroom Map



**POSTERS**

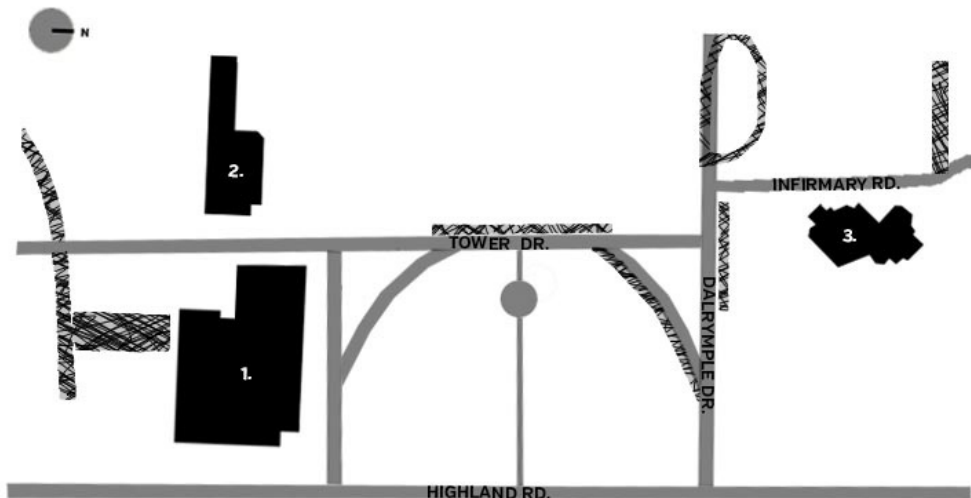
- College of Human Sciences and Education: #9-23
- School of Veterinary Medicine: #24
- College of Science: #25-47
- College of Humanities and Social Science: #48-56
- College of Agriculture: #57-69
- College of the Coast and Environment: #70-73
- College of Engineering: #74-84
- College of Art and Design: #87-88

**Undergraduate Research  
Program Information Tables: #1-8**

**DISPLAYS**

- College of Humanities and Social Science: #89
- Manship School of Mass Communication: #90
- College of Art and Design: #91-94

# Campus Map



## LEGEND

- 1. LSU Student Union
- 2. Nicholson Hall
- 3. School of Music Building
- Visitor Parking

# POSTERS & VISUAL DISPLAYS

9:00 a.m. - 3:30 p.m. | Royal Cotillion Ballroom – LSU Student Union

## College of Agriculture

#	Student	Title	Mentor
69	Ryan Ardoin & Anawin Kitpowsong	Emotion and Purchase Intent of Mayonnaise-Type Spreads as Affected by Nutrient Claims for Sodium (Low Sodium, Reduced Sodium, and Sodium Free)	Witoon Prinyawiwatkul
63	Katie Bowes	Widgeongrass Growth and Biomass Allocation in Response to Different Salinity Regimes	Eva Hillmann
60	Brittany Craft <sup>S</sup>	Whole Grain Willingness Questionnaire: Development of an Instrument to Examine College Students' Willingness to Consume Whole Grains	Georgianna Tuuri
68	Frances Crawford	Holocene Deltaic Stratigraphy in Barataria Bay, Louisiana	Samuel Bentley
57	Abigail DeRouen <sup>H</sup>	Determining the Amino Acid Sequence of Prolactin in <i>Procyon lotor</i>	Donald Thompson
64	Jace Hood	Predator and Foraging Cues in the Thinstripe Hermit Crab ( <i>Clibanarius vittatus</i> )	Julie Lively
67	Haley Hutchins	Characterizing the diversity of plant-associated <i>Colletotrichum</i> species in Louisiana	Vinson Doyle
66	Brianne Jones	Identifying a Protein Found in Formosan (Soldier) Termites using SDS PAGE and the Zymograph Method	Roger Laine
58	Samantha Lanjewar <sup>H</sup>	Feasibility of Whole Genome Amplification of Lysed Cells from Embryo Biopsies for Preimplantation Genetic Diagnosis	Kenneth Bondioli
59	Alison Mikes <sup>H</sup>	Development of a Transposon-based Vector to Express Large Quantities of Factor VIII	Richard Cooper
65	Emily Oakman	Post-Katrina Soil Salinity Sampling in Bayou Sauvage National Wildlife Refuge, Louisiana	Richard Keim
61	Scarlett Swindler	Novel Method for Rapid Detection of Human Norovirus GII in Oyster Harvesting Waters Using Zeolite Granules Coupled with Immunomagnetic Separation	Marlene Janes
62	Carly Thaxton <sup>H</sup>	Failure to Achieve Recommended $\omega$ -3 DHA Intake During Pregnancy: Nutrition Education Needed	Carol Lammi-Keefe

## College of Art & Design

#	Student	Title	Mentor
87	Christopher James <sup>H,S</sup>	Oystower: Monitoring Coastal Resilience	Jori Erdman
91	Jacob Lagasse	Duality of Femininity	Bri Ozanne
94	Lauren Taylor <sup>H</sup>	Harmonious Strife	Vincent Cellucci

**S** denotes LSU Discover Scholar

**H** denotes Honors College Student

# College of the Coast & Environment

<b>#</b>	<b><u>Student</u></b>	<b><u>Title</u></b>	<b><u>Mentor</u></b>
70	Davis Cowles <sup>H</sup> <sup>S</sup>	Characterizing Novel Alternative Splicing Isoforms of Critical Drug-Processing Genes in Mice	Vincent Wilson
71	Abbey Hotard <sup>H</sup>	Evaluating Biofilms in Drowning Marshes as a Factor in Wetland Recovery	Giulio Mariotti
72	Shannon Matzke <sup>H</sup>	Influence of Nutrient Availability and Sediment Supply on Productivity of <i>Spartina patens</i>	Tracy Quirk
73	Taylor Weakley	The Role of Ocean Acidification on Estuarine Phytoplankton Growth and Organic Contaminant Uptake	Sibel Bargu Ates

# College of Engineering

<b>#</b>	<b><u>Student</u></b>	<b><u>Title</u></b>	<b><u>Mentor</u></b>
76	Jeffery Anderson	Rapid Uptake and Ubiquitination of Fluorescent Peptides into Mammalian Cells Using a $\beta$ -Hairpin Sequence Motif	Adam Melvin
84	Ashley Curran <sup>H</sup>	Uncovering Novel Interactions of the MEC1 DNA Damage Response Protein, Hug1	Michael Benton
77	Thanh Dang	Accurate Adsorption Energies from Mainstream Density Functionals	Ye Xu
79	Lisa Goodgion <sup>H</sup>	Physical Modeling of Hurricanes: Towards Resilient and Sustainable Coastal Communities	Aly Aly Mousaad
80	Jamie Hamilton	Investigation of Wave Power for Shoreline Retreat Predictions	Navid Jafari
82	Kristopher Meche	Heat Transfer Simulation for Selective Laser Melting in Powder Layers	Shengmin Guo
74	Kurt Ristroph <sup>H</sup> <sup>S</sup>	Zein Nanoparticle Interaction with Soybean Plants	Cristina Sabliov
83	Ryan Ward	Implementing Nanotechnology within Super Capacitors to Improve Overall Performance	Manas Gartia
78	Kelly Yates	Detection of Alkaline Phosphatase Production by <i>C. Reinhardtii</i> in a Microfluidic Device	Adam Melvin

# Manship School of Mass Communication

<b>#</b>	<b><u>Student</u></b>	<b><u>Title</u></b>	<b><u>Mentor</u></b>
85	Katherine Campbell <sup>H</sup>	How Various Sources of Content on Social Networking Sites Influence Millennial Attitude Toward a Brand	Hyojung Park
86	Chris Handy <sup>H</sup> <sup>S</sup>	Depoliticizing Science: The Effect of Local Crises on Partisan Science Policy	Kathleen Searles

# College of Human Sciences & Education

#	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
20	Jasmine Abdalla	The Use of a Stylus in Different Planes and Feedback Configurations	Arend Van Gemmert
9	Whitney Amato	Increasing Phonemic Awareness using a Word Box Intervention	Cynthia DiCarlo
21	Taylor Amedee <sup>H</sup>	Interlimb Differences in Movement Accuracy in Darkness Vary with Handedness Laterality Scores in Right-Handers	Jan Hondzinski
10	Kelsey Brown	Increasing Letter Formation and Recognition Using Multi-Sensory Intervention	Cynthia Dicarlo
11	Allison Cutrera	Increasing Task Completion Using Positive Incentives	Cynthia DiCarlo
22	Audrey Demand	The Effects of the Mode of Copying a Text on Remembering its Content	Arend Van Gemmert
23	Zadie Franklin	The Influence of Physical Activity Sessions on Elementary Students' Academic Performance and Time on Task	Jennifer Curry
12	Molly Guidroz	Decreasing Socially Inappropriate Communication using Social Stories	Cynthia Dicarlo
13	Falen Johnson	Time Consuming Transitions	Cynthia DiCarlo
14	Nancy Leavines	Appropriate Sitting in the Whole Group Setting	Cynthia Dicarlo
15	Hayden Lyons	Increasing Handwriting Skills Using Fine Motor Dexterity Intervention	Cynthia DiCarlo
16	Kathleen Nguyen	Increasing Abilities to Write Numbers Using Multi-Sensory Interventions	Cynthia Dicarlo
17	Kayla Patton	Decreasing Aggressive Behavior Using Social Stories	Cynthia DiCarlo
18	Anne Pizzini	The Effects of Structured Choice in Participation of Centers	Cynthia DiCarlo
19	Avery Rodrigue	Using Letter Building to Increase Letter Recognition for Pre-Kindergarten Studentsx	Cynthia Dicarlo

# College of Humanities & Social Science

#	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
50	John Clawson <sup>H</sup>	Support for Preschool Expansion among Louisiana Adults	Belinda Davis
54	Elizabeth Coldwell	Mentorship Opportunities in Low Income Communities	Sarah Becker
51	Katherine Davis <sup>H</sup>	E-Cigarette Use in College Students with Problematic Drinking Behaviors: Validating the Electronic-Cigarette Attitudes Questionnaire	Amy Copeland
49	Amanda Kuylen	Uniqueness Point and Speech Planning in Adults Who Stutter	Geoffrey Coalson
89	Emily Palermo <sup>H</sup>	A Study in Creation	Vincent Cellucci
55	Haley Paulish <sup>H</sup>	Understanding Inequality in Special Education: A State-Level Analysis of High School Special Education Graduation Rates	Troy Blanchard
48	Ashley Pomes	An Oceanic Thermometer: Using Sr/Ca in <i>Siderastrea siderea</i> to Measure Sea-Surface Temperature Variability	Kristine DeLong
52	Shelby Stewart <sup>H</sup>	E-Cigarette Use Trends Among College-Aged, Problematic Drinkers	Amy Copeland
53	Karyn Warner <sup>H</sup>	The Effect of Highly Salient Pictures on Unfamiliar Face Matching Performance	Megan Papesh
56	Elizabeth Weltman <sup>H</sup>	LGBTQ Individuals' Experiences with Sexual Aggression in Public Drinking Settings	Sarah Becker

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# College of Science

<b>#</b>	<b>Student</b>	<b>Title</b>	<b>Mentor</b>
42	Megan Borel	Petrogenesis of Tertiary Granites in the Sawtooth Range, Idaho, USA	Barbara Dutrow
25	Madison Boudreaux <sup>H</sup>	Characterization of Ammonium Salt Toxicity in Cabbage Family Plants	Maheshi Dassanayake
26	Terri Cain	Paternally Expressed Gene 3 Binding Near Oxytocin Receptor Regulatory Region	Joomyeong Kim
44	Mark DiTusa <sup>H</sup>	Study of EPFRs on Metal Oxides; Benchtop Talks	Phillip Sprunger
27	Katherine Eagan	Play Streets for Safe Play	Robert Newton
46	Mary France <sup>H</sup>	Sequence the Campus Microbiome 2: Distribution and Diversity of Gut Microbes in Large Felids and Herbivores	Gary King
28	Brennan Howell	Bioluminescence in Shallow Water Fishes	Prosanta Chakrabarty
29	Matthew Johnson	A Survey of the SMR Gene Family in the Plant Kingdom, Using a Motif Oriented Search Tool	Maheshi Dassanayake
30	John Johnson <sup>H</sup>	Genetic Mechanisms of Salt Induced Flowering in the Halophyte <i>Schrenkiella parvula</i>	Maheshi Dassanayake
31	Nikka Khorsandi <sup>H</sup> <sup>S</sup>	Comparative Analysis of Alligator and Chicken Retinal Cells	Evanna Gleason
32	V. Celeste Lanclos	Cultivating Marine Microbes from Coastal Louisiana Using Fulvic Acids as the Sole Carbon Source	J. Cameron Thrash
33	Drake Leonard <sup>H</sup>	Towards a Better Understanding of Antiviral RNAi in <i>Caenorhabditis elegans</i> : Function Characterization of Loss of Antiviral RNAi alleles 1026A and 1026D	Rui Lu
34	Meagan Moore	Salted ChIPs: Regulation of ENaC in Vasopressin Neurons by Mineralcorticoid Receptor Modulated by Dietary Salt	Ryoichi Teruyama
35	Emily Nall <sup>H</sup>	Characterization of a Novel Bacterial Isolate from Louisiana Coastal Waters	J. Cameron Thrash
36	David Odenheimer	Expressing Individual Nopp140 Isoforms in the Gene Deletion Background	Patrick DiMario
37	Glynn O'Neill	Updating Fish Distributions Five Years After the Gulf of Mexico Oil Spill	Prosanta Chakrabarty
47	Grace Samson & Caitlin Billiot	Sequence the Campus Microbiome 1: Distribution and Diversity of Microbes in the Campus Environment	Gary King
45	Christopher Stansbury <sup>H</sup>	Testing the Photon Detection System for Deep Underground Neutrino Experiment	Thomas Kutter
38	Jacob Stover	Divergence and Fine Scale Population Structuring in Island-Mainland Populations	Jessica Oswald
39	Hayley Theriot	The Effects of Bedoukian Celery Extract on the Excystation of Sporocysts in Eight <i>Eimeria spp.</i> Found in Chickens	James Miller
40	Gregory Ware	Determining PAI-1 Metal Binding Residues Using a Metal Sensitivity Assay	Cynthia Peterson

# School of Veterinary Medicine

<b>#</b>	<b>Student</b>	<b>Title</b>	<b>Mentor</b>
24	Robert Walton	Three-Dimensional Imaging and Modeling of Canine Hip Dysplasia [CHD]	Mandi Lopez

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# ORAL PRESENTATIONS

9:00 - 11:00 a.m. | LSU Student Union – *Room as noted*

## Red River Room 323

Colleges Represented: *College of Science, College of the Coast & Environment, College of Agriculture, College of Engineering*

<u>Time</u>	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
9:00	Blake Kruger <sup>H</sup> <sup>S</sup>	Second Harmonic Generation Studies on Plasmonic Nanoparticles for Light-Mediated Drug Delivery	Louis Haber
9:15	Ryan Hoffman <sup>H</sup>	The Influence of Oil Exposure History and Population Genetic Variation on the Sensitivity of Gulf Killifish Embryos to Crude Oil	Fernando Galvez
9:30	David Fertitta <sup>H</sup>	Drifter-Based Predictions of the Spread of Surface Contamination Using Iterative Statistics: A Local Example with Global Applications	Vince Wilson
9:45	Christopher Peck	Checklist of the Fauna Beneath the Antarctic Ross Sea Ice Shelf	Prosanta Chakrabarty
10:15	Kelli Clemons <sup>H</sup>	Development of Mouse Melanoma Model to Evaluate Oncolytic Viral Therapy using VC-1 and OncSynD	Konstantin Kou-soulas
10:00	Ariel Bergeron <sup>S</sup>	The Lysine Requirement of 7 to 28 day old Bobwhite quail.	Theresia Lavergne
10:30	Mallory Garcia <sup>H</sup>	Can Parasitized Sheep Self-Medicating Through Preferred Consumption of <i>Sericea Lespedeza</i> ?	James Miller
10:45	Andrew Olivier <sup>H</sup>	Monte Carlo Study of the Pion Absorption and Charge Exchange Cross Section in LArIAT	Martin Tzanov
11:00	Evan Baynes	Worst Case Discharge	Paulo Waltrich

## Vieux Carré Room 325

College Represented: *College of Humanities & Social Sciences*

<u>Time</u>	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
9:15	Katelyn McCoy <sup>H</sup>	The Effect of Emotional Words and Sounds in Multidimensional Source Memory	Jason Hicks
9:30	Zach Miller <sup>H</sup>	Humanity, the Interplanetary Species: The Legality of Space Colonization	Leonard Ray
9:45	Collette Tilly <sup>H</sup>	The Effects of Levodopa on the Performance of Fine Motor Tasks in Individuals with Parkinson's Disease	Arend Van Gemmert
10:00	Samantha LeBouef	The Self-Presentation and Perception of College Students on Instagram	Joseph Givens
10:15	Marlee Pittman <sup>H</sup>	Syrian Refugees: Why We Can't Ignore Them and What To Do Once We've Admitted Them	Leonard Ray
10:45	Nicholas de Godoy Lopez <sup>H</sup>	A Typology of Pattern Books 1830-1930	Darius Spieth

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# Capital Chamber Room 329

Colleges Represented: *College of Humanities & Social Sciences, College of Human Sciences & Education,anship School of Mass Communication*

<u>Time</u>	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
9:00	Erin Fell <sup>H S</sup>	Tactile Manipulatives, Color Coding and Storytelling as Effective Strategies for Improving Second Language Fluency	Paula Calderon
9:15	Rory Boothe <sup>H S</sup>	'Ain't He A Beauty': Race, Sexuality, and Aesthetic Identities in American Literature and Film	Michael Bibler
9:45	Kristin White <sup>H</sup>	Corporate Social Responsibility (CSR) and Relationships	Hyojung Park
10:00	Lindsey Miller <sup>H</sup>	Measuring the Knowledge and Attitudes of the American Public in Regards to Military Sexual Trauma	Jensen Moore-Copple
10:15	Valencia Richardson <sup>H</sup>	Social media and the 2015 Louisiana Gubernatorial Race	Kathleen Searles
10:30	Brittany Clark	More Than Welfare Queens and Strong Black Women: African American Mothers in the Films Claudine and Precious	Angeletta Gourdine
10:45	JoLena Broussard <sup>H</sup>	A Content Analysis of Minority Representation In a Selection of Current College and University Viewbooks	Meghan Sanders
11:00	Lindsey Spillman <sup>H</sup>	Correcting Party Alignment and Effects on Third Party Support	Kathleen Searles

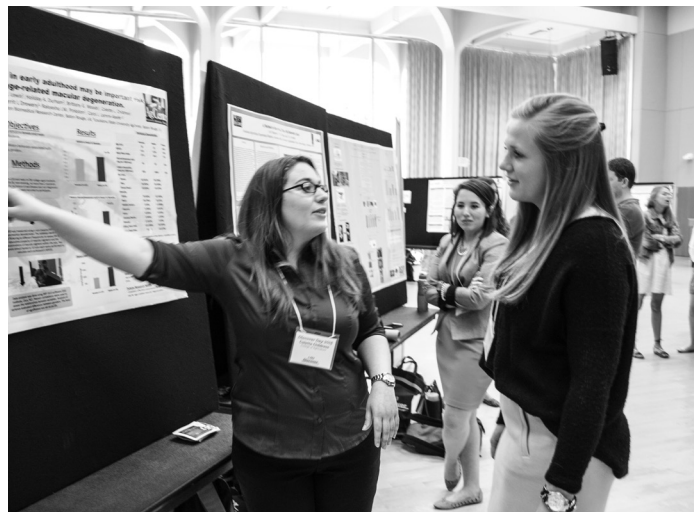
## PERFORMANCES

7:00 - 9:00 p.m. | School of Music – *Choral Room 115*

Colleges Represented: *College of Music & Dramatic Arts, College of Humanities & Social Sciences*

<u>Time</u>	<u>Student</u>	<u>Title</u>	<u>Mentor</u>
7:10	Daniel Davis & Cameron Clements	The Processes and Analysis of Mile Marker 78 by Nathan Tanouye	Joseph Skillen
7:30	Emily McCollister	Dinner at The Pompidou	Laura Mullen
7:50	Claire Wyly	A Dismantling	Sandra Parks

LSU Discover Day 2015



# Special Thanks

LSU Discover would like to give special thanks to all of the individuals and groups who contributed to the success of LSU Discover Day 2016. Special gratitude is extended to Dr. Gil Reeve, Associate Vice President for Academic Planning and Institutional Effectiveness and his staff: Stephenie Franks, Janet Newhall, Kim LeCompte, and Laura Mieki. Additional thanks to the LSU Discover Advisory Board co-chairs, Dr. Gloria Thomas, Executive Director for the Office of Strategic Initiatives, and Meghan Sanders, Associate Dean for Research and Strategic Planning for the Manship School of Mass Communication.

Warm thanks to faculty mentors for their hard work, dedication to students, and efforts to inspire the next great generation of researchers and creative thinkers.

## Thank You

### LSU Discover Advisory Board

Troy Blanchard, *College of Humanities & Social Sciences*  
Michael Blandino, *Ogden Honors College*  
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Gloria Thomas, *Office of Strategic Initiatives*  
Vince Wilson, *College of the Coast & Environment*  
Sheri Wischusen, *College of Science*

### LSU Olinde Career Center

### LSU Ogden Honors College

Student lunch and prizes generously provided by the LSU College of Science, through a Howard Hughes Medical Institute grant in the Undergraduate Biological Sciences Education Program.

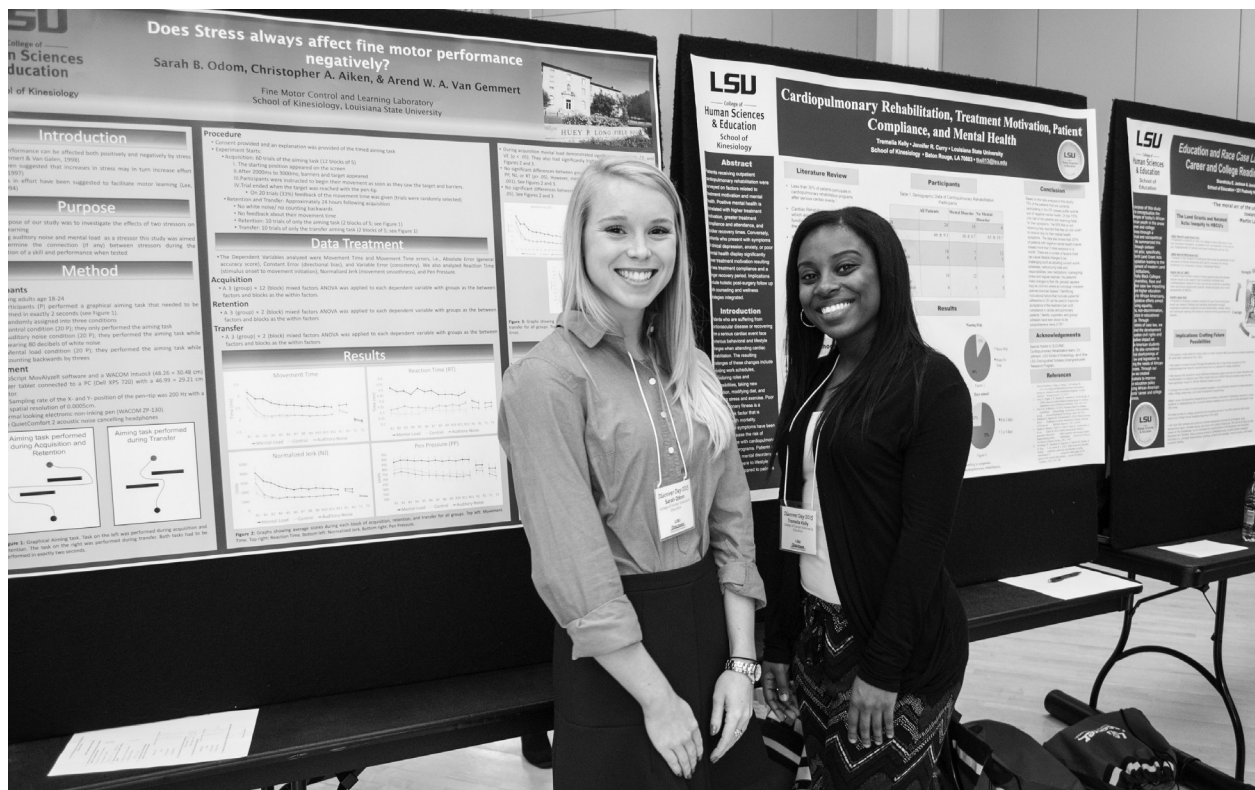
# LSU Discover Staff

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Atianna Cordova, *Student Worker*  
Hayley Theriot, *Student Worker*  
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Vince Wilson, *Director of Undergraduate Programs, School of Coast & Environment*  
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LSU Discover Day 2015



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