

FACULTY RESEARCH INTERESTS
2011/2012

MICHAEL J. LYONS (C)

Chairman, Department of Psychology

Professor

Ph.D., University of Louisville

My general interests are in the areas of psychiatric and behavioral genetics and psychiatric epidemiology. My research focuses on how genetic factors (and environmental factors) influence psychopathology and other aspects of behavior. My current research primarily involves twins studies of aging, personality disorders, schizophrenia, and substance abuse, especially nicotine and alcohol.

DAVID H. BARLOW (C)

Professor

Ph.D., University of Vermont

My clinical research at the Center for Anxiety and Related Disorders at Boston University focuses on understanding the nature of anxiety, depression and related emotional disorders and developing and evaluating new treatments for these disorders in both clinical research settings and clinical settings more relevant to public health needs.

DEBORAH BELLE (DS)

Professor

Ed.D., Harvard University

My research focuses on women in science and on the professional networks of women and men. I am also interested in the impacts of poverty and inequality and in the stresses that arise at the intersection of paid employment and family life. I teach courses on social psychology, the psychology of women, and the psychology of families.

LESLIE BRODY (C)

Professor

Ph.D., Harvard University

I am interested in gender differences in emotional functioning and how cultural and family socialization contributes to such differences. I am also interested in the relationship between emotional expressiveness and mental and physical health. I teach courses in abnormal psychology, psychology of the family, child assessment, and child, family, and adult psychotherapy and feminist and object relations approaches to the family.

TIMOTHY BROWN (C)

Professor

Psy.D., Virginia Consortium for Professional Psychology

Statistical analysis and research methodology (e.g., clinical research applications of new latent variable analytic methods); classification of anxiety and mood disorders; vulnerability/temperament/personality in the development, course, and treatment outcome of emotional disorders; experimental psychopathology research on anxiety/mood disorders; psychometric evaluation and test/interview development.

DANIEL BULLOCK (B)

Professor

Interests of the Bullock lab are focused on the use of integrated computational models of local circuits implicated in reinforcement learning, planning of action sequences (including speech), and motivated decision making. Current models focus on forebrain circuits within or linking: laminar frontal cortex, the striatum and other parts of the basal ganglia, and midbrain dopaminergic areas. The long-term goal is construction of quantitative models of sufficient accuracy to predict effects of many pharmacological manipulations on decision-making, voluntary behavior, and skill learning.

S. BARAK CAINE

Full-Time Lecturer

Ph.D., University of California San Diego

My research focuses on two principal areas: (1) pharmacological mechanisms underlying stimulant-induced arousal and stimulant drug abuse (mentor: George F. Koob), and (2) neural mechanisms underlying stimulant-induced psychosis and antipsychotic drug actions (mentors: M.A. Geyer, N.R. Swerdlow). Psychomotor stimulant drugs including cocaine, amphetamine and methamphetamine increase synaptic levels of several monoamine neurotransmitters, and the transporter and receptor proteins involved are highly diverse. For example, the single neurotransmitter dopamine engages five different g-protein coupled receptors. My efforts are directed toward identifying the roles of different transporters and receptors in mediating the abuse-related and psychoses-related effects of stimulant drugs. Ongoing investigations focus on brain dopamine systems. Recent new areas focus on acetylcholine including muscarinic receptors and nicotine. A principal strategy is to push young investigators in my laboratory to introduce and persuade me toward new scientific directions.

CATHERINE CALDWELL-HARRIS (B)

Associate Professor

Ph.D., University of California, San Diego

Students are invited to join me in investigating language acquisition, bilingualism and cross-cultural psychology. Special projects for the current year are understanding language use in autism, investigating tonal languages, and cross-cultural differences in emotional expression. Students who speak Mandarin, Spanish, or Russian can use their bilingualism skills in ongoing projects. Independent study involves collaborating with me and other lab members on established projects, and/or helping to design new projects. The ideal research intern is responsible and motivated, can work with minimal supervision but also interacts well with other lab members.

JAMES CHERRY (B)

Associate Professor, Director of Graduate Studies

Ph.D., North Carolina State University

My research examines the cellular mechanisms underlying cognitive and sensory processes. Our primary interest is to define the functional significance of anatomically distinct chemosensory systems in the mouse, with the overall goal of understanding how odors can influence mammalian reproductive behavior.

JONATHAN COMER (C)

Research Assistant Professor

Ph.D., Temple University

"My program of research examines five areas of overlapping inquiry: (1) The assessment, phenomenology, and course of child anxiety disorders; (2) the development and evaluation of evidence-based treatments for childhood psychopathology, with particular focus on the development of innovative telehealth methods to reduce systematic barriers to effective mental health care in the community; (3) the psychological impact of disasters and terrorism on youth; (4) national patterns and trends in the utilization of mental health services and quality of care; and (5) psychosocial treatment options for mood, anxiety, and disruptive behavior problems presenting in early childhood."

ALICE CRONIN-GOLOMB (B,C)

Professor

Ph.D., California Institute of Technology

I have two main areas of interest: (1) The relation between sensory function and cognitive function in normal aging and in neurodegenerative disease; in particular, visual cognition in Parkinson's disease (PD); (2) The neural circuitry of visuospatial function in PD. We are examining the interaction of sensory function, spatial abilities and gait. Individual student-led projects also include perception, autonomic function and their relation to cognition.

STACEY DOAN (DS)

Assistant Professor

Ph.D., Cornell University

Research in the lab focuses on biological, behavioral, and cognitive aspects of emotion regulation. We are particularly interested in examining the role of sociocultural factors in influencing the development of emotion regulation across children from multiple ethnic groups and socioeconomic status. Furthermore, links between parenting factors, children's stress response, and mental health are explored.

HOWARD EICHENBAUM (B)

Professor

Ph.D., University of Michigan

My research involves explorations of the neural circuitry that mediates our capacities for cognition and memory. In particular, work in my lab focuses on the contributions of a system of brain structures including the hippocampus and cerebral cortex. Our approach to understanding this system entails a combination of neuropsychological testing to analyze how memory breaks down after selective damage to components of this system and electrophysiological recording to characterize how experiences are encoded by the activity patterns of neurons in these brain structures.

MICHAEL D. GRANT (C)

Research Assistant Professor
Ph.D., Pennsylvania University

I am an investigator on the Vietnam Era Twin Study of Aging (VETSA), a longitudinal cognitive aging study. My research interests include examining the genetic and environmental influences on cognitive and psychosocial functioning over time, with an emphasis on physical health (biological markers of aging). I have been involved in longitudinal aging and twin research since graduate school at The Pennsylvania State University and have significant background and experience in behavior genetics and twin methodology.

MARGARET A. HAGEN (B)

Professor
Ph.D., University of Minnesota

In the American legal system, psychological experts are called upon to make determinations regarding competency, dangerousness, vulnerability, parental fitness, custody, eye witness testimony, personal injury, product liability, sentencing, and rehabilitation. They are expected to predict future behaviors of criminals, victims, parents and children. They are even asked to prescribe laws based on their professional, consensual knowledge of mental functioning and the development of personality and character. Legal psychoexpertise is a fraud. My current interest revolves around determining what passes for theory and research in psychology, to expose what actually comprises the scientific knowledge base of the expert witness in psychology.

MICHAEL E. HASSELMO (B)

Professor
D.Phil., University of Oxford, England

Research in my laboratory concerns the role of neuromodulators in cortical function, with an emphasis on acetylcholine and norepinephrine. Neurophysiological techniques are used to analyze effects of modulators on synaptic and neuronal activity in cortical circuits, and computational modeling is used to link this physiological data to behavior. Behavioral experiments are designed to test predictions of the computational models. Areas of focused research include episodic memory function, theta rhythm dynamics in hippocampal formation and the olfactory system. Research addresses physiological effects relevant to Alzheimer's disease, schizophrenia and depression.

STEFAN G. HOFMANN (C)

Professor
Ph.D. University of Marburg, Germany

My primary research interests are in the treatments and psychophysiology of anxiety and other emotional disorders. Specifically, I am interested in the mechanism of treatment change and the factors that predict treatment success. I am also interested in the biological correlates of different emotional states. For more information, please visit www.bostonanxiety.org.

MARC HOWARD (B)

Associate Professor

Ph.D., Brandeis University

Research investigates topics centered on episodic memory, the ability to remember specific events situated in a particular spatiotemporal context. We develop mathematical models of cognition and evaluate them against both behavioral and neurophysiological data, providing a bridge between cognition and systems-level neuroscience. We use a combination of mathematical, computational and behavioral tools to evaluate our hypotheses. At present, our efforts are focused on developing and evaluating a unified mathematical framework to describe how the brain constructs the spatial and temporal context believed to underlie episodic memory. This model appears to have far-ranging implications, leading to research interests in statistical learning, semantic memory, time perception, and reward systems.

KATHLEEN KANTAK (B)

Professor

Ph.D., Syracuse University

My research uses animal models to conduct translational research related to drug addiction, attention deficit hyperactivity disorder and their co-morbidity. Using intravenous drug self-administration procedures in rats, I investigate how multiple memory systems regulate drug-seeking and drug-taking behavior as well as how drug exposure influences the neurocognitive functioning of multiple memory systems. In addition, I investigate how cognitive-enhancing therapeutics may be useful to facilitate extinction learning for drug-conditioned cues and attenuate drug relapse. Other studies focus on evaluating the frontostriatal and medial temporal lobe neurocognitive deficits in rats with an ADHD phenotype and their response to medications as well as comorbidity between ADHD and vulnerability to drug addiction. In the context of all this research, I collaborate with other investigators to conduct image analysis or to understand the neurochemical and molecular correlates of these disorders and their treatment.

DEBORAH KELEMEN (DS)

Associate Professor

Ph.D., University of Arizona

My primary research area is cognitive development. Current interests focus on children's developing conceptions of the living and non-living natural world, understanding of intentional agency and reasoning about artifacts and object function. Other projects are exploring the development of social categories and the role of parental input in children's prescientific theory-formation.

JACQUELINE LIEDERMAN (B)

Professor

Ph.D., University of Rochester

I am interested in the neural mechanisms underlying behavior and how these change in the context of development and/or disease. My training is primarily in physiological psychology. Research Interests: (1) The use of transcranial magnetic stimulation (TMS) to make inferences about whether a particular region of cortex is necessary for a specific function. I have several projects planned that have to do with visual attention and reading. This work takes place at the Beth Israel Deaconess Medical Center (2) Examination of the mechanisms underlying reading with adults with reading disability (in cooperation with the Learning Disabilities Center at B.U.) as well as with neurologically intact individuals; (3) The effect of exposure to xenoestrogens during the prenatal period; how it affects brain development in general and the development of sexually dimorphic behaviors, in particular. One population that I am working with are Faroese Islanders that eat whale blubber during pregnancy, thereby exposing their offspring to very high levels of PCBs.; (4) examination of factors underlying male vulnerability to neurodevelopmental disorder which may derive from events during the prenatal period. Teaching Interests: Developmental Neuropsychology, Neuropsychology, Physiological Psychology (with an emphasis on the human brain)

KATHLEEN MALLEY-MORRISON (DS)

Professor

Ed.D., Boston University

My general interest is in cross-cultural and cross-national perspectives on violence in families and between nations and other groups. My current research projects focus on predictors of tolerance for violence and the role of moral disengagement in allowing individuals to behave violently or endorse violence and still view themselves as moral individuals.

ENNIO MINGOLLA (B)

Professor

Director, CELEST, Center of Excellence for Learning in Education, Science, and Technology)

Ph.D., University of Connecticut

I work on development and empirical testing of neural network models of visual perception, notably the segmentation, grouping, and contour formation processes of early and middle vision in primates, and on the transition of these models to technological applications.

DAVID I. MOSTOFSKY (B)

Professor

Ph.D., Boston University

My research activities are in the area of Behavioral Medicine, and currently include topics such as: stress and its role in moderating various chronic disorders; applied behavior analysis in non mental health disorders; essential fatty acids; and neurotherapy applications to chronic disorders.

HEATHER W. MURRAY (C)

Research Assistant Professor

Ph.D., Drexel University

My research interests include examining underlying mechanisms of distress tolerance as they relate to anxiety disorders and substance use disorders. I am also interested in the study of dissemination and implementation of empirically supported treatments.

MICHAEL OTTO (C)

Professor

Ph.D., University of Mexico

My research focuses on the investigation of the etiology and treatment of anxiety, mood, and substance-use disorders. Of particular interest to me is the development and testing of new treatments, including the combination of pharmacologic and cognitive-behavioral strategies for treatment-refractory and substance abusing patients, and the modification of treatment packages for novel populations (e.g., Cambodian refugees). In addition, I am pursuing a number of translational research agendas, examining potential mediators and moderators of the efficacy of exposure-based treatments.

TIBOR PALFAI (C)

Associate Professor, Clinical Program Director

Ph.D., Yale University

My primary research interest is the role of cognitive-motivational processes in health risk behavior, including problem drinking, smoking, and eating. Specific areas of research include, (1) understanding the processes underlying successful and failed self-control attempts and (2) developing approaches to reduce health-risk behaviors among college student and medical populations.

HILDA PERLITSH (DS)

Clinical Associate Professor, MA Program Director

Ph.D., Duke University

My professional commitment is the application of psychological theory, methods and research knowledge toward improving organizational, group and individual effectiveness. Initially trained in clinical and social psychology, subsequent training has been in the areas of group and organizational behavior and community psychology. Current teaching assignments are in Industrial and Organizational Psychology and the Proseminar in Human Development. In addition to teaching, I have consulted on managing change in organizations and have conducted training in the following areas: negotiation skills, inter-group relations, team building and diversity issues. My research interests are in the social and organizational factors that affect work performance and satisfaction, women and work.

DONNA B. PINCUS (C)

Associate Professor

Ph.D., SUNY Binghamton

My primary research interests include the assessment and treatment of children's fears and anxieties; children's coping with everyday stress; risk and resilience factors affecting the development of child psychopathology; and psychological factors affecting children with medical conditions. My current research focuses on developing new treatments for children and adolescents with anxiety disorders and their families. I am also currently developing treatments for children and adolescents with comorbid conditions, such as anxiety and sleep disorders.

ELIZABETH PRATT (C)

Clinical Assistant Professor

Ph.D., Rutgers University

Research focuses on studying the treatment of eating disorders at the Center for Anxiety and Related Disorders. We are conducting a randomized controlled trial of two forms of cognitive behavioral therapy for bulimia nervosa and personality disorders. We are conducting a smaller controlled trial of integrative treatments for bulimia nervosa. Students in our lab are studying the treatment of anorexia nervosa, neuropsychological factors in eating disorders, relational functioning in eating disorders, and the stigma of the eating disorder diagnosis.

MARK RICHARDSON (C)

Assistant Professor

Ph.D., University of California, Los Angeles

My primary clinical and research interest address neurobehavioral sequelae of a variety of acute and chronic conditions among adults, including: HIV disease, depression, traumatic closed head injury and substance abuse. Current interests also include assessment of cognitive abilities and personality functioning, clinical judgment, and ethnicity and culture as risk- and protective factors in psychopathology.

KIMBERLY SAUDINO (DS)

Associate Professor

Ph.D., University of Manitoba

My primary research area is infant and child temperament with a focus on activity level. I am particularly interested in etiology of individual differences in the development of temperament, and much of my research involves the study of twins in an effort to disentangle the contributions of genetic and environmental factors to the development of temperament and related behaviors. A second focus of my research is on the measurement of temperament in childhood; specifically, the factors that influence the validity of parents' ratings of their child's temperament.

DAVID SOMERS (B)

Associate Professor

Ph.D., Boston University

The Perceptual Neuroimaging Laboratory employs functional MRI, psychophysics, and computational modeling to investigate the mechanisms underlying perception, attention & short-term memory. Our studies focus on basic science questions about the functioning of the normal human brain. We are particularly focused on questions of how we perceive, attend to, and remember multiple objects at the same time. Studies focus on visual, auditory, and/or tactile perception and cognition.

CHANTAL E. STERN (B)

Professor, Brain, Behavior and Cognition Program Director

D. Phil., University of Oxford, England

Research in my laboratory focuses on mapping the human brain using functional magnetic resonance imaging (fMRI). Our primary goal is to study out how the normal brain encodes, stores, and subsequently recognizes visual, spatial, and verbal information. In addition to studies of normal short-term and long-term memory processes, we use behavioral testing and fMRI to study normal aging, Alzheimer's disease, and HIV-related dementia. Graduate students within the Cognitive Neuroimaging Laboratory carry out their research within the psychology department at Boston University and also at the Massachusetts General Hospital NMR center.

AMANDA TARULLO (DS)

Assistant Professor

Ph.D., University of Minnesota

My research focuses on the effects of early experiences on the neural and behavioral development of infants and young children. In particular, I examine the ways in which early life stress shapes the developing brain as well as the neurodevelopmental mechanisms that link early life stress to child outcomes. Using electroencephalogram (EEG) measures, I identify patterns of infant brain activity that predict socio-emotional and cognitive functioning in early childhood. I study both typically developing and at-risk populations in order to explore both normative and atypical neurodevelopmental processes. One aim of this research is to understand why some children who experience early life stress are resilient and fare quite well, whereas others have enduring developmental problems.

HEATHER THOMPSON-BRENNER (C)

Research Assistant Professor

Ph.D., University of Michigan

My research focuses on the treatment of eating disorders, including integrative treatments for individuals with both eating problems and mood, anxiety, or personality disorders. Additional research focuses on the influence of education, race/ethnicity, and gender on eating disorder treatment access and outcome, as well as cultural differences in body image ideals. Other studies in our lab concern the treatment of anorexia nervosa, the assessment of binge eating, and the stigma of an eating disorder diagnosis.

MARTHA TOMPSON (C)

Associate Professor

Ph.D., University of California, Los Angeles

My research focuses on the role of the family in promoting individual mental health. I have examined adults and children with a variety of mental disorders and their families. I am particularly interested in family processes and family treatment among individuals with depression, bipolar disorder and schizophrenia. The goal of this work is to identify strengths and deficits in family systems, which may impact on the course of mental disorders, and to develop programs for helping families cope with these disorders. My most recent projects include: 1) designing and implementing family-based treatment for preadolescent children with depressive disorders; 2) examining the role of maternal depression and family relationships in the development of depression vulnerability in youth; and 3) understanding the impact of family psychoeducationally-focused treatment for adults with bipolar affective disorder.

TAKEO WATANABE (B)

Professor

Ph.D., University of Tokyo

Areas of Interest: (1) perceptual learning, (2) visual plasticity and (3) consciousness. My current research is concerned with how the brain is changed by perceptual experience and how the brain processes subliminal stimuli using psychophysical methods and brain imaging. I teach courses in Sensation & Perception and consciousness. I have published 60 papers including 3 papers in Nature, 1 paper in Science, 1 paper in Nature Neuroscience, 2 papers in Neuron, 6 papers in PNAS and 6 papers in Current Biology.