Introducing the New “Gilmer Gazette”

The “Gilmer Gazette” has been an annual publication of the Clinical Group of the UVA Department of Psychology for the past seven years. Recently, Susan Lane published the seventh edition featuring the news, events, awards, and alumni activities of the Clinical Group.

With this current issue, the “Gilmer Gazette” is broadening its distribution to our entire department and will include articles and reports about all of us. The goal is for this to be an ongoing bi-monthly publication; therefore, if you have articles or news to submit, please send these to Cindy Grotz at clg5z@virginia.edu and we will do our best to include your reports in future issues.

We Welcome New Members to the Department of Psychology

Faculty:
Lanice Avery, Assistant Professor of Women, Gender, Sexuality, and Psychology
Jianhua Cang, Paul T. Jones Jefferson Scholars Foundation Professor of Neuroscience
Hudson Golino, Assistant Professor of Psychology
Xiaorong Liu, Assistant Professor of Biology and Psychology
Per Sederburg, Associate Professor of Psychology

Graduate Students:
Maura Austin, Social
Ian Becker, Developmental
Katherine Daniel, Clinical
Joshua Danoff, Psychobiology
Alida Davis, Clinical
Jeremy Eberle, Clinical
Remy Furrer, Social
Jesse Grabman, Cognitive

Andrew Graves, Cognitive
Quinn Hirschi, Social
Brandon Jacques, Cognitive
Ryan Kirkpatrick, Cognitive
Yuching Lin, Social
Tara Saunders, Quantitative
Shannon Savell, Clinical
Tyler Spears, Cognitive

IT Specialist: Tom Martin
Technical Writer: Cindy Grotz

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Fall Events—2017

Fri., Sept. 22, 2017 Intradepartmental Symposium and Academic Year 2017 Kickoff: Poster Session: 11 am — 2 pm Academic Commons Talk Session: 2 pm — 4:30 pm Gilmer 141

Mon., Sept. 25, 2017 Department of Psychology 2017-2018 Colloquium Series at 3:30 pm in Gilmer 190: Michael L. Platt, James S. Riepe University Professor, Departments of Neuroscience, Psychology, and Marketing, University of Pennsylvania, “How We Connect: The Biology of Friendship”

Fri., Oct. 27, 2017 2017-18 Colloquium Series at 3:30 pm in Gilmer 190, Alumni Lecturer: Matthew Lerner PhD, Assistant Professor of Psychology, & Pediatrics Director, Social Competence & Treatment Lab, Stony Brook University, “Catch Me If You Can: Novel Mechanisms of Social Functioning and Intervention in Youth with Autism Spectrum Disorders”

Fri., Nov. 10, 2017 Diversifying Scholarship Conference, 8:30 am to 5 pm in Bavaro Hall, “Forging Interdisciplinary Connections, Empowering Students, and Promoting a Culture of Inclusivity”

Fri., Nov. 10, 2017 2017-2018 Colloquium Series and the Aston-Gottesman Lecture Series at 3:30 pm in Gilmer 190: Professor Paul Griffiths, PhD, FAAS, FAHA, The University of Sydney, “The Behavioral Gene”

Mon., Nov. 13, 2017 2017-18 Colloquium Series co-sponsored with Psychiatry; Student Health; and the Institute of Law, Psychiatry, & Public Policy at 3:30 pm in Gilmer 190: Thomas Joiner, Robert O. Lawton Distinguished Professor of Psychology, Florida State University, “Why People Die By Suicide”

Fri., Dec. 1, 2017 Undergraduate Psychology Seminars Poster Session at 11 am — 12:30 pm and 2 pm — 3:30 pm in Gilmer Academic Commons. Students from the seminars “Diverse American Families” and “Research Methods with Children” present posters of research from this semester. Light refreshments provided.

Mon., Dec. 4, 2017 Diversity Town Hall at 3:30 p.m. in Gilmer 141.

Upcoming Events—2018

Friday, January 26, 2018 2017-18 Colloquium Series at 3:30 pm in Gilmer 190: Professor Carola Suarez-Orozco, Co-Director, Institute for Immigration, Globalization & Education Senior Program Associate, W.T. Grant Foundation Co-Founder, Re-Imaging Migration at UCLA
Faculty and students in the UVA Psychology Department currently perform research which spans seven major scientific areas. Not surprisingly, these specialties overlap in many significant ways, which fosters collaborations and interdisciplinary efforts. Shared research allows the department to blur the lines that would divide us and advance our efforts in new and sometimes, unexpected ways.

Within the study of psychology, there is a general interest in understanding how individuals vary and how genes explain our differences in behavior. What makes each individual unique and what determines how he or she interacts with the world? Does our environment shape and affect us at the molecular level, possibly by turning genes on or off or influencing the amount of their expression?

Jessica Connelly, UVA Associate Professor in Psychology and a molecular biologist at heart, is a prime example of a researcher who is currently collaborating with many others within the department. Jessica works in epigenetics, studying how external factors, such as emotional stressors, regulate the way genes are expressed. Specifically, she studies epigenetic modification of the oxytocin receptor, \textit{OXTR}, to see if these changes are related to differences in behavior. Her primary work is with prairie voles, in which her research shows that the amount and quality of parenting affects the epigenetic marks and these marks, in turn, affect the brain and resulting social behavior.

This research can easily be translated to humans since the parenting and mating behavior of prairie voles is remarkably similar to humans, and the DNA methylation sites in the genes being studied are the same in humans and voles. Connelly sought collaboration with other researchers within the UVA Psychology Department as her work progressed in new directions. Her goal was to determine how epigenetic markers in humans may relate to behavior and whether the environment can indeed shape our genome.

To assess the relationship between epigenetic markers and behavior quantitatively, Jessica collaborates with \textbf{Jamie Morris}, who specializes in neuroimaging. Using imaging to capture the brain’s reaction to social stimuli, it was found that a relationship exists between \textit{OXTR} methylation and neural activity in response to emotional face processing. This suggests that the epigenetic marks have regulatory capacity and influence how much of the gene is expressed. It is hoped that an individual’s diverse epigenetic markers may become predictors of the brain’s reactions in certain social situations.

Following the neuroimaging studies, performed with 18-30 year old subjects, questions arose about how the epigenetic marks are initially established and where the variability originates. Seeking answers, Jessica collaborates with \textbf{Toby Grossman}, who studies the brain processes that underpin social interaction and cognition during infancy. Infants’ interaction with parents and responses to stimuli are observed to determine how babies’ brains develop. It is then possible to determine whether parental interaction is related to epigenetic markers and the shaping of neural responses. Early on, questions can be asked and measurements made to see whether environment affects how epigenetic markers are established and how this correlates with reactions to stimuli.

As the research continued from infants to young children, Jessica began collaborating with \textbf{Angeline Lillard}, an expert in the areas of early childhood and Montessori education. The goal was to study children who are three to nine years of age and attempt to understand whether a Montessori educational environment might change the way a child approaches the world and, as a result, affect the development of epigenetic markers. Current work is underway to compare the epigenomes of children educated in a Montessori classroom to those of children educated in a traditional classroom to determine whether differences exist. It has been established that social behavior in adults is related to the epigenome but it has not been established whether these relationships exist in children’s brains.
From children, the queries move to young adults, leading Jessica to team with Joe Allen, an expert in adolescence. Joe has led the ongoing longitudinal study, Kids, Lives, Families and Friends (KLFF), which continues now as the Virginia Institute for Development in Adulthood (VIDA). These studies began in 1998 and boast 97% retention of subjects as they examine the influences of social relationships, autonomy, and attachments to parents, and predict development from adolescence into adulthood. Using the existing data from this study, researchers can ask, “how was the epigenome shaped and how does it affect each individual in adulthood? Did the stressors an adolescent faced or the way he or she was parented affect the markers on the epigenome and do these markers, in turn, predict potential outcomes in mental or physical health?”

Finally, smaller collaborations exist with Alev Erisir, who has expertise in neuroscience. This joint work seeks to determine the distribution of OXTR receptors in the brain and the effect this may have on epigenetics and behavior.

By following the work of one faculty member, Jessica Connelly, it is clear that collaboration is thriving in the Psychology Department. Researchers with many areas of expertise are able to share knowledge and resources to expand projects in exciting new directions. Finding links between the seven scientific areas of study makes the whole department stronger and more effective as we study what makes each individual unique in mind, behavior and even, epigenome.

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**Graduate Student Awards and Honors**

- Jessica Mazen won first place in the Diversifying Scholarship poster session, and Diane-Jo Bart-Plange won second place in the Diversifying Scholarship oral presentation category.
- Miranda Beltzer, Jason Sumontha, and Alexandra Werntz were initiated into the prestigious Raven Society.
- Charlie Ebersole has been awarded one of eight 2017 Leamer-Rosenthal Prizes in Emerging Researchers category for Open Social Science. He is recognized for his leadership in two Many Labs projects and his development of StudySwap, an online platform that facilitates replication and collaboration between researchers.
- Meltem Yucel was elected to the board of the Cognitive Development Society (CDS) as a student representative.
- Meghan Puglia has been awarded an APF/COGDOP Research award.
- Diane-Jo Bart-Plange received a 2017 Clara Mayo Award from the Society for the Psychology Study of Social Issues.
- Jessica Kansky has received the 2017-2018 Distinguished Teaching Fellowship, and the 2017-2019 Jefferson Scholars Foundation Fellowship. She also was a Society for Personality and Social Psychology Graduate Travel Award Recipient and a Graduate Student Poster Award finalist.
- Alex Werntz was named a Student Representative to the Board for Council of University Directors of Clinical Psychology (CUDCP) and a LIFE program fellow and is serving as a UVA speaker.
Hudson Golino

A new academic year brings new classes, new schedules, new students and new faculty. One of those new faculty members in the UVA Psychology Department is Hudson Golino, who just arrived from Brazil this summer. His wife, Mariana, also a Ph.D. psychologist who specializes in cognitive aging, and his 15 month old daughter, Cecilia, accompanied him on this international move.

Hudson was educated in Brazil, at the Universidade Federal de Minas Gerais where he earned his Ph.D. in March 2015, studying applications of machine learning in Psychology, Education and Health. He also earned his M.Sci. in Developmental Psychology (2012), and B.Sci. in Psychology (2011), at the same university. Until recently, he taught at two universities in Brazil, the Universidade Estadual de Feira de Santana and the Universidade Salgado de Oliveira, commuting about 1500 kilometers between them.

What drew Hudson to UVA was the amazing faculty, many of whom he had followed via published research. He says he is excited to be a junior faculty member in a place where people are doing such impactful work. He is looking forward to collaborating with many of these researchers and helping them to ask different questions than usual and to use data analysis in novel ways.

Hudson’s areas of research include techniques to identify the number of factors underlying human thinking and behavior, as well as predictive modeling. He studies human intelligence, from basic cognitive processing to higher order abilities, through the life span. He is creating tests to assess the development of intelligence with the goal of identifying different stages of performance, from the simple to the complex tasks. What he likes best about his work is the liberty and freedom to think and propose new ideas. Ironically, this is also the most challenging thing because it is a huge responsibility to be free to have good ideas and pursue them in research. He is hoping to have a positive impact on the UVA community by collaborating with other researchers and helping to solve problems using the techniques he studies or develops. In the near term, he hopes to collaborate with UVA Psychology faculty members, Chad Meliza, Karen Schmidt and Cynthia Tong. In the long term, he hopes to work with Timothy Salthouse who studies the cognitive performance of older adults, to review the structure of traditional tests. He also hopes to work with Steve Boker to understand creativity in data analysis.

If he were not a professor, Golino says he would probably be a professional martial arts competitor, utilizing his skills in Jeet Kune Do, Judo and Brazilian Jiu-Jitsu. On the plus side, he says a career as a professor will most likely last longer and will not be as hard on his body (probably)!

At UVA he will be teaching “Introduction to Machine Learning,” one of his favorite courses, to undergraduate and graduate students. He will also teach a course about the Construction and Validation of Tests and Questionnaires to undergraduates. We welcome him to our Department and look forward to working with him for many years to come.
In the Spotlight: New Faculty (continued)

Per Sederberg

Per Sederberg, is one of the newest faculty members in the UVA Department of Psychology, having just moved to Charlottesville with his wife, Laurel, who is an LCSW and family therapist and their two children, a 9-year-old daughter and a 6-year-old son. Per comes to us from the Ohio State University in Columbus, OH and is currently relocating his lab. He brings with him funding from the National Science Foundation and the Air Force Research Labs.

Per did his undergraduate work at UVA in cognitive science. Initially, he was studying physics and math, but he soon realized that the courses he found most interesting all fit under the cognitive science major. After a four-year stint as a computer programmer in industry, he returned to academia, completing graduate work at Brandeis University and earning a Ph.D. in neuroscience from the University of Pennsylvania. Per then completed post-doctoral work at Princeton on the topic of applied machine learning. In 2010, he joined the faculty at the Ohio State University.

Per was drawn back to UVA because it is a fantastic institution with a culture of supporting innovations in research. He appreciates the fact that there is a strong undergraduate population and a focus on education at all levels. Per enjoys psychology because it is an interdisciplinary science which includes a breadth of study and diversity of research. If he was not a Psychology professor, he says he would probably be a professor of neuroscience or perhaps a computer scientist.

Per considers himself a computational cognitive neuroscientist. He studies the brain and behavior with the goal of understanding the cognitive processes, thoughts, and actions that make humans interesting and help us interact with the world. Per’s lab currently performs large scale behavioral and neuroimaging studies with a broad focus on the processes that give rise to success and failure in memory. These processes depend on attention, perception, decision making, and many other aspects of cognition. Memory shapes how we learn from new experiences, and how we perceive the world, and is key to defining who we are and what we become. One goal is to discover whether it is possible to predict what subjects will remember from their stream of real-world experiences and to develop interventions to help individuals remember the information important to them, and forget information that is less important or even negative, such as a traumatic event.

Per’s lab is also working to develop a set of neural/cognitive signatures that comprise a subject’s “neural vital signs,” and then track these through time to see what events cause cognitive performance to wax and wane and whether an intervention for, e.g., concussion or aging, has an effect. These new approaches could have many potential clinical applications if such fluctuations in cognitive state can be quantified.

In the near future, Per hopes to collaborate with Tim Salthouse to apply computational modeling approaches to longitudinal datasets. He also foresees working with Hudson Golino, another new faculty member, to explore merging approaches to analyze neuroscientific data. In the long term, he hopes to work with faculty in the UVA Engineering Department to create mobile sensor technology for daily life and with the UVA Medical Center to incorporate methods to quantify the cognitive state in clinical populations.

At UVA, Per will teach an undergraduate course on Mechanisms of Human Memory and a combined undergraduate and graduate class on Quantitative Methods for Studying the Brain. Please join us in welcoming Per to our Department. We look forward to a great future of collaborative efforts with him.
Dan Willingham’s new book, The Reading Mind: A Cognitive Approach to Understanding How the Mind Reads, was published in May 2017. The book is hailed as a “brilliant, beautifully crafted, and accessible exploration of arguably life’s most important skill: reading.” The book is currently available for purchase in e-book or hardcover format with the following ISBN: 978-1-119-30137-0. We congratulate our colleague on this accomplishment!

Recent Publications: June—November 2017


12. Clemens MB, Schmidt KM, Canfield SE, Gilbert SM, Khandelwal SR, Koontz BF, Lallas CD, Liauw S, Nguyen PL, Showalter TN, Trabulsy EJ, Cathro HP, Schenkman NS, Krupski TL. Creation of a Novel Digital Rectal Examination Evaluation Instrument to...


