LSU

Discover

Undergraduate Research

DISCOVER DAY [2018]

LSU's Undergraduate Research & Creativity Symposium

APRIL 10, 2018

DISCOVER DAY 2018
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WELCOME TO LSU DISCOVER DAY 2018!

LSU Discover Day is a university-wide undergraduate symposium 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 displays, art exhibitions, and oral presentations. This event allows the LSU community a chance to publicize and reflect on campus-wide undergraduate student success in discovery, creativity, and research.

SCHEDULE OF EVENTS

Time	Event	Location
9:00-11:00 a.m.	**Poster Presentations & Visual Displays (3D Models, etc.)**	Royal Cotillion Ballroom *LSU Student Union*
	Art Show Presentations	Student Union Art Gallery *LSU Student Union*
1:00-4:00 p.m.	**Oral Presentations**	Vieux Carré 325 Red River Room 323 Capital Chamber 329 Castilian 304 Feliciana 208 *LSU Student Union*
4:00-5:00 p.m.	**Keynote Speech & Reception** *Keynote Speaker: Dr. Jesse Allison**	Atchafalaya Room 339 *LSU Student Union*

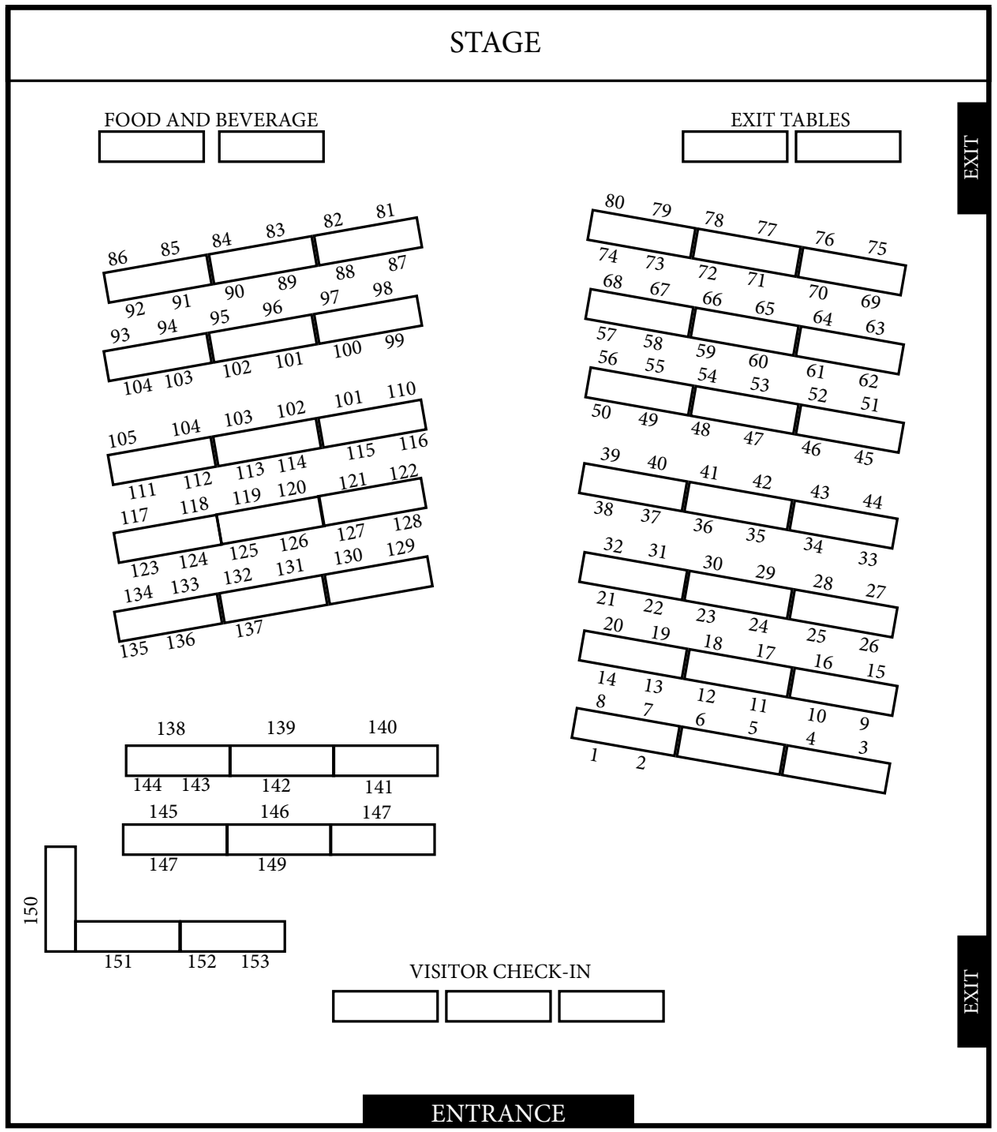
**Read more about our keynote speaker Dr. Jesse Allison (D.M.A., University of Missouri-Kansas City), on pg. 19*

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 research and creative endeavors.

To learn more about LSU Discover, visit lsu.edu/discover

ROYAL COTILLION BALLROOM MAP
POSTER & VISUAL DISPLAY PRESENTATIONS



POSTERS:
Coast and Environment: #1-9
Engineering: #10-33
Science: #34-80
Humanities and Social Sciences: #81-108
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VISUAL DISPLAYS:
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Business: #124-125
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POSTERS

9:00 - 11:00 a.m. | Royal Cotillion Ballroom – *LSU Student Union*

KEY

G | Undergraduate Research Grant recipient
T | Travel Stipend recipient
A | LSU Discover Research Ambassador
S | Discover Scholar awardee
N | University of New Orleans student
D | Dillard University student
UL | University of Louisiana at Lafayette
UM | Louisiana at Monroe
L | Southeastern Louisiana University student
M | Montgomery University student
V | Vanderbilt University student
Z | Zamorano University student
MS | University of Mississippi student
SU | Southeastern University A&M College
B | Baton Rouge Magnet High School student

* all students from LSU-BR unless otherwise noted

AGRICULTURE

#	Student	Title	Mentor
137	Giuliana Bays	Optimization of Homology-Directed Repair Efficiency for CRISPR/Cas9 Induced Genomic Editing in Porcine Fibroblast Cells	Kenneth Bondioli
135	Sara Berrezueta [Z]	The Development of a Rapid Method for Screening Soybean Cultivars for Resistance to Taproot Decline	Vinson Doyle
136	Skylar Bueche	Dissolved Oxygen Dynamics in Backwaters of North America's Largest River Swamp	Yi-Jun Xu
128	Benjamin Faucheux	Construction and Testing of Three DNA Vaccines against *S. javiana*	Richard Cooper
130	Mary France	Efficacy of Compound X (Bedoukian Research, Inc.) on Reducing Fecal Egg Count in Lambs	James Miller
129	Madison Hannan	Influence of Antimicrobial Spice on Dairy Culture Bacteria	Kayanush Aryana
131	Ian Moppert	Flax Seed Enhances Acid Tolerance of *Streptococcus thermophilus* ST-M5	Kayanush Aryana
132	Courtney Murr	Application of Hormones as a Potential Spawning Aid For A Species of Conservation Concern	Christopher Green
127	Hannah Tonry	Developing the Tools to Monitor Populations of *Cercospora* Species Associated with *Cercospora* Leaf Blight on Soybean	Vinson Doyle
134	Amy Turner w/ Mischael Daniel	Contributions of Lateral Hypothalamic Galanin Signaling to Feeding and Anxiety Behavior	Emily Qualls-Creekmore
126	Lesley Twiner [G]	Using ArcGIS to Compare Coastal Wetland Loss Between Managed and Unmanaged Sites	Maurice Wolcott
133	Caroline Winer	Examining Older Adults' Intrinsic Motivation and Perceived Competence to Cook	Georgianna Tuuri

MASS COMMUNICATION

#	Student	Title	Mentor
123	Katherine Gagliano [G]	When One Door Closes: The Evolution of Journalists' Gatekeeping Role	Joshua Grimm

ENGINEERING

#	Student	Title	Mentor
14	Joseph Balhoff	Biophysical Analysis on the Effects of Fluid Shear Stress on Cancer Cell Chemotaxis and Extravasation	Adam Melvin
13	Mark Behl	Parallel Computational Fluid Dynamics (CFD) Simulations for Modeling Slug Flow Experiment	Mayank Tyagi
15	Jacob Bursavich [S]	Catalytic Conversion of Trash into Useful Fuel Products Through Induction-Based Pyrolysis	Dorin Boldor
16	Joshua Campbell [T]	A Microfluidic Device to Characterize the Effect of Orthogonal Chemical Gradients on 3D Cancer Cell Migration	Adam Melvin
17	Riad Elkhanoufi	Design and Fabrication of a Triple-Input Microfluidic Droplet Trapping Array Towards Multiplexed Cancer Diagnostics	Adam Melvin
18	Madison Hasenkampf	Analysis of Water Bottle Filler Data and Prevented Greenhouse Gas Emissions around LSU Campus	Clinton Wilson
19	Olivia Hunt [G]	Slurry Fluorogypsum-Cement-Fly Ash Blends for Coastal Restoration Applications	Michele Barbato
20	Henry Kantrow	Hole-Mask Colloidal Nanolithography Using Tilted-Angle-Rotation Metal Evaporation: Decreasing Hole Size with Improved Monodispersity	Kevin McPeak
26	Layah Khalif	Identification of Breast Cancer Subtype Specific Response to Extracellular Matrix	Elizabeth Martin
24	Chandler Landrum [G]	Creating a Unified Model Database for the Adsorption Affinity of Uranium to a Variety of Natural and Artificial Adsorbents	Zimeng Wang
25	Grant Landwehr [T A]	Biophysical Analysis of Cellular Deformation Due to Fluid Shear Stress in a Microfluidic Device	Adam Melvin
23	Kloe Liner	The Integration of Sustainability into Industrial Engineering Education	Isabelina Nahmeus
22	Corey Matyas	Parallel Hybrid Optimization Algorithm for the Material Composition of Multilayer Thin-Film Structures	Georgios Veronis
21	Lindsay Miller	Evaluation of Extracellular Matrix Gene Expression as Predictive Markers of Breast Cancer Survival	Elizabeth Martin
32	Amy Morgan	Evaluating Three-Dimensional Cancer Cell Migration to Durotactic Cues in a Microfluidic Device	Adam Melvin
31	Robert Petras	Determining Gas Compositions from Live Well Fluids on an Oil Rig	Ipsita Gupta
30	Michael Quigley [G]	Gas Turbine Combustor	Shyam Menon
28	Jordan Remont	Cancer Cell Directed Matrix Remodeling by Adipose Derived Stem Cells and Fibroblasts Increase Cancer Cell Proliferation and Survivability	Elizabeth Martin
33	Katie Render [G T] w/ Jeffery Anderson	Microfluidic Co-Culture of Breast Cancer Cells and Adipose Stem Cells	Adam Melvin
29	Grace Rozanski	The Extracellular Matrix: A Target for Rejuvenating Aged Human Adipose-Derived Stem Cells	Elizabeth Martin
27	Matthew Thomas [S]	Aerodynamic Mitigation of Wind-Induced Loads on Low-Rise Buildings by Varying Parapet Height	Aly Mousaad Aly
10	Wayne Wortmann	Development of a Thiol-Acrylate-based Hydrogel for Tumor Spheroid Generation in a Microfluidic Device	Adam Melvin
11	Gyeong Min Yoo	Gold Nanoparticle-on-Oxide Surfaces for Plasmonic Water Purification	Kevin McPeak
12	Syed Zamin	Modulating Mechanical Properties of Extracellular Matrix Composites via Lignin Incorporation	Jangwook Jung

HUMAN SCIENCES & EDUCATION

#	Student	Title	Mentor
109	Stephanie Casnave	Affects of Bimanual Interference When Non-Dominant Hand Performs Continuous Movement and Dominant Hand Performs Discrete Movements	Nikita Kuznetsov
110	Emilee Delaune	Using Comprehension Aiding Strategies to Increase the ESL Student's Compliance to a Teacher's Directive in a Kindergarten-Aged Child	Cynthia DiCarlo
111	Madison Hopper	The Relationship Between Hand Use and the Direction of Handwriting	Arend Van Gemmert
112	Rachael Hunter w/ Laura Pivach	Readi-Steadi	Arend Van Gemmert
113	Briasha Jones [A]	Don't Watch What You're Doing: Cognitive-Motor Integration with the Dominant and Non-Dominant Hand	Arend Van Gemmert
114	Mallik Matthews	Neural Cross-talk Interference Causing Perturbation of Rhythmic Arm Due to Discrete Task	Nikita Kuznetsov
115	Madelyn Michael	Using a Literacy Based Behavioral Intervention to Increase Appropriate Social Responses in a Kindergarten Classroom	Cynthia DiCarlo
116	Kassidy Mueller	Using Movement to Increase Student Engagement in a Pre-Kindergarten Aged Child	Cynthia DiCarlo
118	Manjot Singh [G]	Effects of Aerobic and Resistance Exercise on Biomarkers of B-cell Function and Overall Inflammation in Patients with Type 2 Diabetes	Guillaume Spielmann
117	Autumn Smith	Using Multi-Sensory Activities to Increase Alphabetic Awareness in a Pre-Kindergarten-Aged Child	Cynthia DiCarlo
119	Emily Tagesen [UL]	The Relevance of Physical Fitness Tests in the United States Military	Jeremy Foreman
120	Maria Torregrossa	Increasing Hand Raising in Kindergarten-Aged Children Through Verbal Praise and Planned Ignoring	Cynthia DiCarlo
122	Logan Williams w/ Deja Vercher	Performing with a Wounded Brain? Eye-Hand Coordination in Children with Diabetes	Marc Dalecki
121	Briana Yancy	Atrial Septal Defect in a Collegiate-Level Athlete: Importance of Treatment Choice and Return-To-Play Protocol	Ralph Castle

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HUMANITIES & SOCIAL SCIENCE

#	Student	Title	Mentor
86	Madeline Allen	Stuttering Severity and Working Memory in Adults Who Stutter: Preliminary Findings	Geoffery Coalson
85	Lilly Cambre [A]	A Survey of Earthquake and Tsunami Protective Actions in Two Haitian Communities	Michelle Meyer
92	Niels Dickson w/ Samantha Knotts. Bryanna Jones	Lost in Translation: The Difference Between Interpreting Verbal and Numeric Information	Sean Lane
91	Alexis Dupuy w/ Anne Ardoin	Acoustic and Auditory-Perceptual Approach to Dysprosody in Children with Autism Spectrum Disorder	Daphne Hartzheim
84	Misty Ezejiofo	Compensation Negotiation and Hireability Behaviors of Minority Women in the Workplace	Jason Harman
90	Jane Fiegel	Reconstructing Ancient Lives Using 3D Technology	Heather McKillop
83	Faith Flugence [D]	Divorce Rate in Minority American Marriages After and Before the No-Fault Reform	Ashraf Esmail
89	Raleigh Goodwin	Communicating the Coastal Crisis: The Influence of Priming, Nudging, and Information Provision on Pro-Environmental Behavior	Jason Harman
82	Brandon Hamann [D]	Restorative Justice: The Effects of Criminal History on the College Application Process	Ashraf Esmail
88	Shannon Haynes [D]	Equitably Regulating the Exotic-Entertainment Industry	Ashraf Esmail
81	Jasmine Jones [D]	Homelessness in America	Ashraf Esmail
87	Elizabeth Joseph	Using Mobile Apps to Promote Preschoolers' Physical Activity: Perspectives of Parents and Childcare Center Directors	Amanda Staiano
93	Sarah King	Different Vowel Characteristics Found in Southern, Northern, and New Orleans Regions in Louisiana	Hyunju Chung
94	Katherine Lantier	Mothers Reinforce Anxiety in their Daughters: Associations Between Gender, Age, and the Functions of Child Anxiety	Thompson Davis
95	Anna Madden [TSA]	The Effect of Attention Bias Modification on Emotion Dysregulation	Steven Greening
96	Shane Martin [A]	A Comparison of Live Versus Web-Based Group Treatment for Weight Management	Phillip Brantley
97	Madeline Meyer [GA]	Get Weird: the Effect of Idea Presence and Comparison on Group Creativity	Jason Harman
98	Jasmine Mobley [N]	Mothers Report Elevated Separation Anxiety in Children with Chromosome 22q11.2 Deletion Syndrome	Elliot Beaton
104	Brittney Moore [N]	30 Years of Service: Creating Strong Communities in Southeast Louisiana through Homeownership and Financial Literacy	Michelle Thompson
103	Alison Poor	The Associations Between Callous-Unemotional Traits, Beliefs About the Future, and Offending in Justice-involved Adolescent Boys	Paul Frick
102	Hannah Richards w/ Kaitryana Leinbach	Connecting Maryland's Past to Louisiana's Present: The GU 272	Jennifer Cramer
101	Alexandria Rivera [D]	What are Black Women's Experiences of Losing Children Through Gun Violence?	Ashraf Esmail
100	Dylan Roberts	Indications of Interglobular Dentin in Ya'amun, Jordan	Teresa Wilson
99	Joneka Russell [D]	Marijuana Comes Out of the Closet!	Ashraf Esmail
105	Andrea Smith	White Noise on Executive Function in Individuals with ADHD	Scott Roye
106	Chrystalynn Turner [D]	Procedural Fairness of the Court's Consideration of Familial Responsibilities	Ashraf Esmail
107	Madeline Walker	The Impact of Value on Prospective Memory in Face Matching	Megan Papesh
108	Victoria Whiteside [D]	The 13th Amendment: How the Convict-Leasing System Exploited African Americans	Ashraf Esmail

SCIENCE

#	Student	Title	Mentor
75	Christopher Abadie [T]	Spatiotemporal Properties of Solid State Harmonics	Mette Gaarde
34	Osarumwense Adun [A]	Dual Rail Photon Interaction with Atoms	Jonathan Dowling
35	Ashley Augustus	Neural Activation Patterns Related to Maternal Care and Feeding State in the Mouth-Brooding Cichlid Fish, *Astototilapia burtoni*	Karen Maruska
36	Jeremy Baker	Examining Degenerative Joint Diseases in Horses Using a 3D Computer Model	Michelle Osborne
37	Augustus Bates [T]	Exploring the Origins of Putative Paterae in Northwest Arabia Terra, Mars	Suniti Karunatillake
38	Rory Bentley [T]	Searching For High Energy Stellar Systems at The Center Of The Milky Way	Robert Hynes
44	Evan Boatwright	Agmatine Supplementation Alleviates Pain from Early Intervertebral Disc Disease and Chronic Hip Dysplasia in Dogs	Mandi Lopez
43	Michael Brands	Cationic Ionic Liquid Surfactant-Polyacrylamide Gel Electrophoresis for Enhanced Glycoforms Separation	Isiah Warner
42	Maria Castellanos	Microbiomics: Canine Fecal Sequencing	Gary King
69	Sukarn Chokkara [V]	Investigating the Role of Upregulated NFκB in Neuropathy	Bruce Carter
70	Megan Davis [L]	Investigation of Dipole Bound Anions	Thomas Sommerfeld
76	Kathryn DeLeo	Expressing GFP-Coilin from its Endogenous Promoter in *Drosophila melanogaster*	Patrick DiMario
39	Amber DePoy	A Comparative Genomic Analysis of Extremely Halophilic Carbon Monoxide Oxidizers	Gary King
47	Charles Everhardt	The Origin of Winter Seiche Waves in the Frozen Yellowstone Lake in Regards to the Nature of Yellowstone's Magma Chamber	Karen Luttrell
46	Annaliesa Fanguy	Role of PratA in the Photo-assembly of the Active Site of Photosynthetic Water Oxidation	David Vinyard
45	Logan Franks	Microbiomics: Analysis of Soil Composition in Baton Rouge City Park	Gary King
40	Michelle Gautreaux	Developing a qPCR Assay to Assess the Tolerance of *Crassostrea virginica* to Temperature and Salinity Stress	Morgan Kelly
48	Kaitlin Griffin	Synthesis and Conjugations of a BODIPY Bearing Two *isothiocyanoacetate* groups	Maria Vicente
49	Kate Gutterman	Utilizing Tourmaline Chemistry to Define Sediment Source Terrains from the Black Hills, South Dakota	Darrell Henry
52	Heewon Hah	Enumerating Diagonalizable Matrices over Z_{p^k} Using Graphs	Oliver Dasbach
41	Ivan Hidrovo	Lung Nodule Segmentation for Malignancy Classification with Three-Dimensional Convolutional Neural Network	Joyoni Dey
50	Omar Kana	Elucidating Protein Druggability with eFindsite	Michal Brylinski
51	Binisha Karki [L]	Characterization of Immune Responses During Tumor Progression Versus Spontaneous Engraftment Failure in a Novel Immunocompetent Double-Labeled Murine Melanoma Model	Konstantin Kousoulas
53	Yasmeen Kawji	*Tigriopus californicus*: Adaptations to Thermal and Salinity Stressors	Morgan Kelly
54	Margarite LaBorde [T]	Multiparameter Estimation with Single Photons–Linearly-Optically Generated Quantum Entanglement Beats the Shotnoise Limit	Jonathan Dowling
68	Harrison Marcello [L] w/ Caleb Hooter	Designing a Molecular Machine by Computational Modeling: Real Life Bioanalysis	Fereshteh Emami
80	Neeha Mathew [N]	Lymph Node Stromal Cells Enhance Pancreatic Cancer Metastasis in Orthotopic Xenograft Model	Li Li

SCIENCE

#	Student	Title	Mentor
74	Ishan Mehrotra	Microbiomics: Analysis of Canine Fecal Composition in Cane's Dog Park	Gary King
79	Emily Nall	Metabolic and Physiological Flexibility of an Isolate from the OM252 Clade	J. Cameron Thrash
71	Dan Nguyen	Microbial Diversity in Farr Park Equestrian Center Arena and Grounds	Gary King
72	Heidi Nowakowski	Modifications to para-Menthane-[3,8]-diol to Increase Mosquito Repellency	Carol Taylor
73	Michelle Opiri	Synthesis of Self-targeted NanoGUMBOS for Enhanced Anticancer Effect	Isiah Warner
78	Samuel Palmer MS	Quantifying Abscission Defects in Mutant *Arabidopsis thaliana* Flowers	Sarah Liljegren
56	Khang Pham S	Focal Plane Detector System for the Enge Split-Pole Spectrograph at Florida State University	Catherine Deibel
55	Madigan Reid	Sexually Dimorphic Oxytocin Receptor-Expressing Neurons in the Mouse Hypothalamus	Ryoichi Teruyama
77	Lauren Rodriguez w/ Ashley Schoonmaker	Heterotachy Is a Pervasive and Important Feature of Phylogenomic Data	Jeremy Brown
62	Gabriel Sanchez w/ William Boles, Jared Barrileaux	Cellular and Humoral Immune Response to Heterologous Antigen Delivery by Recombinant HSV-1 vaccine, VC2	Konstantin Kousoulas
65	Ari Saravia	Intestinal Microbiome Composition of an Acute in Vivo Alzheimer's Disease Rat Mode	Gary King
60	Jacob Searight	Characterization of Secondary Metabolite Production Among Cercospora Species Associated with Cercospora Leaf Blight	Vinson Doyle
64	Blake Shaw	Computational Investigations of the Graphene Oxide's Liquid Interface	Revati Kumar
61	Lana Thaljeh	Targeting the Virus DNA-Packaging Motor	Michal Brylinski
63	Bennett Thomas	DNA Sequence Variation of the HIF1A Gene in the Gulf Killifish, *Fundulus grandis*	Morgan Kelly
66	Sadie Thompson w/ Tabitha Kearns	Metagenetic Characterization of the Resident Equine Uterine Microbiome Using Multiple Techniques.	Gary King
59	Brandon Tramontana	Reception and Integration of Multimodal Courtship Signals in an African Cichlid Fish, *Astatotilapia burtoni*	Karen Maruska
58	Richard Tuminello	Modeling Superluminous Supernovae	Manos Chatzopoulos
67	Madison Wayt T	Apatite Zoning in Late Archean Igneous Granitoids from the Eastern Beartooth Mountains, Montana and Wyoming, USA	Darrell Henry
57	Sarah Whitlow S	Expression of Reproductively Important Genes in the Eye Increases with Ovulation and Correlates with Mate Choice Behaviors in the Social African Cichlid, *Astatotilapia burtoni*	Karen Maruska

ART & DESIGN

#	Student	Title	Mentor
153	Anjelica Sifuentes G	Redefining Our Borderlands	Bruce Sharky

COAST & ENVIRONMENT

#	Student	Title	Mentor
5	Kareem Abdo	Presence of PBDEs in the Mouth of the Mississippi River	Kanchan Maiti
2	Devin Comba	Isotope Analyses of Raw versus Lipid-Extracted Seal Scat	Michael Polito
6	Rachel Croy	Phylogenetic Similarities Among Bacteria Isolated from Songbirds	Crystal Johnson
9	Amanda Fontenot TSA	Tidal Fluctuations of pH, DIC, and DOC in a Sandy Hook Bay Coastal Wetland	John White
7	Rohit Kalvakaalva	Dietary Shifts in Antarctic Krill Predators Across the Holocene	Michael Polito
8	Katelyn Lamb GT	Isotopic and Mercury Analyses of Coastal Seabirds Collected from Louisiana in 2010 During the Deepwater Horizon Natural Resource Damage Assessment	Micahel Polito
4	Darian Madere	Changes in Bacterial Abundance Under Seasonal Nutrient Variations and Relationships with Phytoplankton Biomass	Sibel Bargu
1	Amelia Schexnayder	Breaking Hypoxia -- Reaerating the Northern Gulf Shelf	Louis Thibodeaux
3	Rachel Tuggle	Louisiana Roseau Cane and Scale	Linda Bui

BUSINESS

#	Student	Title	Mentor
124	Lauren Agrigento G	Predictive Analytics: Opiate Misuse	Joni Shreve
125	Alyssa Hebert S	Volatility Strategies Using Options	Kurtay Ogunc

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VISUAL DISPLAY

9:00 - 11:00 a.m. | Royal Cotillion Ballroom – *LSU Student Union*

#	Student	Title	Mentor
142	Karmen Ancar [G]	Can We Move Our Fingers Independently?	Nikita Kuznetsov
138	Jonathan Cangelosi	Microbiomics: Analysis of Horse Fecal Composition in a Pasture	Gary King
149	Caroline Copeland	Development of Serial Shear Stress Breast Cancer Cell Lines for the Evaluation of Endocrine Resistance at Metastatic Sites	Elizabeth Martin
146	Ellyn Culotta	Using Multi-Sensory Intervention to Increase Numerical and Quantitative Awareness from 0 to 20 in Kindergarten-Aged Children	Cynthia DiCarlo
144	Emily Hingle	Using Word Boxes to Improve Letter Recognition and Phoneme Identification in a Kindergarten-Aged Child	Cynthia DiCarlo
152	Claire LaGrone [T]	*Carmen* Around the World	Rosemary Peters-Hill
139	Jeffrey Lemoine	Computational Drug Repositioning to Treat Rare Diseases	Michal Brylinski
141	Madison Liggio [G]	Using Social Stories to Increase Appropriate Social Initiations in a Preschool-Aged Child	Cynthia DiCarlo
148	John Marceaux	Geometric Design	Ravi Rau
145	Haley Matthews	Discovering the Nature and Impact of the Girls on the Run Club in Baton Rouge	Senlin Chen
140	Katherine Miley	Carbonated Drinkable Cheese: Microbial and Physicochemical Characteristics.	Kayanush Aryana
147	Meagan Moore [B]	3D-Printing Whole Body Personalized Phantoms for Radiotherapy Measurements	Wayne Newhauser
150	Derek Staal	Bench Scale Experimental Study of Slug Flow Phenomena Using PID Control	Mayank Tyagi
151	Nolan Tiersch	Development of Novel Vitrification Devices by Three-Dimensional Printing	Teresa Gutierrez-Wing
143	Jason Tullos	Ultrasonic Assisted Self-Assembly of Polystyrene Nanospheres at the Air-Water Interface	Kevin McPeak

JURIED STUDENT ART SHOW

9:00 - 11:00 a.m. | Union Art Gallery – *LSU Student Union*

Juried by: *Tom Sofranko, Lynne Baggett, & Hanna Schloemer*

Student	Title	Media	Mentor
Giselle Doucet	Winter as Witnessed by the Stars	Video-Poem	Vincent Cellucci
Taylor Gonsoulin	At the End of the Road	Photography	Johanna Warwick
Jacob Lagasse	Morphosis "Ptah"	Ceramics	Dennis Ritter
Lillian LaGrange	Documenting Thailand's Agricultural Industry	Photography	Kristine Thompson
Rachel Rome	Self Portrait	Painting	Kathy Rodriguez
Blaise Trusty	The Lights of My Life	Photography	Jeremiah Ariaz

ORAL PRESENTATIONS

1:00 p.m. - 4:00 p.m. | LSU Student Union – *Room as noted*

RED RIVER ROOM 323

Time	Student	Title	Mentor
1:00	Geraldo Ballasteros [M]	Living Small: Improving Housing Market Accessibility with Tiny Homes	Mitchell Tropin
1:15	Toiya Smith [D]	Just[US] League	Casey Schreiber
1:30	Michael Vingiello	Serving a Segregated City: Primary Care Access Disparities in Baton Rouge, Louisiana	Fahui Wang
1:45	Haley Grieshaber	A Policy Analysis of the Abolishment of Monetary Bail	Belinda Davis
2:00	Sierra Phelps	Perceptions of Procedural Justice: Exploring the Role of Familial Incarceration and Mental Health Among Youth of Color	Dari Green
2:15	Andreas Huang	An Economic Thesis on Incentives and Participation	Louis-Phillipe Bela
2:30	Hailey Teachout [G A]	Understanding What Motivates People to Join The Cajun Navy and Volunteer for Disaster Rescue Efforts	Michelle Meyer
2:45	Meagan Morvant	Effects of Nostalgia on Brand Loyalty Following Crisis	Diane Francis
3:00	Samantha Knotts	I Saw It on the News: How Does Pre-Trial Publicity Impact Jury Decision-Making?	Sean Lane

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CAPITAL CHAMBER ROOM 329

Time	Student	Title	Mentor
1:00	Alex Yandell [T]	Lexical Idiosyncrasy: How the Verb Conditions Language Variation in Spanish	Rafael Orozco
1:15	Phoebe Fortenberry [T]	The Woman's Role in Society: A Choice or a Pre-Destination? The Literary Portraits of Women in Emilia Pardo Bazán's *La dama joven* and "El Áncora"	Dorota Heneghan
1:30	Danielle Maurer	A New King Arthur: Edward I's Conquest of Wales Through Arthurian Symbolism	Maribel Dietz
1:45	Mary Hillman [UM]	Ibn Fadlan, John Mandeville, and the Land of Darkness: The Medieval Making and Mapping of Semitic Monsters	Will Rogers
2:00	Kaitlin Simpson [UM]	War in a Democratic Society: Comparing the Predictions of Alexis de Tocqueville to Writings of French Observers to the American Civil War	Ralph Brown
2:15	Jorge Abadin [T]	Gender and Modernization in Galdós' *Tristana* and *El Abuelo*	Dorota Heneghan
2:30	Sachin Shrestha	Religion and Morality in Middlemarch	Jana Giles
2:45	Victoria Pfeifer	Conquering the Warmest Love: Anger in Seneca's Philosophy and Shakespeare's *Othello*	Mary Sirridge
3:00	Alison Brabham [UM]	Medieval Male Gaze	Will Rogers
3:15	Monica Music [S]	Preparing and Performing an Opera Role	Robert Grayson
3:30	Taylor Pernini [S]	An Inexhaustible Source of Magic: How Fanfiction Turned One World Into a Thousand	Chris Barrett
3:45	Hannah Ofori-Nuamah [M]	Hip Hop, What Happened to You?: Examining The Impact of Capitalism on Rap Music and How it Has Impacted Black Communities.	Lisa Nevans

CASTILIAN 304

Time	Student	Title	Mentor
1:00	Macie Coker with April Gaydos	LSVI Partnership - 3D Eyeglass Printing	David Bowles
1:15	Anna Madden [ATS]	Evidence that Intervention Against Type 2 Diabetes Modifies Risk of Late-Life Cognitive Decline	Owen Carmichael
1:30	Anusha Zaman [B]	Electronic Cigarette Aerosols Induce Adverse Health Effects in Mice of Reproductive Age and Their Offspring	Alexandra Noel
1:45	Joseph DeCorte	CXCL1 Regulates Host Immune Response to *Streptococcus pneumoniae*-Induced Pneumonia via CXCL2	Samithamby Jeyaseelan
2:00	Sabrina Valdes	Transmission of *Rickettsia asemboensis* and *Rickettsia felis* in Cat Fleas	Kevin Macaluso
2:15	Steven Grouchy	Smartphone-Based Fluorescence Imaging System for Cancer Cell Detection	Manas Gartia
2:30	Hira Hasan	An Investigation of Maltose Transport System Induction in the Rugose Phase Variant of Human Pathogen *Vibrio vulnificus*	Gregg Pettis
2:45	William Saunders	Market Basket Analysis of Safety at Active Highway-Railroad Grade Crossings	Julius Codjoe

FELICIANA 208

Time	Student	Title	Mentor
1:00	Breanna Lee [G]	Testing Machine Learning Algorithms on a Virtual Robotic Arm	Jian Zhang
1:15	Wei Zhao [T]	Investigation of a Piezoelectric Droplet Delivery Method for Fuel Injection and Physical Property Evaluation	Shyam Menon
1:30	Benjamin Lane [T]	Observation of an Optical Spring with a Beamsplitter	Thomas Corbitt
1:45	Daniel Schmidt with Jeffery McClung	Pilot Scale Slug Flow Experimental Analysis using PID Control	Mayank Tyagi
2:00	Lauren Baxter	Automated Filament Positioner for Microcombustion Pyrometry	Ingmar Schoegl
2:15	Shivani Pandya [G]	Optimization of Gasification Parameters	Dorin Boldor
2:30	Nicole Bryer	Biochemical Characterization of Archaeal Fe-S Cluster Assembly Machinery	Yuchen Liu
2:45	Prerak Chapagain [N]	Hoverboards: Prototype Focal-Plane Positioners to Move Heavy Payloads for ELTS	Michael Goodwin

VIEUX CARRÉ ROOM 325

Time	Student	Title	Mentor
1:00	Breea Gould	Beyond the One-Nation Identity: Transnational Identity in German-Turkish Cinema	Gundela Hachmann
1:15	Elizabeth Vukovics	The Italian Migration Crisis and its Effects on Ordinary Life in Italy	Kevin Bongiorni
1:30	Rufaro Chirewa [SU]	Bridging The Gap on Financial Inclusion: A Review on Kenya	Nicholas Omoregbe
1:45	Anne Weaver	A Contrast of Results from E-Mail and Mail Distribution of the 2016-2017 Louisiana Game Harvest Survey.	Lucien Laborde
2:00	Stefanie Foreman [G]	Impacts of Red Foxes Under Live Oak Trees	Linda Hooper-Bui
2:15	Henry Crull [G]	Investigation of Sicklebill Hummingbird Niche Expansion Through Analysis of *Centropogon* and *Heliconia* Pollen, and *Centropogon* Pollen Reference Catalog	Linda Lagomarsino
2:30	Jackson Mierl	Analysis of Platy 1 Elements in New World Monkey Species	Mark Batzer
2:45	Jacob Miller with Dylan Bienvenu	Understanding Water Transport in Trees with Application to Heat Pipes	Harris Wong
3:00	Madeline LeBlanc [ST]	Identification of Carbon, Nitrogen, and Phosphorus Hot Spots in Four-league Bay Along a Salinity and Sediment Gradient	Robert Twilley
3:15	Sydney Cottingham	Gastrointestinal Helminth Prevalence in Lesser Scaup (*Aythya affinis*) Wintering on Lake Pontchartrain, Louisiana	Kevin Ringelman
3:30	Amanda Fontenot [TSA]	The Fate of Soil Carbon in Louisiana's Eroding Coastal Wetlands and Potential Impact on Future Climate	John White
3:45	Hannah Megison	How Much Oil Could We Spill in the Event of a Well Blow-Out?	Ipsita Gupta

2018 DISCOVER SCHOLAR AWARDS

Congratulations to the 2018 LSU Discover Scholar Awardees!
The LSU Discover Scholar Awards recognizes LSU's top undergraduate research students.

Jacob Bursavich, *College of Engineering*

Jacob Bursavich is a Baton Rouge native and senior Biological Engineering major. Jacob is a member of the Biological Engineering Student Organization and his research is supported by the National Science Foundation. After graduating this spring, Jacob plans on completing a MSBAE in biological engineering at LSU. After that he hopes to pursue a PhD and possibly start his own tech company focused on innovative R&D in the fields of biological and chemical engineering. Jacob is presenting his research, *Catalytic Conversion of Trash into Useful Fuel Products Through Induction-Based Pyrolysis* at poster #15 in the Royal Cotillion Ballroom.

Alyssa Hebert, *E.J. Ourso College of Business*

Alyssa is a senior Finance major from Madisonville, LA. Alyssa is an active member of the Honors College, LSU Center for Internal Audit program, Student Finance Association, and Kappa Kappa Gamma Fraternity. After graduating in May, she hopes to work in Washington D.C. for a few years before pursuing graduate school. See her research work on *Volatility Strategies Using Options* at poster #125 in the Royal Cotillion Ballroom.

Amanda Fontenot,
College of the Coast & Environment

Originally from Houston, Texas, Amanda is an Honors College senior majoring in Coastal Environmental Science. She has presented her work previously in Tampa, Florida as a Travel Stipend Recipient, and is also an LSU Discover Research Ambassador. Amanda will be giving both an oral presentation, *The Fate of Soil Carbon in Louisiana's Eroding Coastal Wetlands and Potential Impact on Future Climate*, at 3:30 in the Vieux Carré Room and displaying her work on *Tidal Fluctuations of pH, DIC, and DOC in a Sandy Hook Bay Coastal Wetland* at poster #9 in the Royal Cotillion Ballroom.

Madeline LeBlanc,
College of the Coast & Environment

A native of Sunshine, Louisiana, Madeline is a senior Coastal Environmental Science student with a minor in Chemistry. Madeline is involved within her major, the Ogden Honors College, and the Louisiana Service and Leadership program. Madeline has presented at LSU and recently at the International Conference on Environmental Science and Engineering in Barcelona as a Travel Stipend recipient. Madeline will be giving an oral presentation on *Identification of Carbon, Nitrogen, and Phosphorus Hot Spots in Fourleague Bay Along a Sediment and Salinity Gradient* at 3:00 in the Vieux Carré Room.

Anna Madden,
College of Humanities & Social Sciences

A senior Psychology major from Denham Springs, Louisiana, Anna is an LSU Discover Research Ambassador and Travel Stipend recipient. After graduating in May, Anna will be pursuing a Masters in Psychological Research at Texas State University with later plans for a Ph.D. in Cognitive Neuroscience. Anna will be giving both an oral presentation titled *Evidence that Intervention Against Type 2 Diabetes Modifies Risk of Late-Life Cognitive Decline* at 1:15 in the Castilian Room and displaying her work on *The Effect of Attention Bias Modification on Emotion Dysregulation* at poster #95 in the Royal Cotillion Ballroom.

Monica Music, *College of Music & Dramatic Arts*

Originally from Dallas, Texas, Monica is currently a junior Vocal Performance major. Monica has performed at the Houston Grand Opera's Young Artists Vocal Academy, Opera in the Ozarks, LSU Opera, LSU Symphony, and LSU A Cappella Choir and will be traveling to Des Moines, IA this summer as an apprentice artist with the Des Moines Metro Opera. Hear Monica's oral presentation, *Preparing and Performing an Opera Role*, at 3:15 in the Capital Chamber Room.

Taylor Pernini,
College of Humanities & Social Sciences

A senior from Atlanta, Georgia, Taylor is an Honors College student majoring in English Literature and minoring in International Studies. In the future, Taylor will be leading a conference at 2018 Louisiana Queer Conference and attending law school after graduating in May. Taylor will be giving her oral presentation, *An Inexhaustible Source of Magic: How Fanfiction Turned One World into a Thousand*, at 3:30 in the Capital Chamber Room.

Khang Pham, *College of Science*

Khang came to LSU from Houma, LA and is a graduating senior in the Physics department. Khang is an active member of the McNair Scholars Program and Phi Eta Sigma Honor Society and intends to study nuclear fusion in graduate school in the future. Khang will be presenting his research today entitled *Focal Plane Detector System for the Enge Split-Pole Spectrograph at Florida State University* at poster #56 in the Royal Cotillion Ballroom.

Matthew Thomas, *College of Engineering*

Matthew is a Civil Engineering major by way of Houma, Louisiana. Currently a Junior, Matthew's research is supported by the Louisiana Board of Regents: RCS Program, as well as the Gulf of Mexico Alliance. Matthew is presenting his research titled *Aerodynamic Mitigation of Wind-Induced Loads on Low-Rise Buildings by Varying Parapet Height* at poster #27 in the Royal Cotillion Ballroom.

Sarah Whitlow *College of Science*

Sarah is a Baton Rouge native and Biological Sciences major in the Honors College. She is an undergraduate research assistant for the Maruska Lab in the Biological Sciences department and a member of the Tri Beta Biological Honors Society and Phi Mu Sorority. Sarah will be presenting her work, *Expression of Reproductively Important Genes in the Eye Increases with Ovulation and Correlates with Mate Choice Behaviors in the Social African Cichlid, Astatotilapia burtoni* at poster #57 in the Royal Cotillion Ballroom.

2018 TAF/LSU DISCOVER MENTOR AWARD

This year, LSU Discover introduced the Tiger Athletic Foundation/LSU Discover Undergraduate Research Mentor Award to honor the hardworking faculty members that are instrumental in molding student researchers.

LSU Discover is proud to announce that the winner for the inaugural Tiger Athletic Foundation/LSU Discover Undergraduate Research Mentor Award is Dr. Patrick DiMario, professor of Biological Sciences in the College of Science. This award honors faculty who actively and effectively guide undergraduate researchers, helping them to move toward independent work, and encouraging them to publish or present their findings. Dr. DiMario will be honored at the annual LSU Distinguished Faculty Awards ceremony on May 2nd in the Lod Cook Alumni center.

Throughout his 22 years at LSU, Dr. DiMario has dedicated himself to his students – imparting his knowledge, providing guidance, and sharing his love of science and research with LSU's undergraduate researchers. Since the fall of 1990, he has mentored 65 undergraduate research students, many of whom have gone on to careers in research and medicine. He has also co-authored a number of articles and presentations with undergraduates, encouraging his students to share their research.

Dr. DiMario was nominated by the following current and former undergraduate researchers: Molly Lieux, Celine Jeha, Kathryn DeLeo, Carlie Melancon, and Alex Houser. In each of these student's nomination letters they noted Dr. DiMario's patience, enthusiasm, and exceptional ability to guide them through their research issues no matter how small or large.

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 2018. Special gratitude is extended to Dr. Stephen Beck, Associate Vice President of Research, the Office of Research and Economic Development, the LSU Discover Advisory Board, and the jurors for the Student Art Show: Tom Sofranko, Lynne Baggett and Hanna Schloemer. We would also like to thank Student Union Director of event management and marketing, Rachel Henry, art show technician Joey Tipton, keynote speaker Dr. Jesse Allison, and all of the volunteers for their help with the coordination of this event.

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

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LSU Discover Day is also open to participants from other colleges.
Thank you to the following colleges & schools for participating:

University of New Orleans
Vanderbilt University
Zamorano University
University of Mississippi
Southeastern University A&M College
Baton Rouge Magnet High School

Dillard University
University of Louisiana at Lafayette
Louisiana at Monroe
Southeastern Louisiana University
Montgomery University

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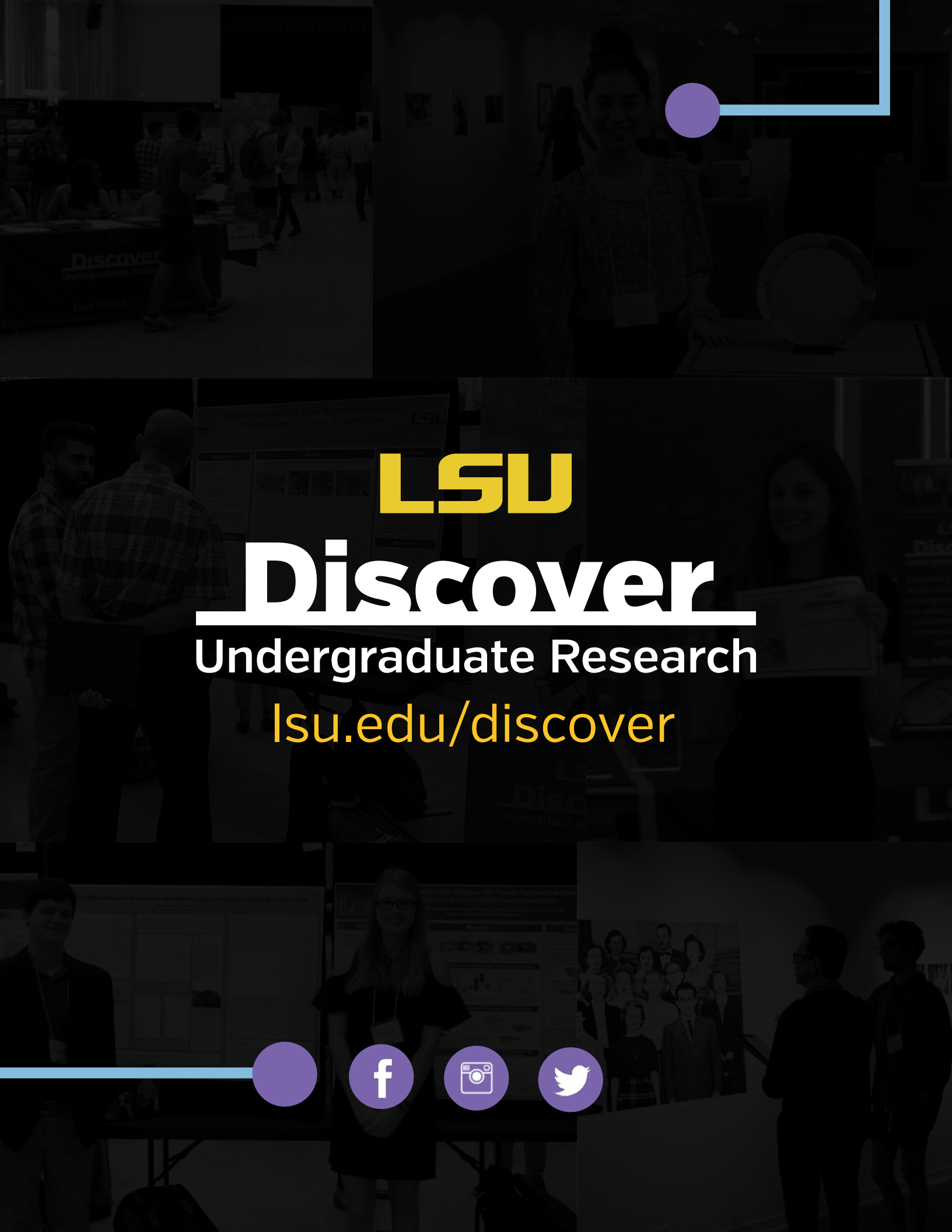
KEYNOTE SPEAKER

Dr. Jesse Allison

Dr. Jesse Allison, professor of Experimental Music & Digital Media, is an innovator in sonic art technology, thought, and practice. His work centers around the idea that computer interactivity, used wisely, can produce new and engaging forms of art. Technology research, interdisciplinary collaboration and creative activity are fluidly traversed echoing the spirit of his joint faculty position between the Center for Computation & Technology's Cultural Computing focus area (CCT-CC) and the LSU School of Music.

As head of the Experimental Music & Digital Media (EMDM) program and a co-PI for the CCT REU program in Interdisciplinary Research Experience in Computational Sciences, he provides students with a link between art and research where themes of human/computer interactivity, embedded computing, social computing systems, and other touch points between technology and society permeate the research and discovery process. An important aspect of both the EMDM program and Cultural Computing, discovery must be viewed as an active endeavor. With a goal to envision (instead of simply adopt) applications of technology in places where it is appropriate, beneficial, and if done well, quite possibly magical.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