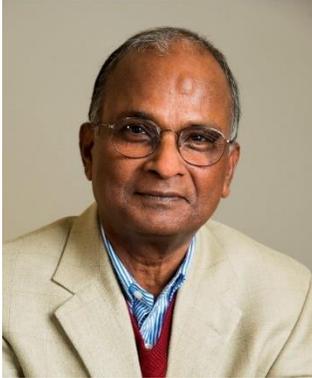


## **CHARGE St. Louis 2019**

### **CONTRIBUTING SPEAKERS**



**Host: DC Rao, Ph.D.**

Dr. Rao is a Professor of Biostatistics, Genetics, Psychiatry, and Mathematics, and the Director of the Division of Biostatistics at Washington University in St. Louis, School of Medicine. His major research interest is genetic epidemiology of common complex human diseases, with particular interests in cardiovascular (CVD) and metabolic diseases and their risk factors. He made major contributions to the evolving field of Genetic Epidemiology in the 70's and 80's, including the launching of the journal Genetic Epidemiology in 1983 and the International Genetic Epidemiology Society (IGES) in 1991. His research in CVD genetics has been supported by multiple grants from the National Institutes of Health. He served or currently serves as the PI of Coordinating Centers (CC) or Data Coordinating Centers (DCC) for several NHLBI-sponsored multi-center family and genetic studies. He has published extensively (over 700 papers).

Dr. Rao's interest in Gene-Environment Interactions (GxE) is life-long, starting with gene-age interactions in the 70's, moving into path analyses in the 80's, and finally extending into the GWAS setting. His more recent research, which leverages CHARGE and large biobank resources, has focused on gene-lifestyle interactions in large multi-ancestry populations. He feels fortunate and privileged about collaborations with many outstanding investigators throughout CHARGE and beyond.

## **CHARGE St. Louis 2019**

### **CONTRIBUTING SPEAKERS**



**Thomas Winkler, Dr. rer. physiol.**

Dr. Winkler is a postdoc in the Department of Genetic Epidemiology at the University of Regensburg. His research focuses on statistical and computational methods for the analysis of high-dimensional genome-wide association studies (GWAS) within genomic research consortia. He has developed methods and tools that facilitate quality control of large numbers of GWAS (EasyQC) as well as for analysis of gene-environment interactions based on stratified GWAS. He has contributed to various adiposity meta-analysis projects within the Genetics Investigation of ANthropometric Traits (GIANT) consortium, including GWAS stratified by sex, age, smoking or physical activity. He earned his doctoral degree in biomedical sciences from the University of Regensburg in 2015. He is an active collaborator of the CHARGE Gene-Lifestyle interaction working group.



**Hugues Aschard, Ph.D.**

Dr. Aschard is an Assistant Professor of Statistical Genetics at the Pasteur Institute. His research focuses on the development and the application of novel methods and strategies for the integration of biological, clinical and environmental data to understand further the genetic architecture of multifactorial diseases. It combines in-depth theoretical work and discovery-oriented studies that aim at answering specific biological questions. His work addresses in particular the implementation of multivariate analysis (i.e. the combined analysis of multiple outcomes and/or multiple predictors) and approaches allowing for interaction effects between risk factors.



**Chunyu Liu, Ph. D.**

Chunyu Liu, Ph.D. Dr. Liu is Research Associate Professor of Biostatistics at Department at Boston University School of Public Health. She has a long-standing interest in human genetics and genomics. Recently, her lab has focused heavily on developing novel statistical strategies in analyzing mitochondrial DNA copy number and sequence variations in relation to age-related phenotypes. Dr. Liu co-convenes the TOPMed Mitochondrial DNA Working Group and the CHARGE Mitochondrial DNA Working Group.

## **CHARGE St. Louis 2019**

### **CONTRIBUTING SPEAKERS**



#### **Pradeep Natarajan, MD MMSc**

Pradeep Natarajan, a preventive cardiologist and human geneticist, is the Director of Preventive Cardiology at Massachusetts General Hospital (MGH), Assistant Professor of Medicine at Harvard Medical School, and Associate Member of the Broad Institute of Harvard & MIT.

Dr. Natarajan researches the inherited bases of cardiometabolic traits using large-scale human genetic studies, genotype-driven human investigation, and clinical genetic testing implementation. Among his scientific contributions, Dr. Natarajan has helped leverage naturally-occurring protective ‘human knockouts’ to discover therapeutic targets, create and evaluate genomic risk prediction tools, and discover the role of acquired mutations in blood cells in

cardiovascular disease risk.

Dr. Natarajan received his B.A. in molecular biology with Honors and Phi Beta Kappa in 2004 from the University of California, Berkeley. He received his M.D. with Alpha Omega Alpha in 2008 from the University of California, San Francisco. He received his master’s degree in biomedical informatics in 2015 from Harvard Medical School. Dr. Natarajan completed his internship and residency in internal medicine at the Brigham and Women’s Hospital in 2011. He completed his clinical fellowship in cardiovascular medicine at the Massachusetts General Hospital in 2015 and post-doctoral training in human genetics at Massachusetts General Hospital and the Broad Institute in 2017.



#### **Stella Aliskaban, Ph.D.**

Dr. Aslibekyan is an Associate Professor of Epidemiology at the University of Alabama at Birmingham, currently on leave and working as a genetic epidemiologist at 23andMe. Throughout her research career, Dr.

Aslibekyan has focused on the "nature and nurture" question-- i.e. the interplay of genetic and environmental factors, which her NIH- and American Heart Association-funded studies explored using several approaches (both computational and molecular) in diverse cohorts. Dr.

Aslibekyan has authored over 100 peer-reviewed publications linking genomic and epigenomic variation to health traits. Her recent CHARGE project (JAMA Cardiology, 2018) identified several novel multi-omic determinants of the circulating inflammatory marker TNF-alpha and connected them to the increased risk of coronary heart disease. She is active in CHARGE and TOPMed through the Genetics of Lipid Lowering Drugs and Diet Network (GOLDN) study.

## **CHARGE St. Louis 2019**

### **CONTRIBUTING SPEAKERS**



**Joyce van Meurs, Ph.D.**

Dr van Meurs is Associate Professor of population genomics at the Erasmus Medical Centre in Rotterdam.

Dr van Meurs has a background in molecular biology and her research is focused on integrative genomics of the musculoskeletal system and aging, where multiple genomic levels (variation in DNA/RNA/ methylation/metabolomics/microbiome) are combined to find common biological mechanisms in multilevel –omic data. She is leading musculoskeletal research in the Rotterdam Study (a large longitudinal cohort study of >15.000 individuals). She is co-leading the Biobank-based integrative omics study (BIOS), which is a large-scale multiple genomics data infrastructure for the discovery of mechanisms and biomarkers of disease.

In addition to her research activities, Dr van Meurs coordinates the high-throughput human genotyping facility at Erasmus MC, which provides genomic services for groups in- and outside Europe.

**Nathan Stitzel, MD, PhD**



Dr. Stitzel is Assistant Professor of Medicine and Genetics at the Washington University School of Medicine and a member of the Scientific Leadership Council in the McDonnell Genome Institute where he co-directs the Center for Common Disease Genomics program. As a cardiologist and human geneticist, his work focuses on discovering genetic variation that underlies cardiovascular disease. His laboratory uses a variety of techniques in genomics and bioinformatics to map novel genes and identify causal pathways underlying both Mendelian and complex forms of cardiovascular disease. His group also looks to apply insights from human genetic studies to improve patient care. In parallel to his research, Dr. Stitzel

directs the Center for Cardiovascular Genetics at the Washington University School of Medicine and Barnes Jewish Hospital, an outpatient clinic specializing in the diagnosis and management of inherited cardiovascular disorders.

## **CHARGE St. Louis 2019**

### **CONTRIBUTING SPEAKERS**



**Philip De Jager, M.D., Ph.D.**

Dr. Philip De Jager is Weil Professor of Neurology at Columbia University Irving Medical Center, where he directs the Division of Neuroimmunology. The division consists of the Multiple Sclerosis Center and the Center for Translational & Computational Neuroimmunology. The focus of the division is to characterize and target the role of the immune system in neurodegenerative disease such as Alzheimer's disease (AD), Amyotrophic Lateral Sclerosis (ALS), Multiple Sclerosis (MS), and Parkinson's disease (PD).

After completing Yale University with a degree in Molecular Biophysics & Biochemistry as well as Medieval French literature, Dr. De Jager received a Ph.D. in Neurogenetics from Rockefeller University and an M.D. from Cornell University Medical College. He then completed his M.M.Sc. in Clinical Investigation at Harvard Medical School (HMS) and MIT. Dr. De Jager served as a neurology resident in the Partners Neurology program at Massachusetts General Hospital and Brigham and Women's Hospital and MGH. He then joined the faculty at HMS, rising to the rank of Associate Professor before joining Columbia University Medical Center. He has been recognized for his leadership in the field of multiple sclerosis research with both the Harry Weaver Neuroscience Scholar Award (2008) and the Barancik Award for Innovation in MS Research (2014) by the National MS Society.

The goal of Dr. De Jager's work as a clinician-scientist is to apply modern methods of human immunology, genetics, and computational biology to the understanding of common neurodegenerative diseases such as AD, PD, and MS. He has applied his discoveries from basic research to identify novel targets for drug development and to create novel tools to enhance clinical decision-making and prevent the onset of these neurodegenerative diseases.