2023-2024 URC Award Recipients

Arts: Visual and Performing

David Guillermo Barba, MFA

ASSISTANT PROFESSOR, ECAS, FILM AND MEDIA

Volver [Return]: a documentary feature film about returnee migrants to Mexico

Three Mexican women, brought to the United States as children and raised as Americans, struggle to rebuild their lives in Mexico following deportation or voluntary repatriation. This feature documentary film focuses on the lived experiences of Viridiana, Maria and Valentina who grew up in Minnesota, Colorado and Georgia respectively. As young adults, they returned to a country they barely knew, struggling to adapt to language and customs foreign to them. Living in different corners of Mexico, the three women's journeys have points of connection and divergence, emblematic of the hundreds of thousands of stories of those who depart the United States, leaving family and friends behind.

Viridiana (33) lives in the small rural town of Quebrantadero, Guerrero with her two boys. Maria (32) lives in the suburbs of Mexico City in Zumpango, State of Mexico with her partner Jorge and her pit bull Max. Valentina (38) lives in La Paz, Baja California Sur, with her two children. Viridiana and Maria grew up undocumented in the US, while Valentina was there on a visa. The mothers of all three women live in the United States, as does much of their immediate family. Their English language skills have played a critical part in being able to find steady employment and rebuild their lives.

Julio Medina, Master of Fine Arts

ASSISTANT PROFESSOR, ECAS, DANCE

Futuristic Dances: Mexican Cosmology in Motion

My project is a series of events showcasing Mexican/Aztec culture and dance in Atlanta. This series would involve a weekend festival during Dia de Los Muertos, a dance concert premiering an evening-length choreography, and a short dance film I choreograph. This project launches a reclaiming of my indigenous identity as I choreograph contemporary or experimental dances based on Mesoamerican mythology and Chicano studies. Often tradition is separate from the modern, but I plan to hold space for communities to co-exist: traditional Aztec and Folklorico alongside contemporary dance.

My choreographic research draws inspiration from scholarship, film, and documentaries, encouraging a reimagining of Mexican identity and colonized history. In studying Chicano scholarship, my identity has shifted. I now perceive myself as native, understanding that my ancestors were indigenous to Mesoamerica pre-Columbus. I have developed a penchant for

Aztec cosmology and mythology in reclaiming my indigenous identity; this is the crux of my movement research. I aim to investigate the Aztec pantheon of gods and goddesses, such as Quetzalcoatl (the feathered serpent) and Coatlicue (earth goddess). Ultimately, my choreography will reflect a spirituality informed by Mexican mythology, centered around an ability to listen to the earth and nature to maintain connectivity to the universe. The nature of the movement research is conceptual, metaphysical, and futuristic. Still, this project will further the artistic discourse and elevate the representation of the latine experience in the United States. The choreographic work and short film will enter national and international festivals for presentation on completion.

Biological and Health Sciences

Jimena Andersen, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, HUMAN GENETICS

Investigating neuron-OPC interactions in a 3D human model of the spinal cord

Oligodendrocyte progenitor cells (OPCs) can respond to demyelinating injury by differentiating into new myelinating oligodendrocytes. Neuronal activity has emerged as an important factor modulating OPC proliferation, migration and differentiation. However, the precise nature of neuron-OPC interactions in the spinal cord is not known. Understanding how neurons in the spinal cord regulate OPC behavior is a key step in promoting remyelination in disease conditions.We previously described cortico-motor assembloids, a human induced pluripotent stem cell (hiPSC)-derived platform to study cell-cell interactions in the cortico-motor pathway. Our recent preliminary data suggests that cortico-motor assembloids are a powerful model to study neuron-OPC interactions. Based on this work, we hypothesize that neurotransmitter signaling modulates OPC differentiation and myelination in the human spinal cord through specific neuron-OPC interactions. Here, we aim to dissect the role of these neuron-OPC interactions. We will use a combination of optogenetics, pharmacology and monosynaptically-restricted rabies virus tracing to pinpoint relevant interactions. Specifically, we will 1) investigate the role of glutamate, GABA and acetylcholine in OPC proliferation, differentiation and myelination, and 2) map in vitro spinal cord OPC connectivity. Altogether, this work will highlight neuronal mechanisms that could be leveraged to promote remyelination in the future.

Byron Au-Yeung, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, Immunology MEDICINE

Identification of a subpopulation of naive T cells with increased colitogenic potential in human and mice

Inflammatory Bowel Disease (IBD) encompasses Ulcerative Colitis and Crohn's Disease, conditions characterized by chronic inflammation of the gastrointestinal tract. Genetic studies and animal models strongly suggest that T cells, one type of adaptive immune cell, promotes the inflammatory immune responses that occur in IBD. However, T cells are a functionally diverse population of cells and it is still unclear which T cells are responsible for initiating the

immune responses that lead to the development of IBD. Our preliminary studies were the first to identify two types of “helper” T cells with the use of genetically modified mouse models. We found that Population “A” appears to induce a severe form of colitis and Population “D” induces much less severe colitis, in a mouse model of IBD. In this proposal, we aim to better understand the functional properties of Population “A” and “D” cells from mice and humans. We hypothesize that Population “A” cells are a hyperactive cell type, whereas Population “D” cells are protective. We plan to isolate, then compare the behaviors of Population “A” and “D” cells to better understand how each promotes immune responses. We propose that the functions of “A” and “D” cells are balanced in a healthy immune response and that tipping the balance toward Population “A” function could increase the susceptibility to IBD. These studies will provide a framework for understanding of two types of helper T cells that are not well characterized, and their potential relationship to the chronic inflammatory immune responses in IBD.

Christopher Beck, PhD

PROFESSOR OF PEDAGOGY, PRACTICE OR PERFORMANCE, EMORY COLLEGE OF ARTS AND SCIENCES, BIOLOGY

Development of Student Science Identity in Introductory Biology

The degree to which students identify as scientists (science identity) is known to impact persistence in the sciences. As a result, gaining a more complete understanding of the development of student science identity, especially in introductory science courses, is important. In a previous study across our two-semester, introductory biology sequence at Emory, we found that students begin with intermediate science identity that increases during the first semester and only increases very slightly during the second semester. Our previous work and that of others have collected data on coarse timescales (i.e., beginning of the semester as compared to end of the semester), but the dynamics of science identity within a semester is unclear. As a result, the overall goal of this proof-of-concept study is to explore the potential of using short surveys delivered by text message every other week to examine variation in and change in science identity throughout a semester of introductory biology. By collecting data on shorter time intervals throughout a semester of introductory biology, the proposed study will address the following specific questions: (1) how much does science identity vary within a semester; (2) how does science identity change over time; and (3) what factors might lead to changes in science identity. The preliminary data collected in this study would be used as the basis of a proposal to the National Science Foundation to study the development of science identity across introductory science courses at Emory or in introductory biology courses at other universities with different student demographics.

Victor Faundez, PhD

PROFESSOR, SCHOOL OF MEDICINE, CELL BIOLOGY

Mitochondrial Alzheimer's Disease Risk Loci Control APOE Gene Expression

This proposal focuses on a pathway where genetic defects affecting mitochondria result in an upregulation of the secreted factor apolipoprotein E (APOE). The APOE E4 allele (APOE4) is the main genetic risk factor for Alzheimer’s disease. Thus, mechanisms controlling the expression of APOE may be paramount to the pathogenesis of Alzheimer’s disease. We posit

that disruption of the respiratory chain modulates the expression of APOE. This model is based on our observation that genetic disruption of the electron transport chain increases the expression and secretion of APOE up to 49-fold. The relevance of this pathwat to disease is highlighted by the fact that mutation of two genes required for normal complex I respiratory function, NDUFS3 and NDUFAF7, result in large increases in APOE secretion. These two genes encode mitochondrial proteins that belong to novel and robust Alzheimer's disease genetic risk loci. The significance and impact of our model stems the integration of four genetic risk factors for Alzheimer's disease (APOE, NDUFS3, NDUFAF7, and COX7C) with age into a novel mechanism where mitochondrial dysfunction is the most upstream step. By doing so, we upend current canonical views that mitochondrial dysfunction is merely a terminal event in Alzheimer's disease. Rather, we propose that mitochondrial defects by itself could drive APOE-dependent pathology and disease progression/severity. Here we will test the hypothesis that dysfunction of the respiratory chain upregulates APOE expression as a protective mechanism using iPSC-derived human neurons and astrocytes carrying APOE alleles that modify the risk of Alzheimer's.

Shannon Gourley, PhD

ASSOCIATE PROFESSOR, NATIONAL PRIMATE RESEARCH CENTER

Mechanisms supporting the development and reliance on habitual routines in young organisms

Habits are familiar, routinized behaviors triggered by cues in the environment. Young children are experts in habitual behaviors – they learn routines rapidly, and readily link them to external stimuli like the time of day (for instance, a bedtime routine). What remains poorly understood, however, are the neural mechanisms that endow young children with such proficiency in establishing and adhering to habits. New knowledge could be enormously helpful in understanding why some neurodevelopmental illnesses like autism spectrum disorders (ASD) are characterized by aberrant behavioral rigidity and habit compliance. Routines take on greater-than-typical salience, and their violation is distressful. These qualities create perpetuating and self-reinforcing cycles of behavior that imperil the quality of life of children with ASD and their caregivers.

In Aim 1, we will test the hypothesis that ventral hippocampal (vHC)-to-central nucleus of the amygdala connections stabilize early in life and are necessary for habitual action in young, typically developing mice. In Aim 2, we will selectively delete 2 high confidence ASD risk genes, Chd8, encoding Chromodomain helicase domain 8, and Syngap1, encoding Synaptic Ras GTPase activating protein 1, in excitatory neurons in the developing vHC. We will test the hypothesis that gene deletion will induce over-adherence to habits and trigger markers of neuron hyper-excitability. We will then use combinatorial viral vector strategies to simultaneously dampen the excitability of vHC neurons to mitigate habit biases. Positive outcomes would suggest that vHC hyper-excitability is a common mechanism by which mutations with distinct molecular consequences induce over-reliance on routines in ASD.

Seong Su Kang, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, MEDICINE, PATHOLOGY AND LABORATORY MEDICINE

BDNF/C/EBPβ axis regulates the major pathogenesis in Alzheimer's Disease

Alzheimer's disease (AD) is characterized by the accumulation of the β-amyloid peptide (Aβ) and phosphorylated or cleaved forms of the microtubule-associated protein Tau (MAPT), in addition to chronic neuro-inflammation. It has been well known that BDNF (brain-derived neurotrophic factor) has a protective role against AD pathogenesis as well as neuronal survival. However, its molecular mechanism related to the inhibition of AD is not clear. C/EBPβ (CCAAT-enhancer Binding Protein-β) is induced by pro-inflammatory cytokines that are chronically upregulated in AD brain. In our preliminary study, we found that BDNF deprivation upregulates C/EBPβ, correlating with the upregulation of delta-secretase, which is asparagine endopeptidase (AEP, LGMN) and cleaves both amyloid-beta precursor protein (APP) and Tau in the aged brains and human AD. Moreover, delta-secretase is regulated by C/EBPβ during the aging process and depletion of delta-secretase substantially abolishes senile plaques in AD mouse model expressing 5 familial AD mutations (5xFAD), and neurofibrillary tangles (NFT) in Tau P301S AD mice expressing mutant human MAPT, leading to prominent restoration of synaptic plasticity and cognitive functions. Therefore, we presume that BDNF/C/EBPβ axis may play a critical role in AD pathogenesis and progression during aging. The objective of this proposal is to test the hypothesis that BDNF/C/EBPβ axis regulates all of the major pathogenesis including senile plaque, NFT, and neuro-inflammation in AD via regulating delta-secretase expression. Successful completion of the proposed study will lead to the identification of a novel drug target for treatment of AD.

Aubrey Kelly, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, PSYCHOLOGY

OXYTOCIN-MEDIATED NEWCOMER ACCEPTANCE INTO AN ESTABLISHED GROUP

A sense of belonging is crucial to human health and having a weak tie to a community or failing to become accepted into a group results in a deterioration in physical and mental health or even directed violence toward the exclusive group. How do we successfully join new groups? Here I propose to use the highly prosocial spiny mouse to examine behavioral and neural correlates that enable individuals to successfully integrate into a community. I will (1) identify behavioral patterns that enable a newcomer to successfully join a new group and (2) use [wired] fiber photometry to determine how oxytocin modulates social learning that facilitates those behaviors. Additionally, I will validate a highly innovative new tool in spiny mice – wireless fiber photometry. This will allow us to conduct studies examining the neuroscience of collective mammalian group behavior in an unprecedented manner. This proposal will specifically examine the brain and behavior of the newcomer; however, this data will serve as preliminary data for an NIH grant that will propose to examine not only the brain and behavior of the newcomer, but also the brain/behavior of all members of the group. Identifying behavioral and underlying neural mechanisms that promote group acceptance and stability will not only help us develop behavioral strategies that can promote the establishment and stabilization of our own communities, but also behavioral and possibly even neural therapies that could help individuals who struggle to fit in and acquire a sense of belonging.

Rebecca Levit, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, MEDICINE

Very early drivers of neutrophilic inflammation in cardiac ischemia-reperfusion

The immune system profoundly influences the recovery of the heart after myocardial infarction (MI). This is especially true in the modern era where the standard of care is reperfusion, which not only re-supplies tissue with oxygen and nutrients, but also delivers innate and adaptive immune cells to the myocardium. In humans, neutrophils are the most common white blood cell (WBC) in circulation and rapidly infiltrate the heart after reperfusion. Neutrophils can directly damage the heart as well as influence downstream inflammatory events. We performed single cell RNA sequencing of neutrophils 24 hours after reperfusion in mice. We identified a unique population of neutrophils with a gene signature responding to type I interferons (IFN-I). IFN-I are cytokines best known for activating the anti-viral immune response by binding to the type I IFN α and β receptor (IFNAR) leading to transcription of hundreds of downstream 'interferon sensitive genes' (ISGs). Previous studies have investigated the IFN-I response in MI using global knockout mice or chemical inhibitors, implicating macrophages as key responding cells. But the global nature of the models may have missed the role of neutrophils (1-3). The overarching hypothesis of this proposal is: Neutrophil response to IFN-I is a key early driver of neutrophilic inflammation culminating in impaired cardiac function after MI/R. In this proposal we will study mice with neutrophil-specific knock down of IFNAR. We will evaluate their functional recovery after MI/R and downstream inflammatory events to explore this as a neutrophil-targeted therapy after MI/R.

Cheryl Maier, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, PATHOLOGY AND LABORATORY MEDICINE

Defining the Impact of Therapeutic Plasma Exchange on COVID-19 via Plasma Proteomics

Despite tremendous strides in preventing severe COVID-19 through vaccines and antivirals, strategies for managing critical illness in those patients who nevertheless develop severe COVID-19 remain insufficient, largely due to limited understanding of the mechanisms driving systemic endotheliopathy and microvascular thrombosis that lead to organ failure and death. We previously reported increased blood viscosity from elevated fibrinogen in critically ill COVID-19 patients that was associated with disease severity and thrombosis, which led to the development of COPLEX, a small, non-funded randomized control trial investigating the use of therapeutic plasma exchange (TPE) to decrease fibrinogen levels and correct blood viscosity. Patients receiving TPE demonstrated significant normalization in a multitude of laboratory and clinical parameters and a lower incidence of death, and plasma samples were banked for later study. Separate mechanistic studies have recently uncovered a pathologic role of fibrinogen in promoting red blood cell aggregation that causes endothelial glycocalyx degradation in COVID-19. Thus, TPE may provide benefit in COVID-19 not only by decreasing blood viscosity but by restoring the biophysical properties of its cellular constituents, which will be reflected in plasma proteomic profiles. Here we propose to define the proteomic alterations in COVID-19 patient plasma following TPE and to determine any association between identified analytes with clinical and sociodemographic attributes already available in our COPLEX REDCap database. To our

knowledge, this will be the first untargeted proteomic characterization of patient plasma after TPE in any patient population, thus providing data relevant to a variety of diseases for which this intervention is used.

Malavika Murugan, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, BIOLOGY

Understanding the role of excitation/inhibition balance in regulating reward representations in the medial prefrontal cortex of CNTNAP2-/- mice

In the last 20 years, the number of children diagnosed with autism has grown by 175%. Today, 1 out of 100 children worldwide is diagnosed with autism. One of the main challenges people with autism face is difficulty with social interactions. Studies suggest that this is caused by an impaired ability to enjoy social interactions and find them rewarding. Evidence suggests changes in the brain's reward processing system might underlie these behavioral differences observed with autism. Specifically, there may be an imbalance in the way neurons in the medial prefrontal cortex communicate with each other in rewarding contexts. However, the mechanisms through which circuit-level changes in the mPFC relate to altered social behavior in people with autism remain poorly understood. The goal of this proposal is to understand how the brain processes reward in a mouse model of autism. In Aim 1 of this proposal, we will investigate the extent of similarities and differences in the reward representation between social and non-social reward in the excitatory and inhibitory neuron populations in the mPFC of CNTNAP2-/- and wildtype using cellular resolution calcium imaging performed in a transgenic mouse model. In Aim 2, we will design an integrate-and-fire network model of the mPFC capable of replicating the response profile observed in Aim 1, and modify the network properties to simulate an autism-like connectivity. Thus, this proposal will provide mechanistic insight into the circuit-level properties that lead to altered reward representations in mouse models of autism.

Donald Noble, PhD

INSTRUCTOR, SCHOOL OF MEDICINE, CELL BIOLOGY

Respiratory rate conditioning for pain control after spinal cord injury

Up to 70% of spinal cord injury (SCI) patients experience pain, yet there is no cure and pharmacological manipulations are often inadequate, only slightly reducing pain intensity. Both SCI and the ensuing pain are associated with respiratory complications including increased respiratory rate (RR), which in many conditions is associated with worsened clinical prognosis. As a fundamental physiological variable that can be voluntarily regulated, breathing has tremendous untapped potential as both a therapeutic intervention target, and a predictor of clinical outcomes in pain research. Strong evidence in humans suggests slowing breathing reduces pain; however, a mechanistic understanding of how this occurs is hindered by a lack of physiologically accurate, clinically-translatable animal models. To fill this gap in knowledge, using a one-of-a-kind rodent model and innovative monitoring technology, we showed that rodents could learn to slow RR (sRR) by operant conditioning, and sRR prevented development of hypersensitivity in an inflammatory pain model. In rats and mice, we also recently found respiratory abnormalities after SCI, including acutely increased rate and variability of breathing. Furthermore, truncal mechanical stimulation evoked increases in RR at chronic time points following SCI but not sham surgery, and acute increases in resting RR predicted the

development of mechanical hypersensitivity. Building on these results, proposed studies investigate (i) trained slow RR as a strategy to block or reduce pain, and (ii) the reversibility of evoked pain activity in key neural circuits with sRR or chemogenetics. We envision studies leading to clinical uptake of wearable sRR technologies and enhancing pain management.

Shoichiro Ono, PhD

ASSOCIATE PROFESSOR, SCHOOL OF MEDICINE, PATHOLOGY AND LABORATORY MEDICINE

Functional analysis of coronin in assembly of muscle contractile apparatuses

Contractile forces produced by muscle tissues are essential for vital activities of animals, including humans, such as body movement, respiration, blood circulation, and food digestion. The biochemical basis of muscle contraction is the interaction between actin and myosin, which generates mechanical forces. For proper function of muscle, actin and myosin, together with many accessory components, need to be assembled into highly ordered contractile apparatuses, such that the actin-myosin interaction is tightly regulated to produce contractile forces in an efficient manner. Defective assembly of muscle contractile apparatuses can cause severe diseases in skeletal or cardiac muscles. However, the assembly mechanism of the contractile apparatuses is largely unknown. Our laboratory primarily investigates the regulatory mechanism of actin dynamics in muscle using genetics and cell biology in the nematode Caenorhabditis elegans and biochemistry using pure proteins. C. elegans is an excellent model organism for muscle cell biology because their body wall muscles share structural similarities with mammalian skeletal and cardiac muscles. By combining biochemical approaches, we have identified several key regulators of actin dynamics and gained insight into the conserved mechanism of actin regulation during assembly and maintenance of the muscle contractile apparatuses. In this URC project, we propose to characterize functions of coronin as a new actin regulator in muscle. Preliminary data suggest that a coronin gene is highly expressed in muscle and essential for muscle function in C. elegans. Results from this URC project should help us to strengthen the premise for applications to extramural funding.

Nisha Raj, PhD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, HUMAN GENETICS

Interrogating neurogenic defects in complex assembloid models of fragile X syndrome

Since the discovery of the causal mutation in FMR1, enormous strides have been made in understanding fragile X syndrome (FXS), however, an effective treatment for the disorder is still lacking. We believe that a major gap in the preclinical phase may have been the lack of a developmentally relevant, physiologically representative human neuronal model. This proposal aims to address this by providing a human cellular platform with robust cellular and molecular readouts to test the efficacy of therapeutic interventions in FXS. We will use patient-derived induced pluripotent stem cells (iPSCs) that we can differentiate into organoids, which are 3D cultures of neural cells that recapitulate several features of human brain development in a dish. This technology provides an unprecedented opportunity to model human neurological disorders and potentially develop patient-specific therapeutics. Here, we propose to employ a novel

assembloid system to study cell fate commitment of excitatory and inhibitory neurons as well as interneuron migration in FXS (Aim 1). We will further use organoids to determine the corrective effects of targeting the microtubule-associated cytoskeletal protein doublecortin (DCX), which is an mRNA target of FMRP as well as a downstream target of the cAMP intracellular cascade, which is compromised in FXS (Aim 2). These findings will provide critical insight into the underlying pathomechanisms in FXS, as well as into the biology of FMRP during early human development. Ultimately, this may aid in the development of targeted patient-specific therapeutic strategies that have broader implications for other neurodevelopmental disorders.

Patricia Zerra, MD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, PATHOLOGY AND LABORATORY MEDICINE

IgM drives factor VIII-specific CD4 T cell proliferation in mice with hemophilia A

Roughly 20-30% of patients with severe hemophilia A develop neutralizing anti-factor VIII (FVIII) antibodies, known as inhibitors, following the administration of FVIII. Once a patient develops inhibitors their therapeutic options are limited, and there is an increased risk of morbidity and mortality1-10. Our failure to predict and prevent inhibitor formation largely stems from a fundamental lack of understanding about the key immune pathways that initiate this process. The goal of the proposed work is thus to identify key initiating immune factors that regulate anti-FVIII antibody formation, which will allow us to understand the underlying immune response to FVIII and then prevent this process in at-risk patients.

Using a pre-clinical model, we have identified marginal zone (MZ) B cells as a key initiating immune population in inhibitor development. Our current research aims to determine mechanisms by which MZ B cell contribute to propagation of the immune response to FVIII. Specifically, we aim to define the mechanisms by which IgM antibodies generated by MZ B cells facilitate T cell activation and proliferation. To do this, we will examine the immune response to FVIII in mice that lack IgM antibodies as well as the impact of anti-FVIII IgM antibodies on the localization of infused FVIII in the spleen of mice with hemophilia A.

The overall impact of this work will be to provide new insight into key aspects of inhibitor formation as well as an important framework to develop rational approaches to prevent inhibitor development following FVIII infusion in patients with hemophilia A.

Humanities

Maren Jill Adams, PhD

ASSOCIATE PROFESSOR, OXFORD COLLEGE

New Technologies of Transmission in Post-Bomb Japan

Wartime memories, clearly, are not “dead and gone,” but their landscape is changing as first-hand witnesses die and new generations take over their stories. By the 70th anniversary, in 2015, of the bombings of Japan, the first Atomic Bomb Legacy Successors (or “Memory

Keepers") in Hiroshima and Nagasaki began sharing stories they had trained with first-hand-witnesses to learn and perform, and in 2022 the Legacy Successors program expanded further. To date, English language scholarship has overlooked the memorial innovations of the Legacy Successor program. Yet the program has opened remarkable new terrain for those interested in memorial transmission by combining the authority of the first generation with the affective power of latecomers' live performances through a variety of memorial technologies.

The URC grant will allow me to complete fieldwork in Japan with Hiroshima and Nagasaki Legacy Successors, study their methods during live performances and trainings, and conduct interviews with performers, audiences, and staff. My project frames the work of the legacy successors as "pedagogical" following my earlier (2022) theorization of memorial pedagogy. I argue that the pedagogy of the Legacy Successors produces crosses generations while transforming them. I suggest that the key to these memorial methodologies—these "technologies of transmission"—lies in what recent scholars term "affective witnessing," through which I describe how the Legacy Successor teachers impact their audiences through cultivated methods of embodied exchange. Overall, the project offers a new pedagogical model of transgenerational memorial transmission that targets audiences at further temporal and spatial remove from wartime events.

Matthew H. Bernstein, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, FILM & MEDIA STUDIES

Columbia Pictures

In 2023, I will complete with my co-author, the independent scholar Dr. Eddy von Mueller, a comprehensive history of Columbia Pictures. As of January 2023, we have written over half of our 8 chapters; we plan to complete the remaining chapters by early mid-summer and begin revisions late summer. I have written the chapters on the studio's classical era (1924-1958, when founder Harry Cohn died); Dr. Mueller has written the chapters on Columbia's history since; and we exchange and revise each other's work constantly.

I seek a single course release to enable me to complete this work, for the manuscript is due in December 2023. The book will be published in 2024, the centennial of Columbia's founding. We have an advance contract in Routledge's Hollywood Centenary Series, which has commissioned new histories of many major studios (e.g, MGM, Paramount, Universal, etc.): https://www.routledge.com/The-Routledge-Hollywood-Centenary-Series/book-series/RHC

Columbia Pictures is an example of Hollywood business history, based on an array of primary documents; we focus on production policies in relation to the studio's creative talents (directors, screenwriters and stars)--and beginning in the 1950s, its creative partnerships. The importance of this work resides in Columbia's fascinating history, from Frank Capra's populist comedies of the 1930s to its contributions to today's blockbuster franchise era (e.g. the Spiderman series), and our exploration of how its films speak to American and international audiences. No one has ever written such a full account; we aim for ours to be definitive.

Bumyong Choi, PhD

SENIOR LECTURE, EMORY COLLEGE OF ARTS AND SCIENCES, RUSSIAN AND EAST ASIAN LANGUAGES AND CULTURES

Examining the Impact of Critical Race Pedagogy on Korean Language Teachers and Learners

The proposed research project aims to investigate the impact of Critical Race Pedagogy (CRP) on the perceptions and understanding of diversity, equity, and inclusiveness (DEI) among Korean language teachers and learners. The study addresses three key research questions: 1) What are Korean teachers' perceptions regarding CRP and DEI practices in their teaching in the United States and Korea? 2) What are Korean learners' perceptions on DEI in their classroom (language learning?) in the United States and Korea? 3) How do people belonging to minority groups in the United States and Korea want to be represented in foreign language classrooms?

The study will use a mixed-methods approach, including surveys, focus group interviews, and observations of teachers' working groups, to collect data from Korean language teachers and learners. The data will be analyzed to understand the perceptions of CRP in the teaching process and the understanding of diversity, equity, and inclusiveness in the classroom. Additionally, minority group members in the United States and Korea will be interviewed to understand their perspectives on representation in foreign language classrooms.

The research aims to fill a gap in the literature by examining the impact of CRP on the perceptions and understanding of DEI among Korean language teachers and learners, and to provide specific, realistic and feasible procedures for incorporating CRP principles in Korean language education. The findings have implications broadly in foreign language education in both the United States and Korea.

Anouar El-Younssi, PhD

ASSISTANT PROFESSOR, OXFORD COLLEGE

The Experimental Turn in the Moroccan Novel (1974-1989)

The impact of post-1960s immigration on American Christianity and religious life will likely be more extensive than the previous, predominantly European, wave that peaked about a century ago. In both cases the vast majority of new immigrants are Christian. But the current wave of immigrants is more numerous, more diverse (in terms of national origin and religious traditions), overwhelming non-white, and more connected to global networks. Scholarly assessment of the long term religious contribution of new Christian immigrants is limited. Yet, the substantively Christian character of America’s new immigrants has significant bearing on analyses of America’s shifting religious landscape, including ongoing changes in religious belonging and how faith traditions contribute or respond to major developments in American society. African immigrants constitute a small but rising segment of this current wave. Despite limited scholarly attention, their growing presence and ministries factor in the browning of American Christianity (its decreasingly white character) and add new elements to debates around assimilation, racial justice, and the nature of the black Church. This project, which builds marginally on my 2008 study, investigates how African immigrants and their immediate descendants are contributing to transformations in American Christianity at a time of major transitions, including long time decline in White Christianity, resurgent Christian nationalism, growing religious pluralism, extensive demographic change, and spirited debate about America’s global influence. The

research plan incorporates appraisal of select Christian movements on the African continent (with energetic international reach) and survey of up to 100 African immigrant congregations in the U.S.

Aisha Finch, PhD

ASSOCIATE PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, WOMEN'S, GENDER AND SEXUALITY STUDIES

Cimarronas: Black Feminist Thought, World-Making, and Historical Memory in the Caribbean and Latin America

This book project, Cimarronas: Black Feminist Thought, World-Making, and Historical Memory in the Caribbean and Latin America, offers a new intellectual history of Black feminist theory and praxis in Latin America, with particular attention to the Spanish-speaking Caribbean. This project will draw from three sources: archival materials in the Spanish-speaking Caribbean; oral histories with African-descended feminist activists and scholars; and close textual readings of early feminist publications. In so doing, it seeks to map out the historical emergence of a field that is gaining increasing visibility in the US academy. This summer, I will initiate the early stages of field research for this project, beginning with archival research in Cuba and the Dominican Republic. I am requesting support to develop the book's first chapter on the ways in which Black feminist thinkers have mobilized the history of slavery and marronage to articulate their own political imaginaries. Maroonage – the widespread practice of escaping from slavery – was endemic to slave societies throughout the Americas, and has become a powerful and ubiquitous symbol for activists throughout Latin America in the current moment. In this chapter, I take a unique approach to the question of historical memory, examining archival materials that document the encounters of maroon women and fugitive communities with the colonial state. I explore what these historical experiences of captivity and self-liberation can illuminate about how contemporary Black feminist scholars and activists frame their own critiques of state violence and their dreams of freedom.

Bayo Holsey, PhD

ASSOCIATE PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, AFRICAN AMERICAN STUDIES

Tyrannies of Freedom: African Exceptionalism, Imperial Logics, and the Millennial Global Order

"Tyrannies of Freedom: African Exceptionalism, Imperial Logics, and the Millennial Global Order" examines Anglo-Atlantic constructions of Ghana as an exceptional African nation-state. It tracks the emergence and spread of such narratives since the turn of the millennium including those highlighting U.S. economic development efforts, humanitarian aid, and foreign direct investments. Politicians, media pundits and others have portrayed these projects as moral triumphs that have led to increased African freedom. In doing so, they have contributed to Ghana's reputation as a neoliberal success story and favored U.S. partner. Yet, Ghana has faced ongoing poverty and rising inequality. Moreover, U.S. interventions have in fact led to increased surveillance, endangerment, and exploitation. In this context, I argue that these

narratives play a crucial counterrevolutionary role. They serve to legitimate U.S. global hegemony in the context of continuing opposition.

The focus on the concept of freedom within these narratives is, I argue, no accident. Given Ghana's once famed status as a beacon of Black freedom, its transformation into a neoliberal success story and U.S. partner performs a powerful epistemological task. It defangs the radical potential of conceptualizations of African sovereignty. For this reason, I theorize what I call the tyrannies of freedom or, in other words, the dangerous consequences of the cooptation of the concept of freedom to describe the effects U.S. global power. In this way, my book manuscript and two related articles will contribute to the interrogation of global white supremacy and its impact on the African continent.

Arun W. Jones, PhD

ASSOCIATE PROFESSOR, CANDLER SCHOOL OF THEOLOGY

Scottish Subjects in North Indian Kingdoms, 1866 – 1947

The research project focuses on the relationship of Scottish missionaries to Indian rulers and larger society in the independent native states of Rajasthan, India, during the British imperial era, from the advent of mission work in those states in 1866 until Indian independence in 1947. Indians ruled their states due to the Empire's strategy of indirect rule. Using data gathered from archives in Scotland and interpreted within Hindu religious and political frameworks, the project argues that the Indian rulers, not the British Empire, were paramount in setting the terms on which the missionaries could carry on their work in those states. The rulers, moreover, governed their kingdoms according to Hindu understandings of royal government, in which service providers (traditionally nobles with standing armies and priests of religious institutions) were incorporated into the kingdom through gifts of land and money. Missionaries were service providers, albeit of another sort than military men, in the kingdoms where they operated. They offered medical, educational, and religious services to various persons and communities in society. These services were incorporated into the reign of local kings through the traditional indigenous mechanism of gift-giving. Indian rulers donated land, buildings, goods and even cash to Scottish missions and missionaries. Conversely, if missionaries were not desired by a particular ruler of an independent native state, mission work could not take place there. As the world historical context changed from the 19th into the 20th century, the relationships between missionaries and Indian rulers and society also adapted and changed.

Jinsook Kim, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, FILM & MEDIA STUDIES

Sticky Activism: Online Misogyny and Feminist Anti-Hate Activism in South Korea

This book project approaches digital media as a key battlefield in the intense cultural and political confrontations between feminists and misogynists in South Korea over the past decade. Through textual, discursive, and institutional analyses of digital media platforms (including Facebook, Twitter, and wikis) as well as in-depth interviews with feminist activists, this book

examines how new modes of feminist activism have contested the widespread yeoseonghyumo (misogyny) in that country. While it is often viewed as a global leader in information communication technology in terms of digital connectivity and saturation, I argue for a rethinking of what digitally saturated life actually entails by highlighting complex and painful efforts to create better conditions for women and marginalized groups amid the constraints and sheer volume of toxicity in digital cultures. With a theoretical basis in digital, feminist, and global media studies, this book foregrounds the concept of “sticky activism” by bringing together various academic discussions of “stickiness” to describe the circulation and accumulation of affect, capacity of media, mobilization of participants’ everyday activities, and transformation of cultural and social institutions. Thus, I discuss how certain affects stick to certain bodies and objects, how everyday activism becomes inseparable from the participants in it, and how feminist activism mediates and connects online and offline efforts. I argue that sticky activism has contributed to the formation of feminist counterpublics by articulating affective dissonance, opposing misogyny and gender violence in society and culture, and developing new feminist subjectivities in South Korea.

Sarah McPhee, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, ART HISTORY

Art & Technology: The Eye of the Etcher/Envisioning Baroque Rome

How can contemporary technology engage art produced by technologies of the past, and what can be crafted in narrative and digital form to propose an answer. This project involves the completion of a monograph, entitled “The Eye of the Etcher. A Brief Life of Giovanni Battista Falda,” and a portion of a closely related digital humanities project, entitled “Envisioning Baroque Rome.” The monograph treats the life and work of the seventeenth-century Italian etcher Giovanni Battista Falda (1643-1678) who, in a career of just fifteen years, produced two maps and 300 urban views. His collective works offer the closest record we have of a comprehensive vision of the city of Rome ca. 1676. The digital humanities project involves rebuilding this two-dimensional corpus in the three-dimensional environment of a virtual world. The projects have evolved in tandem, informing one another in essential, productive, and unexpected ways. The technologies at stake are early modern architectural etching and engraving translated and redeployed through twenty-first century modeling and texturing to create a correctly scaled, topographically accurate, walkable reconstruction of the Baroque city. Falda’s publisher, Giovanni Giacomo De Rossi, beckoned viewers of Falda’s great map to “stroll the streets with your eyes.” With the technology of the virtual world, we are able to enter and walk the streets of the historic city. A URC Grant would allow me to complete the book and to build out critical regions of Rome in the virtual world for exhibition.

Walter C. Rucker, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, AFRICAN AMERICAN STUDIES

The Birth of a Notion: A Century of Racial Violence and Mass Incarceration in America

“The Birth of a Notion” analyzes postbellum constructions of Blackness as deviant and dangerous. This notion departed, significantly, from antebellum stereotypes—namely, “Mammy” and “Sambo”—depicting enslaved peoples as obedient to white supremacist, patriarchal, and paternalistic regimes. In the collective imaginary of slavery’s apologists, emancipation precipitated the reversion of loyal servants into “untamed” African “savages”—the so-called “Brutes,” “Beasts,” and “Colored Amazons” populating the criminal “New Negro” class of the postbellum era. Ultimately, both sets of racialized tropes provided psychopolitical rationales for the twin paradoxes of slavery and Jim Crow in the land of freedom and equality.

The creation of the savage/criminal “New Negro” undergird the histories and legacies of lynching, race massacres, and mass incarceration—framing a long continuum of thought, action, “memory,” and race making in the U.S. That notions of emancipated people reverting to savage form occurred in the same decades as the march towards European imperial domination of the African continent is no coincidence. By the 1880s, the African “savage” in the European mind gave ideological support for devastating campaigns of terror and violence throughout Africa. By the 1890s, the New Negro “Brutes,” “Beasts,” and “Colored Amazons” in the American imaginary resulted in the deaths of many untold and told thousands and the dispossession and imprisonment of millions more in the following century.

Didem Uca, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, GERMAN STUDIES

Coming of Age on the Move: The Contemporary Transnational Bildungsroman in German

I am applying for URC financial support for two course releases in one semester of the 2023-2024 academic year in order to facilitate the completion of my monograph. My monograph-in-progress, Coming of Age on the Move: The Contemporary Transnational Bildungsroman in German, analyzes novels written over the past 25 years that rewrite the traditional genre of the novel of formation by centering protagonists who are first- or second-generation immigrants and refugees. These young protagonists travel, migrate, and seek refuge due to different sociohistorical, economic, political, familial, and personal factors, learning to negotiate various national, cultural, and linguistic contexts while also facing intersecting forms of marginalization due to factors such as race, religion, gender, sexuality, age, nationality, and linguistic background. As the only extended study of transnational German literature to consider age alongside other intersecting components of identity, my monograph seeks to investigate sociocultural and narratological methods through the development of an analytical framework that gives equal weight to issues of identity, politics, aesthetics, structure, and form. By featuring young protagonists coming of age amidst literal, linguistic, and figurative border crossings, these texts play on, reimagine, and burst open tropes of the traditional Bildungsroman genre and thus constitute the heretofore unaddressed subgenre: the contemporary transnational Bildungsroman in German. This book identifies and defines this emergent subgenre as one that reveals the lack of agency granted to young multiply othered protagonists in German-speaking cultures and presents their ability to self-define and self-narrate despite and against these societal limitations.

Brian Vick, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, HISTORY

The Internationalization of Science and Politics in the Nineteenth Century

This monograph project and related peer-reviewed article explore the surprisingly early development of international ties between national scientific organizations and of a form of international politics predicated on scientific authority. While the literatures on both the internationalization of politics and on scientific internationalism typically put the origins of these trends in the 1870s and see earlier institutions as national and nationalist in nature, my work shows how the connections between the international and national levels and between science and politics were integral to the formation of the national organizations already from the 1830s, with implications for how we think about the interplay of science, politics, and national borders today. The study analyzes the underlying networks and sociability as well as the scientific politicking revealed in correspondence among scientists and political activists in such causes as the movements for peace, prison reform, and abolition of slavery, and between these and government officials. While emphasizing the structural exclusions of marginalized groups from the institutions of both science and politics in this era, my research also spotlights the presence of women and people of color in these activities, alongside European-descended men. In addition to the fields of German, Austrian, Italian, and French history, the research engages with and contributes to scholarship in the history of science, international relations, and gender history. The project ultimately illuminates the place of science in the formation of the modern international order and that of politics in the formation of modern scientific institutions.

Interdisciplinary

Matthias Chung, PhD

ASSOCIATE PROFESSOR, ECAS, MATHEMATICS

John Oshinski, PhD

PROFESSOR, EMORY SCHOOL OF MEDICINE AND GEORGIA TECH SCHOOL OF ENGINEERING, BIOMEDICAL ENGINEERING

Accelerated Reconstruction of 5D Whole-Heart Cardiac MRI

Whole-heart Magnetic Resonance Imaging (MRI) is an invaluable noninvasive diagnostic tool for evaluating cardiac anatomy and function, and for monitoring the progression of cardiac diseases. The acquired raw MRI data needs to undergo a computationally expensive and ill-posed inversion process to obtain meaningful and detailed time-resolved 3D images of the heart. The respiratory and contractile movement of the heart causes artifacts that pose additional challenges to acquisition and reconstruction. Current state-of-the-art inversion techniques require more than 10 hours to reconstruct cardiac and respiratory-resolved images, rendering the technique untenable for clinical use. Our aim is to make the inversion process

viable for routine clinical use. We will utilize a recently developed novel method based on the variable projection framework. In a preliminary study, we could reduce computation times significantly. In this proposed project, we will develop a carefully curated and integrated cardiac MRI inversion method, develop computational phantoms for calibration, integrate a mathematical model to compensate for cardiac and respiratory motion, and test the method on an extensive set of clinical image data. Our research has the potential to provide a fundamental shift in the use of MRI for diagnosis and intervention in cardiovascular imaging.

Hans E Grossniklaus, MD, MBA

PROFESSOR, EMORY SCHOOL OF MEDICINE, OPHTHALMOLOGY

Ahmet Coskun, PhD

ASSISTANT PROFESSOR, EMORY UNIVERSITYH SCHOOL OF MEDICINE AND GEOROGIA INSTITUTE OF TECHNOLOGY, WALLACE H. COULTER DEPARMTNE OF BIOMEDICAL ENGINERRING,

Vasculogenic Mechanisms in Uveal Melanoma

Uveal melanoma (UM), a lethal tumor, is the most common primary ocular tumor. Mutations in UM cells that result in aggressive tumor behavior are not enough to promote tumor growth and metastasis and architectural tumor features are needed for UM progression. The most important architetural feature is UM vascularity. Vasculogenesis, the process that results in UM vascularity, will be studied in this proposal. UM vasculogenesis appears to occur from three distinct, progressive mechanisms- (1) macrophage infiltration with channel formation; (2) lining of these channels with endothelial cells and UM cells (vasculogenic mimicry, or VM), and (3) development of complex fibrovascular septae within the UM. These mechanisms are hypoxia/HIF1α dependent-macrophage infiltration/channel formation from hypoxia induced macrophage production MMP2/9; hypoxia induced VEGF production from M2 macrophages resulting in VM; hypoxia induced P4HA1/2 collagen production from UM cells and fibroblasts that result in complex fibrovascular patterns. These processes will be visualized in human UM tissue using spatiomic methods and will be reporduced in mouse models of UM.

Kimberly Hoang, MD

ASSISTANT PROFESSOR, SCHOOL OF MEDICINE, NEUROSURGERY

Francisco Robles, PhD

ASSISTANT PROFESSOR, EMORY SCHOOL OF MEDICINE AND GEORGIA TECH SCHOOL OF ENGINEERING, BIOMEDICAL ENGINEERING

Towards In-Vivo, Intraoperative Image Guided Brain Tumor Margin Assessment with Quantitative Oblique Back Illumination Microscopy

During the surgical removal of tumors of the brain, the surgeon’s goal is to remove as much of the tumor as is safely possible and still preserve normal brain. In tumors of brain itself, the edge of the tumor is quite indistinct, gradually blending into the normal brain. To address this,

neurosurgeons use the operating microscope, fluorescent dyes, and navigation with imaging tools such as CT scans and MRI scans. Though these are powerful techniques, they do not provide details of the edge of the tumor removal down to a cellular level. The investigative proposal will develop the use of a handheld microscope that is small enough that it can be held along the edge of the tumor removal margin. The technique is call quantitative oblique back illumination microscopy, or qOBM for short. This will be done in subjects who are requiring surgery and we will determine the safety of its use and the ability of this new tool to assess the edge of the tumor removal in real time as the surgeon is working. The information from this initial study in patients will be used to create a more extensive proposal seeking larger federal and foundation grant funding. Ideally, the use of this new device will allow greater extent of tumor removal and a more accurate detection of brain that needs to be preserved.

Mathematics and Natural Sciences

Connie Roth, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, PHYSICS

Solvent Vapor Setup for Controlled Solvent Quenching of Polymer Glasses

Polymer glasses are used for everything from common house-hold goods to active layers in organic light emitting diode (OLED) displays. As a nonequilibrium state, glasses have properties that strongly depend on how they were formed, exhibiting time-dependent densification and associated property changes on a logarithmic timescale, collectively known as physical aging. New processing methods such as solvent vapor annealing (SVA) use exposure to solvent vapor as a means of driving a glassy polymer film into an equilibrium-liquid state to cause self-assembly of a polymer blend or block copolymer into some desired morphology before quenching the polymer back into its glass state by solvent evaporation. Glass formation via solvent quench such as solvent casting, spin-coating, and now SVA is considerably less well-understood than the more heavily studied temperature quench where glasses are formed by thermal cooling. The proposed research aims to open up a new research area in the Roth lab investigating the properties of glassy polymer films formed by solvent quench under controlled conditions. URC funding is requested to purchase and assemble the components needed for a solvent vapor setup that will enable controlled solvent vapor conditions with ellipsometry and quartz crystal microbalance (QCM) measurements. Ellipsometry quantifies the time-dependent densification of films by measuring their thickness and refractive index, while QCM determines the mass of solvent lost. URC funds will cover salary for a recent Emory grad during her gap year to assemble and calibrate the new solvent vapor setup, as well as collect preliminary data to pursue external funding.

Emily Wall, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, COMPUTER SCIENCE

Developing Behavior Change Interventions for Responsible Data Science

Whether measuring the effects of climate change, tracking the spread of COVID-19, or approving a loan for a fledgling business, individuals and organizations all over the world are using data science tools to make informed, data-driven decisions. While data-driven practices have tremendous potential to accelerate societal and technological innovation, they can also cause considerable harm. One well-known instance occurred when the image recognition algorithms used in Google Photos labeled a black couple as gorillas. This is just one recently publicized example; however, this represents an artifact of larger systems that can cause extensive unseen harm. We posit that analysts can play a key limiting role in such injustices by exercising responsible data science practices.

The objective of this proposal is to promote responsible data science through behavior change interventions, which requires both awareness and action by analysts to make lasting change. This research innovates on prior work by the PI in bias detection and bias mitigation by leveraging the psychological theory behind behavior change and habit formation to structure the design process for proactive tools for responsible data science. In particular most recently, the PI and colleagues developed a novel theoretical framework for behavior change interventions in data science. The proposed work will expand upon this framework to design new UI components within well-known data science tools such as JupyterLab (https://jupyter.org) and Observable (https://observablehq.com) to help analysts (i) increase awareness and (ii) take action. Specifically, we propose to address this through (1) designing and developing interventions and (2) evaluating the efficacy of the interventions toward increasing awareness and imparting behavior change.

Social Sciences

Wen Wei Loh, PhD

ASSISTANT PROFESSOR, ECAS, QUANTITATIVE THEORY AND METHODS

Causal mediation analysis of multiple longitudinal mediators with unknown causal structures

Mediation analysis is widely used in behavioral, psychological, and social science research to investigate causal mechanisms. But substantive applications in many realistic settings are limited by two crucial restrictions. First, prevailing conventional methods are saddled with the strict - and often implicit - assumptions that the mediators' causal structure is completely known with no unmeasured confounding among them. These assumptions impede extensions to longitudinal designs - a standard and essential setting in social science research - when complex but unknown confounding patterns among multiple repeatedly-measured mediators must be carefully accounted for to achieve valid inference. Second, prevalent software for mediation analysis permits only linear and additive regression models. More flexible causal inferential-based methods allowing for non-linear models have thus far been limited to a single mediator. In this project, I seek to address both shortcomings, focusing on mediation analysis with multiple longitudinal mediators whose causal structures are unknown. I will extend my current research on causal mediation analysis for multiple mediators in cross-sectional designs

to longitudinal designs. I will propose novel definitions unencumbered by these causal restrictions and develop estimators that permit more flexible non-linear regression models. These cutting-edge estimation procedures will be implemented using publicly and freely available software. The software will emphasize accessibility and practical guidance for substantive researchers with little to no computer programming experience.

Alix Olson, PhD

ASSISTANT PROFESSOR, OXFORD COLLEGE

The Promise(s) of Resilience? Pessimism in Crisis

Politicians, scientists, business executives, philanthropist organizations, social workers, psychologists, university administrators, and military officials tout resilience as the savior of contemporary life. The Promise of Resilience? Pessimism in Crisis explores its proliferation as ethical injunction, policy-making mantra, democratic project, and, most vitally, aspirational value through which people appraise not only themselves, one another, and the world around them, but which political interventions are possible and desirable. This book argues that resilience is central to a neoliberal rationality that I term “promising pessimism” – the idea that the only credible promise of governance is to facilitate adaption to (and even thriving through) crisis. Through this logic, resilience becomes an immunizing practice, whereby vulnerable bodies/populations are encouraged to fold the naturalized “shocks” of advanced capitalism into their lives as “resilience capital.” This way of thinking is organized around the biopolitical vision of a “homo resilient infrastructure” –from individual to human species- that sustains and extends exploitative ways of life. While demonstrating these disturbing effects, the book argues that resilience is not reducible to a neoliberal technology of power. Indeed, contemporary social movements have adopted resilience as a generative way of thinking about liberatory praxis. As such, my critical evaluation of resilience reveals a fundamental struggle over how to be governed- and to govern ourselves- in a shared context of escalating disaster. My book proposal is under review at Columbia University Press. The URC grant will allow me time to write the final two chapters of the manuscript, and to finalize the earlier chapters.

URC – Halle Global Research

Maren Jill Adams, PhD

ASSOCIATE PROFESSOR, OXFORD COLLEGE

New Technologies of Transmission in Post-Bomb Japan

Wartime memories, clearly, are not “dead and gone,” but their landscape is changing as first-hand witnesses die and new generations take over their stories. By the 70th anniversary, in 2015, of the bombings of Japan, the first Atomic Bomb Legacy Successors (or “Memory Keepers”) in Hiroshima and Nagasaki began sharing stories they had trained with first-hand-witnesses to learn and perform, and in 2022 the Legacy Successors program expanded further. To date, English language scholarship has overlooked the memorial innovations of the Legacy Successor program. Yet the program has opened remarkable new terrain for those interested in memorial transmission by combining the authority of the first generation with the affective power of latecomers’ live performances through a variety of memorial technologies.

The URC grant will allow me to complete fieldwork in Japan with Hiroshima and Nagasaki Legacy Successors, study their methods during live performances and trainings, and conduct interviews with performers, audiences, and staff. My project frames the work of the legacy successors as “pedagogical” following my earlier (2022) theorization of memorial pedagogy. I argue that the pedagogy of the Legacy Successors produces crosses generations while transforming them. I suggest that the key to these memorial methodologies—these “technologies of transmission”—lies in what recent scholars term “affective witnessing,” through which I describe how the Legacy Successor teachers impact their audiences through cultivated methods of embodied exchange. Overall, the project offers a new pedagogical model of transgenerational memorial transmission that targets audiences at further temporal and spatial remove from wartime events.

David Guillermo Barba, MFA

ASSISTANT PROFESSOR, ECAS, FILM AND MEDIA

Volver [Return]: a documentary feature film about returnee migrants to Mexico

Three Mexican women, brought to the United States as children and raised as Americans, struggle to rebuild their lives in Mexico following deportation or voluntary repatriation. This feature documentary film focuses on the lived experiences of Viridiana, Maria and Valentina who grew up in Minnesota, Colorado and Georgia respectively. As young adults, they returned to a country they barely knew, struggling to adapt to language and customs foreign to them. Living in different corners of Mexico, the three women’s journeys have points of connection and divergence, emblematic of the hundreds of thousands of stories of those who depart the United States, leaving family and friends behind.

Viridiana (33) lives in the small rural town of Quebrantadero, Guerrero with her two boys. Maria (32) lives in the suburbs of Mexico City in Zumpango, State of Mexico with her partner Jorge and her pit bull Max. Valentina (38) lives in La Paz, Baja California Sur, with her two children. Viridiana and Maria grew up undocumented in the US, while Valentina was there on a visa. The mothers of all three women live in the United States, as does much of their immediate family. Their English language skills have played a critical part in being able to find steady employment and rebuild their lives.

Bumyong Choi, PhD

SENIOR LECTURE, EMORY COLLEGE OF ARTS AND SCIENCES, RUSSIAN AND EAST ASIAN LANGUAGES AND CULTURES

Examining the Impact of Critical Race Pedagogy on Korean Language Teachers and Learners

The proposed research project aims to investigate the impact of Critical Race Pedagogy (CRP) on the perceptions and understanding of diversity, equity, and inclusiveness (DEI) among Korean language teachers and learners. The study addresses three key research questions: 1)

What are Korean teachers' perceptions regarding CRP and DEI practices in their teaching in the United States and Korea? 2) What are Korean learners' perceptions on DEI in their classroom (language learning?) in the United States and Korea? 3) How do people belonging to minority groups in the United States and Korea want to be represented in foreign language classrooms?

The study will use a mixed-methods approach, including surveys, focus group interviews, and observations of teachers' working groups, to collect data from Korean language teachers and learners. The data will be analyzed to understand the perceptions of CRP in the teaching process and the understanding of diversity, equity, and inclusiveness in the classroom. Additionally, minority group members in the United States and Korea will be interviewed to understand their perspectives on representation in foreign language classrooms.

The research aims to fill a gap in the literature by examining the impact of CRP on the perceptions and understanding of DEI among Korean language teachers and learners, and to provide specific, realistic and feasible procedures for incorporating CRP principles in Korean language education. The findings have implications broadly in foreign language education in both the United States and Korea.

Aisha Finch, PhD

ASSOCIATE PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, WOMEN'S, GENDER AND SEXUALITY STUDIES

Cimarronas: Black Feminist Thought, World-Making, and Historical Memory in the Caribbean and Latin America

This book project, Cimarronas: Black Feminist Thought, World-Making, and Historical Memory in the Caribbean and Latin America, offers a new intellectual history of Black feminist theory and praxis in Latin America, with particular attention to the Spanish-speaking Caribbean. This project will draw from three sources: archival materials in the Spanish-speaking Caribbean; oral histories with African-descended feminist activists and scholars; and close textual readings of early feminist publications. In so doing, it seeks to map out the historical emergence of a field that is gaining increasing visibility in the US academy. This summer, I will initiate the early stages of field research for this project, beginning with archival research in Cuba and the Dominican Republic. I am requesting support to develop the book’s first chapter on the ways in which Black feminist thinkers have mobilized the history of slavery and marronage to articulate their own political imaginaries. Maroonage – the widespread practice of escaping from slavery – was endemic to slave societies throughout the Americas, and has become a powerful and ubiquitous symbol for activists throughout Latin America in the current moment. In this chapter, I take a unique approach to the question of historical memory, examining archival materials that document the encounters of maroon women and fugitive communities with the colonial state. I explore what these historical experiences of captivity and self-liberation can illuminate about how contemporary Black feminist scholars and activists frame their own critiques of state violence and their dreams of freedom.

Arun W. Jones, PhD

ASSOCIATE PROFESSOR, CANDLER SCHOOL OF THEOLOGY

Scottish Subjects in North Indian Kingdoms, 1866 – 1947

The research project focuses on the relationship of Scottish missionaries to Indian rulers and larger society in the independent native states of Rajasthan, India, during the British imperial era, from the advent of mission work in those states in 1866 until Indian independence in 1947. Indians ruled their states due to the Empire's strategy of indirect rule. Using data gathered from archives in Scotland and interpreted within Hindu religious and political frameworks, the project argues that the Indian rulers, not the British Empire, were paramount in setting the terms on which the missionaries could carry on their work in those states. The rulers, moreover, governed their kingdoms according to Hindu understandings of royal government, in which service providers (traditionally nobles with standing armies and priests of religious institutions) were incorporated into the kingdom through gifts of land and money. Missionaries were service providers, albeit of another sort than military men, in the kingdoms where they operated. They offered medical, educational, and religious services to various persons and communities in society. These services were incorporated into the reign of local kings through the traditional indigenous mechanism of gift-giving. Indian rulers donated land, buildings, goods and even cash to Scottish missions and missionaries. Conversely, if missionaries were not desired by a particular ruler of an independent native state, mission work could not take place there. As the world historical context changed from the 19th into the 20th century, the relationships between missionaries and Indian rulers and society also adapted and changed.

Jinsook Kim, PhD

ASSISTANT PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, FILM & MEDIA STUDIES

Sticky Activism: Online Misogyny and Feminist Anti-Hate Activism in South Korea

This book project approaches digital media as a key battlefield in the intense cultural and political confrontations between feminists and misogynists in South Korea over the past decade. Through textual, discursive, and institutional analyses of digital media platforms (including Facebook, Twitter, and wikis) as well as in-depth interviews with feminist activists, this book examines how new modes of feminist activism have contested the widespread yeoseonghyumo (misogyny) in that country. While it is often viewed as a global leader in information communication technology in terms of digital connectivity and saturation, I argue for a rethinking of what digitally saturated life actually entails by highlighting complex and painful efforts to create better conditions for women and marginalized groups amid the constraints and sheer volume of toxicity in digital cultures. With a theoretical basis in digital, feminist, and global media studies, this book foregrounds the concept of "sticky activism" by bringing together various academic discussions of "stickiness" to describe the circulation and accumulation of affect, capacity of media, mobilization of participants' everyday activities, and transformation of cultural and social institutions. Thus, I discuss how certain affects stick to certain bodies and objects, how everyday activism becomes inseparable from the participants in it, and how feminist activism mediates and connects online and offline efforts. I argue that sticky activism has contributed to the formation of feminist counterpublics by articulating affective dissonance,

opposing misogyny and gender violence in society and culture, and developing new feminist subjectivities in South Korea.

Brian Vick, PhD

PROFESSOR, EMORY COLLEGE OF ARTS AND SCIENCES, HISTORY

The Internationalization of Science and Politics in the Nineteenth Century

This monograph project and related peer-reviewed article explore the surprisingly early development of international ties between national scientific organizations and of a form of international politics predicated on scientific authority. While the literatures on both the internationalization of politics and on scientific internationalism typically put the origins of these trends in the 1870s and see earlier institutions as national and nationalist in nature, my work shows how the connections between the international and national levels and between science and politics were integral to the formation of the national organizations already from the 1830s, with implications for how we think about the interplay of science, politics, and national borders today. The study analyzes the underlying networks and sociability as well as the scientific politicking revealed in correspondence among scientists and political activists in such causes as the movements for peace, prison reform, and abolition of slavery, and between these and government officials. While emphasizing the structural exclusions of marginalized groups from the institutions of both science and politics in this era, my research also spotlights the presence of women and people of color in these activities, alongside European-descended men. In addition to the fields of German, Austrian, Italian, and French history, the research engages with and contributes to scholarship in the history of science, international relations, and gender history. The project ultimately illuminates the place of science in the formation of the modern international order and that of politics in the formation of modern scientific institutions.