The 1st International Symposium of Brain and Mind Development

第一届儿童脑智发育国际研讨会

2019.10.30~2019.10.31

Beijing,China

中国·北京

Organized By

1 State Key Laboratory of Cognitive Neuroscience and Learning, Beijing Key Laboratory of Brain Imaging and Connectomics, IDG/McGovern Institute for Brain Research, Beijing Normal University

2 Department of Radiology, Beijing Children's Hospital, National Center for Children's Health

OVERVIEW

The human brain undergoes rapid growth in both structure and function from infancy through early childhood, and this significantly influences cognitive and behavioral development in later life. Moreover, the development of the brain and mind is influenced by many factors, including gene, environment, and their interactions, and is associated with many psychiatric disorders such as autism, attention-deficit/hyperactivity disorder, and depression. As such, big data in brain and mind development are rapidly growing in several international research projects with high-quality neuroimaging, behavioral, genetic, and environmental data. The 1st International Symposium of Brain and Mind Development (BMD) aims at inviting world experts speaking on topics relevant to brain and mind development from infancy through early childhood, with an emphasis on typical and atypical development based on the state-of-the-art techniques including the histology, psychology, neuroimaging and neurophysiology. We welcome researchers, clinicians, and students in the field of psychology, brain imaging, computer science, neuroscience, education, neurology, and psychiatry to participate in this symposium. The BMD symposium is anticipated to produce highly interactive discussions and potential collaborations. This symposium is associated with the 2019 special issue "Imaging baby brain development" published in the NeuroImage journal.

Co-chairs,

Yong He, Ph.D., Professor
Deputy Director, State Key Laboratory of Cognitive Neuroscience & Learning
Director, Beijing Key Laboratory of Brain Imaging & Connectomics
Principal Investigator, IDG/McGovern Institute for Brain Research
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Hao Huang, Ph.D., Associate Professor of Radiology
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Radiologist-in-Chief, Director, Department of Radiology
Beijing Children's Hospital
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ORGANIZING COMMITTEE

Co-chairs:

Yong He, Ph.D., Beijing Normal University

Hao Huang, Ph.D., Children's Hospital of Philadelphia, University of Pennsylvania

Yun Peng, M.D., Ph.D., Beijing Children's Hospital

Members:

Di Hu, Beijing Children's Hospital

Huiying Kang, Beijing Children's Hospital

Xuhong Liao, Beijing Normal University

Xiaojing Shou, Beijing Normal University

Xiaojuan Tao, Beijing Children's Hospital

Mingrui Xia, Beijing Normal University

Hongshuang Xu, Beijing Normal University

Shuangfeng Yang, Beijing Children's Hospital

Hong Zhang, Beijing Children's Hospital

Lingzi Zhang, Beijing Normal University

Jiaying Zhang, Beijing Normal University

Tengda Zhao, Beijing Normal University

INVITED SPEAKERS

Keynote Lecture:

Fernando Calamante, The University of Sydney, Australia

Serena Counsell, King's College London, UK

Weili Lin, University of North Carolina at Chapel Hill, USA

Li-Hai Tan, Shenzhen Institute of Neuroscience, Shenzhen University, China

Invited Talk:

Gareth Ball, Murdoch Children's Research Institute, Australia

Stella Christie, Tsinghua University, China

Sean Deoni, Brown University, USA

Yong He, Beijing Normal University, China

Hao Huang, Children's Hospital of Philadelphia, University of Pennsylvania, USA

Xiaoqi Huang, West China Hospital of Sichuan University, China

Gang Li, University of North Carolina at Chapel Hill, USA

Peiying Liu, Johns Hopkins University, USA

Shuwei Liu, Shandong University, China

Zdravko Petanjek, University of Zagreb, Croatia

Qinmu Peng, Huazhong University of Science and Technology, China

Yun Peng, Beijing Children's Hospital, China

Dinggang Shen, University of North Carolina at Chapel Hill, USA

John Sweeney, University of Cincinnati, USA

Sha Tao, Beijing Normal University, China

Dan Wu, Zhejiang University, China

Duan Xu, University of California, San Francisco, USA

Jian Yang, The First Affiliated Hospital of Xi'an Jiaotong University, China

Xi Yu, Beijing Normal University, China

Wednesday, October 30, 2019

08:00 - 08:30	Registration
08:30 - 09:00	Opening remarks
Keynote Lecture	
Session Chairs: Hao Huang, Yong He	
09:00 - 09:50	Fernando Calamante, the University of Sydney, Australia *Diffusion MRI fibre-tracking: from structural connectivity to multi-modal imaging*
09:50 - 10:40	Li-Hai Tan, Shenzhen Institute of Neuroscience, China *Neurodevelopment of language: a comparison of Chinese and English*
10:40 - 11:00	**Coffee break**
Session 1: Behaviors, Environment, and Brain	
Session Chairs: John Sweeney, Hao Huang	
11:00 - 11:30	Stella Christie, Tsinghua University, China *Why we are smart: The relational mind*
11:30 - 12:00	Sha Tao, Beijing Normal University, China *Understanding school children brain-mind development: recent efforts in imaging genetic cohort studies in China*
12:00 - 13:30	**Satellite Conference/Lunch**
Session 2: Histology and Neuroimaging	
Session Chairs: Peiying Liu, Dan Wu	
13:30 - 14:00	Zdravko Petanjek, University of Zagreb, Croatia *Legal immigrants with long and risky journey: diversity of tangentially migrating cortical neurons and their involvement in brain malformations*
14:00 - 14:30	Hao Huang, Children's Hospital of Philadelphia, University of Pennsylvania, USA *Imaging development of brain microstructure*
14:30 - 15:00	Shuwei Liu, Shandong University, China *Development of the fetal brain: assessment with postmortem 7.0T MRI*
15:00 - 15:20	**Coffee break**
Session 3: Advanced Imaging Techniques	
Session Chairs: Zdravko Petanjek, Stella Christie	
15:20 - 15:50	Peiying Liu, Johns Hopkins University School of Medicine, USA *Assessment of cerebral oxygen consumption in neonates using MRI*
15:50 - 16:20	Sean Deoni, Brown University, USA *TBA*
16:20 - 16:50	Dan Wu, Zhejiang University, China *Mapping the brain structural development from fetus to early infancy*
16:50 - 17:50	Satellite Conference

Thursday, October 31, 2019

Keynote Lecture

Session Chairs: Yun Peng, Hao Huang

08:30 - 09:20	Serena Counsell, King's College London, UK *MRI of the developing brain in high-risk infants*
09:20 - 10:10	Weili Lin, University of North Carolina at Chapel Hill, USA *Baby Connectome Project: a window into early brain development in the first five years of life*
10:10 - 10:30	**Coffee break**

Session 4: Neuroanatomy and Brain Connectivity (I)

Session Chairs: Xiaoqi Huang, Xi Yu

10:30 - 11:00	Dinggang Shen, University of North Carolina at Chapel Hill, USA *Computational tools for infant brain development study*
11:00 - 11:30	Duan Xu, University of California San Francisco, USA *Metabolic imaging from steady-state to dynamic*
11:30 - 12:00	Gareth Ball, Murdoch Children's Research Institute, Australia *Cortical morphology at birth reflects spatiotemporal patterns of gene expression in the fetal brain*
12:00 - 13:30	**Satellite Conference/Lunch**

Session 5: Neuroanatomy and Brain Connectivity (II)

Session Chairs: Duan Xu, Jian Yang

13:30 - 14:00	Gang Li, University of North Carolina at Chapel Hill, USA *Applications of baby brain mapping tools*
14:00 - 14:30	Xi Yu, Beijing Normal University, China *A roadmap of reading: behavioral and neuroimaging longitudinal investigation from infancy to school-age*
14:30 - 15:00	Yong He, Beijing Normal University, China *Developmental connectomics from infancy through early childhood*
15:00 - 15:30	Qinmu Peng, Huazhong University of Science and Technology, China *Regularized-Ncut: robust and homogeneous functional parcellation of neonate and adult brain networks*
15:30 - 15:50	**Coffee break**

Session 6: Developmental Disorders

Session Chairs: Gareth Ball, Gang Li

15:50 - 16:20	John Sweeney, University of Cincinnati, USA *Electrophysiological sudies of fragile X syndrome*
16:20 - 16:50	Jian Yang, The First Affiliated Hospital of Xi'an Jiaotong University, China *MRI predicts outcome of neonates with white matter injury*
16:50 - 17:20	Yun Peng, Beijing Children's Hospital, China *Pediatric neuro MR in BCH: a view of radiologist*
17:20 - 17:50	Xiaoqi Huang, West China Hospital of Sichuan University, China *Understand brain of attention-deficit/hyperactivity disorder with MRI*

Fernando Calamante, Ph.D.
The University of Sydney, Australia

Professor Fernando Calamante studied Physics in Argentina, and obtained his PhD in MRI from University College London in 2000. Fernando relocated to The Florey Institute of Neuroscience and Mental Health and the University of Melbourne in 2005. His main areas of research are Perfusion MRI and Diffusion MRI, and their applications to neurology and neuroscience. His work has been at the forefront of the field and highly cited, including: h-index=53, and 28 papers with over 100 citations (2 with over 1000 citations each). He has gained international recognition for his technical work on bolus-tracking Perfusion MRI methods in particular, which has been highly influential. His Diffusion MRI methods and software tool (MRtrix) for measuring brain structural connectivity are also widely used worldwide. He has raised over AU$35 million in competitive research funding, and has had a long-standing research collaboration with Siemens. Fernando has been elected to a number of leadership positions within the International Society for Magnetic Resonance in Medicine (ISMRM), including as Vice-President Elect in 2019. He joined the University of Sydney in April 2018, and is currently the Director of Sydney Imaging, the University's biomedical imaging Core Research Facility, and Professor at the School of Biomedical Engineering.

Serena Counsell, Ph.D.
King's College London, UK

Professor Serena Counsell is Head of the Advanced Neuroimaging Group and Deputy Head of the Department of Perinatal Imaging and Health, Centre for the Developing Brain, King's College London. Her primary research interests are the development and application of diffusion MRI and other quantitative MR techniques to improve our understanding of the immature brain, its response to injury and the relationship with outcome. Her recent work has focused on developing early imaging biomarkers to assess efficacy of treatments for neural rescue following hypoxic ischaemic encephalopathy and preterm brain injury. She also leads the Congenital Heart Disease neuroimaging programme at KCL.

Weili Lin, Ph.D.

University of North Carolina at Chapel Hill, USA

Dr. Weili Lin currently serves as the Dixie Lee Boney Soo Distinguished Professor of Neurological Medicine and Director of Biomedical Research Imaging Center (BRIC) at the University of North Carolina at Chapel Hill. The BRIC, an institutional center, houses a comprehensive collection of human and small animal imaging scanners and 43 faculty members with diverse expertise on imaging related topics. Dr. Lin is also a Professor of Radiology, Neurology, Biomedical Engineering, and Pharmacy and serves as the Vice Chair of Basic Research in the Department of Radiology. Dr. Lin was elected as a Fellow of the American Institute for Medical and Biological Engineering in 2012, induction into the Academy Council for Distinguished Investigators, the Academy for Radiology and Biomedical Imaging Research in 2018, and has served on numerous National Institutes of Health (NIH) study sections as a regular or ad hoc member over the past 30 years. He has published more than 300 peer-reviewed articles with research interests focused on early brain functional and structural development, discerning cerebral hemodynamics and oxygen metabolism in patients with neurological diseases, and technical development of hybrid PET/MR imaging approaches. Dr. Lin is the contact principal investigator for ongoing research on delineating early brain functional and structural development using non-invasive imaging approaches. For this research, awarded by the NIH Baby Connectome Project, his team has developed imaging protocols, imaging approaches and novel image analysis tools specifically tailored for analyzing early brain development.

Li-Hai Tan, Ph.D.

Shenzhen University and Shenzhen Institute of Neuroscience, China

Dr. Li-Hai Tan is Director of Shenzhen Institute of Neuroscience and Distinguished University Professor of Shenzhen University. He received his Ph.D. from the University of Hong Kong (HKU) in 1995. Following post-doctoral training in the University of Pittsburgh, he worked in HKU during 1999-2014, where he was a tenured professor in 2007. He founded the State Key Laboratory of Brain and Cognitive Sciences at HKU in 2005 and served as its director until 2014. His research interests include the neuroimaging study of language and translating the basic research findings into clinical practice. Dr. LH Tan is an associate editor of *Science Advances*, a journal launched by the AAAS.

Gareth Ball, Ph.D.

Murdoch Children's Research Institute, Australia

Dr. Gareth Ball is a neuroscientist who specialises in the use of modern neuroimaging and machine learning techniques in order to further our understanding of the complex and dynamic processes underlying typical and atypical brain development in childhood. Since receiving his PhD from Imperial College London in 2012, Dr Ball has published over 35 research papers on the use of structural, diffusion and functional MRI to image neonatal and paediatric brain development in high quality journals including *PNAS*, *Annals of Neurology* and *The American Journal of Psychiatry*. This work includes one of the first detailed descriptions of complex network organisation and microstructural cortical development in the neonatal brain; the identification of a set of common genetic variants associated with early brain injury and outcome; and the use of multi-modal imaging to link brain development with the early clinical environment and cognitive outcome in infancy. Dr Ball has additionally contributed to several open-source tools and brain atlases for neonatal and paediatric populations, made available to researchers worldwide. Currently based at the Murdoch Children's Research Institute in Melbourne, Australia's largest child health research centre, Dr Ball has developed a number of approaches that leverage large, open-source MRI databases to draw insight into common disorders of childhood development including ADHD and autism spectrum disorder using modern statistical learning methods. His current work focuses on bridging the gap between macroscale neuroanatomy and the molecular pathways underlying cortical development by combining large-scale MRI databases with comprehensive transciptomic libraries of the developing brain.

Stella Christie, Ph.D.

Tsinghua University, China

Dr. Stella Christie is a tenured associate professor at Tsinghua University, Department of Psychology and Principal Investigator at the Tsinghua Laboratory for Brain and Intelligence. A native of Indonesia, she received her B.A. from Harvard University in 2004, and Ph.D. in Cognitive Psychology from Northwestern University in 2010. Prior to moving to Tsinghua, she was a tenured associate professor at Swarthmore College, USA. At Tsinghua, she is the founder and director of the Tsinghua University Child Cognition Center. Prof. Christie is a cognitive scientist, a world expert in the development of analogical reasoning. Her research investigates how humans acquire relational knowledge—including language learning, spatial intelligence, numerical concepts, social cognition, and creative problem solving. Her works have been published in numerous influential journals. In 2016 she was nominated for the James McDonnell Understanding Human Cognition Award, one of the most prestigious nominations for cognitive scientists.

Sean Deoni, Ph.D.
Brown University, USA

Dr. Sean Deoni is an Associate Professor of Pediatrics (Research), and Associate Professor of Diagnostic Imaging (Research) at Brown University. His lab's work focuses on developing and applying magnetic resonance imaging (MRI) techniques to study early brain development. Our current studies involve following the process of myelination in healthy infants and toddlers in relationship to behavioural development and exploring the varied environmental and genetic influences that shape these brain-behaviour relationships.

Yong He, Ph.D.

Beijing Normal University, China

Dr. Yong He is a Changjiang Distinguished Professor of the Beijing Normal University, China. He is currently the Deputy Director of the National Key Laboratory of Cognitive Neuroscience & Learning, the Founding Director of the Beijing Key Laboratory of Brain Imaging & Connectomics, and the Principal Investigator of IDG/McGovern Institute for Brain Research. He did his Ph.D. at the National Laboratory of Pattern Recognition, Institute of Automation, Chinese Academy of Sciences (2002-2005) and was a postdoctoral fellow at the Montreal Neurological Institute, McGill University, Canada (2005-2007). Dr. He received numerous national award including the National Science Fund for Distinguished Young Scholars (2012) and Leading Scientists in Ten Thousand Talent Program (2019). Currently, he serves as Associate Editor of the *Human Brain Mapping*. To date, Dr. He has authored or co-authored more than 200 peer-reviewed journal articles, with a total citation of 28000 and an H-index of 78. From 2016 to 2018, Dr. He was selected as Highly Cited Researchers in Neuroscience & Behavior (Clarivate Analytics). Dr. He's research interest mainly focuses on imaging connectomics. Specifically, his team has developed a variety of methodologies to describe connectome architectures of structural and functional brain networks, and further investigated connectome alterations in normal development and brain disorders. Dr. He's team has established graph-theoretical network analysis and visualization platforms for imaging connectomics (e.g., GRETNA and BrainNet Viewer). For details, see http://helab.bnu.edu.cn.

Hao Huang, Ph.D.

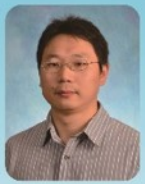
Children's Hospital of Philadelphia, University of Pennsylvania, USA

Dr. Hao Huang is currently an Associate Professor of Radiology at Perelman School of Medicine of University of Pennsylvania and Director of Small Animal Imaging Facility at Children's Hospital of Philadelphia. He obtained the Distinguished Investigator Award from the Academy for Radiology and Biomedical Imaging Research. He is an international leader in pediatric neural magnetic resonance imaging (MRI). He is known best for imaging brain development and has been interviewed by *Science* and *Nature Medicine* on this topic. He is on the Editorial Board of *NeuroImage,* a top neuroimaging journal. He has published nearly 100 peer-reviewed articles in journals such as *Nature*, *PNAS*, *Molecular Psychiatry*, *Journal of Neuroscience* and *Annals of Neurology* with an H-index of 37 and a total citation of 6,500. He is the corresponding/senior or first author in majority of these publications. He is the lead editor of the "Handbook of Paediatric Brain Imaging: Methods, Modalities and Applications" to be published by Elsevier. He maintains a strong NIH funding track-record and supports a laboratory of 10 members. Dr. Huang has been the single PI of multiple NIH R01, R21 and P30 (pilot) awards, PI of the State of Texas awards, subcontractor PI of NIH R01, RC2 and R21 awards, and co-investigator of NIH U, P and R awards and foundation grants. He is the committee member of BrainSpan Consortium (www.brainspan.org), a NIH blueprint project costing $36 million. He is on the Education Committee of ISMRM (International Society of Magnetic Resonance in Medicine), the leading academic society of MR. He has been on the panel of >10 NIH Study Sections. Dr Huang's lab is fortunate to train a few outstanding researchers including school dean at Dalian University of Technology, faculty at Cleveland Clinic and ISMRM Junior Fellow.

Xiaoqi Huang, M.D., Ph.D.

West China Hospital of Sichuan University, China

Dr. Xiaoqi Huang is a Professor of Department of Radiology and Medical Imaging Technology and Deputy Director of the Huaxi Magnetic Resonance Research Center (HMRRC) of West China Hospital of Sichuan University in China. She received her Ph.D. and M.D. from West China Medical School of Sichuan University in psychiatry. She started work on the application of multiple MRI techniques to explore psychiatric disorders during her postdoc in HMRRC. Now with the duel background of psychiatry and medical imaging, she focuses on the application of cutting-edge MRI techniques to explore biological mechanisms of psychiatric disorders such as major depressive disorder, obsessive-compulsive disorder, posttraumatic stress disorder, and attention-deficit/hyperactivity disorder. Currently, she serves as a member of ISMRM (International Society of Magnetic Resonance in Medicine) stipend subcommittee and Vice Chair of Behavior and Health committee for Sichuan Society of Preventive Medicine. Her researches focus on the application of cutting-edge MRI techniques to explore biological mechanisms of psychiatric disorders such as major depressive disorder, obsessive-compulsive disorder, posttraumatic stress disorder, and attention-deficit/hyperactivity disorder. Currently, there are two main domains of my research: (1) using state-of-the-art MR techniques to reveal brain structural and functional changes underpinning psychiatric disorders; (2) applying machine learning approaches to investigate the utility of MRI parameters in disease classification, subtyping, and prediction.



Gang Li, Ph.D.

University of North Carolina at Chapel Hill, USA

Dr. Gang Li is an Assistant Professor in the Department of Radiology at UNC-Chapel Hill. His research has focused on the development of innovative computational tools for analyzing baby brain MRI data for the discovery of brain structure, function and connectivity during early brain development. His pioneering work has yielded the first comprehensive set of infant-dedicated brain MRI analysis tools. He has published more than 70 peer-reviewed journal papers, including *PNAS, Cell, Cerebral Cortex, The Journal of Neuroscience, NeuroImage, Human Brain Mapping, Brain Structure and Function, Medical Image Analysis, IEEE Trans. Medical Imaging, etc.* His publications have received 3000+ citations, with the H-index 33. His computational tools and discoveries on infant brain development were highlighted in the National Institute of Mental Health (NIMH)'s 2015-2020 Strategic Plan. He has received multiple competing NIH grant awards as the Principal Investigator.

Peiying Liu, Ph.D.
Johns Hopkins University, USA

Dr. Peiying Liu is an Assistant Professor at the Department of Radiology of Johns Hopkins University School of Medicine. Dr. Liu's research has been focused on the development and implementation of MRI techniques to evaluate brain function and understand brain pathophysiology. She has spearheaded the development and optimization of MRI techniques to evaluate neonatal brain blood flow, oxygenation, and metabolism, as well as their applications in hypoxic ischemic encephalopathy. Dr. Liu published the first paper in the literature that reported in vivo quantification of brain oxygen metabolism in neonates using a novel non-invasive MRI method. She has also reported the optimal MRI protocols for routine clinical assessment of cerebral blood flow and oxygen extraction fraction in newborns. Dr. Liu has published over 60 peer-reviewed journal articles, and has received the International Society of Magnetic Resonance in Medicine (ISMRM) Junior Fellow Award in 2013. Dr. Liu's research has received continuous support from major funding agencies including National Institutes of Health (NIH) and American Heart Association (AHA). A sought-after reviewer, Dr. Liu has reviewed manuscripts for 20 journals and conferences, and has been recognized as distinguished reviewer by Magnetic Resonance in Resonance and Journal of Magnetic Resonance Imaging. She has also reviewed grant applications for NIH panel EITA. Dr. Liu currently serves as member of the ISMRM Education Committee and Trainee Stipends committee.

Shuwei Liu, M.D., Ph.D.
Shandong University, China

Dr. Shuwei Liu is Professor and Vice-dean of Institute for Brain and Brain-Inspired Science of Shandong University, China. He is also the Director of Center for Clinical Anatomy of Shandong University Cheeloo Medical College. In 2016, as chairman, he organized the 3rd Congress of Asian Association for Clinical Anatomists (AsACA) in Jinan City. Now, he is Vice-President of Chinese Society for Anatomical Sciences. His research interests are sectional and imaging anatomy, brain imaging, and digital human anatomy. He published more than 300 papers in the international and Chinese academic journals.

Zdravko Petanjek, M.D., Ph.D.
The University of Zagreb, Croatia

Dr. Zdravko Petanjek is a tenured Professor of Human Anatomy and Neuroscience of the University of Zagreb School of Medicine, Chairman of Department of Anatomy and Clinical Anatomy, Head of Institute of Anatomy „Drago Perovic", Croatian Institute for Brain Research, Head of Zagreb Neuroembryological Collection, and Head of Laboratory for Neuromorphometry. Education and academic career: University of Zagreb School of Medicine (employed since 1992). Partici¬pated in 20 research projects, main collaborator in 4, head in 6. Author of 67 research articles, two chapters in scientific books and 87 congress/symposia proceedings, 45 invited lectures on scientific meetings. Guest editor of two issues of Collegium Antropologicum, member of organizing committee of 2 FENS/IBRO summer schools. Honors and Awards: 2014: Croatian Academy of Science and Arts, Award for extraordinary scientific discovery in the field of Medicine for the year 2013.; 2001/2002 (2 years) – "Post vert" fellowship, INMED Marseille; 1994 (1 years) – "Van den Houten" fellowship, NIH Amsterdam. Research interests: General research interest is to assess the organization of cortical circuitry via a multidisciplinary approach in human and animal models. Specific main interest is systematic quantitative research of (a) adult and developmental, morphological (re)organization of pyramidal neurons in the human prefrontal cortex, and (b) immunohistochemical studies about organization and origin of primate cortical calretinin GABAergic neurons. Another specific interest is research of (c) circuitry reorganization in human cortical pathology, in the experimental animal model, genetically manipulated animals and animals raised under the different environmental influence, as well as (d) comparative analysis of neuron morphology in various mammalian species.

Qinmu Peng, Ph.D.

Huazhong University of Science and Technology, China

Dr. Qinmu Peng is an Assistant Professor in School of Electronic Information and Communication at Huazhong University of Science and Technology. Dr. Peng received his PhD degree in Computer Science from Hong Kong Baptist University in 2015 and was a postdoctoral researcher at University of Pennsylvania from 2015 to 2018. His research interests include visual computing, machine learning and medical image analysis. He has published more than 30 research articles and obtained four Chinese patents and one US patent.

Yun Peng, M.D., Ph.D.
Beijing Children's Hospital, China

Dr. Yun Peng is a Professor of pediatric radiology and the Director of Department of Radiology, Beijing Children's Hospital, Capital Medical University, National Center for Children's Health. She has become an academic staff in the above department since 1995. She did her postdoctoral Training at Hôpital D'enfants Armand-TROUSSEAU, Medical College, Paris V University, France. Dr. Peng's researches are focusing on pediatric imaging. She was sponsored by the Beijing young outstanding talent, Beijing Nova program, Medical diagnostic imaging pillar and the Beijing Hundred Talent Project. She is also in charge of the projects supported by multiple scientific research fund such as National Natural Science Fund. She has currently published more than 100 scientific papers as the first or corresponding author. She is the deputy director of Chinese Pediatric Radiology Society.

Dinggang Shen, Ph.D.

University of North Carolina at Chapel Hill, USA

Dr. Dinggang Shen is Jeffrey Houpt Distinguished Investigator, and a Professor of Radiology, Biomedical Research Imaging Center (BRIC), Computer Science, and Biomedical Engineering in the University of North Carolina at Chapel Hill (UNC-CH). He is currently directing the Center for Image Analysis and Informatics, the Image Display, Enhancement, and Analysis (IDEA) Lab in the Department of Radiology, and also the medical image analysis core in the BRIC. He was a tenure-track assistant professor in the University of Pennsylvanian (UPenn), and a faculty member in the Johns Hopkins University. Dr. Shen's research interests include medical image analysis, computer vision, and pattern recognition. He has published more than 1000 papers in the international journals and conference proceedings, with H-index 92. He serves as an editorial board member for eight international journals. He has also served in the Board of Directors, The Medical Image Computing and Computer Assisted Intervention (MICCAI) Society, in 2012-2015, and is General Chair for MICCAI 2019. He is Fellow of IEEE, Fellow of The American Institute for Medical and Biological Engineering (AIMBE), and also Fellow of The International Association for Pattern Recognition (IAPR).

John Sweeney, Ph.D.
University of Cincinnati, USA

Dr. John A. Sweeney is a clinical psychologist who conducts cognitive, neurophysiological and neuroimaging studies of psychiatric and neurodevelopmental disorders. He completed training at Syracuse University and Cornell University Medical Center in the USA. He is Professor of Psychiatry at the University of Cincinnati and Visiting Professor in the Huaxi MR Research Center in Chengdu where he works for 3 months annually. He has published more than 400 peer reviewed papers and has been a recipient of the Humboldt Foundation Award for senior research scientists in Germany. In addition to his career-long studies of early manifestations of psychotic and affective disorders, he has for 25 years conducted MRI studies of autism, and over the past 5 years has used electrophysiology to study brain alterations in Fragile X Syndrome in patients and in genetic knock out models of the disorder.

Sha Tao, Ph.D.

Beijing Normal University, China

Dr. Sha Tao is a professor of developmental psychology in the National Key Laboratory of Cognitive Neuroscience and Learning at Beijing Normal University, and the director of the Center for Child Brain-Mind Development. Dr. Tao's research is focused on individual differences in reading, learning a second language and the underlying biological-psycho-social mechanisms. She has published more than 80 articles on international academic journals, including *Psychological Bulletin, Journal of Educational Psychology, Journal of Experimental Child Psychology, Reading Research Quarterly, Journal of Adolescent Research, Journal of Learning Disabilities,* etc.. She won several awards for her research. She serves as the deputy director of the Developmental Psychology Branch, Chinese Psychology Society, and a board member of the Branch for Brain and Education, Chinese Education Society. She directed the project office of The National Children's Study of China (2006-2011) -- the first national wide investigation on children's psychological development in China. Since 2015, she has been leading a longitudinal study on school children wellbeing and brain development.

Dan Wu, Ph.D.

Zhejiang University, China

Dr. Dan Wu is a Principle Investigator from School of Biomedical Engineering and Instrumental Science at Zhejiang University. Dr. Wu obtained her PhD degree from the Department of Biomedical Engineering of Johns Hopkins University, and served as an Assistant Professor of Johns Hopkins University from 2016 to 2018. She was one of the National "One-Thousand Young Investigator" awardee in 2018. Dr. Wu's research focuses on the development of diffusion magnetic resonance imaging sequences, fetal and neonatal MRI, and neuroimage analysis of brain development and diseases. She has published more than 40 journal articles in top journals of the MRI field, such as NeuroImage, Magnetic Resonance in Medicine and Human Brain Mapping. At present, she is charge of several research grants from the National Science Foundation of China and the National Ministry of Science and Technology in China, and she was the PI of R01, R21 and R03 projects of the National Institutes of Health in the United States. She is a Junior Fellow of the International Society of Magnetic Resonance in Medicine of and she serves as a committee member of ISMRM Publishing Committee. She also serves as a committee member and secretary of the Medical Image section of the Biomedical Engineering Society of China.

Duan Xu, Ph.D.

University of California San Francisco, USA

Dr. Duan Xu is a Professor in Residence and leads the Imaging Research for Neurodevelopment Laboratory at the University of California, San Francisco. Dr. Xu obtained his BA in Integrated Science and BS in Biomedical Engineering from Northwestern University in Evanston, Illinois in 1999, followed by his PhD in Bioengineering from the University of California, San Francisco and Berkeley in 2005. Dr. Xu's research focuses on investigating new MRI techniques using primary applications in pediatric neuroradiology. Another research focus is the development of new techniques for ultrahigh field MR scanners involving small animal images, in vivo and ex vivo. Dr. Xu is developing high resolution MR anatomic, diffusion, and spectroscopic techniques with unprecedented resolution in collaboration with various colleagues in Neurodevelopment Biology, Neurology, Pediatrics, Neonatology, and Physiology. He has received multiple NIH R01 grants to improve MRI for pediatric brain imaging as well as participated and actively involved in other Program Projects to study early brain maturation as well as technology development programs such as the P41 Hyperpolarized MRI Technology Resource Center and BRAIN Initiative U01 to build the next generation compact 7T MRI.

Jian Yang, M.D., Ph.D.

The First Affiliated Hospital of Xi'an Jiaotong University, China

Dr. Jian Yang is the Director of Radiology Department of the First Affiliated Hospital of Xi'an Jiaotong University. His research interests include advanced neuroimaging, brain development and injury. He has published more than 100 papers in the international journals and conference proceedings. He hosts 1 National Key R&D Project, 1 Program for New Century Excellent Talents from Ministry of Education of P.R.C., 6 NSFC et al.. He serves as the editorial board member for four international and several Chinese journals.

Xi Yu, Ph.D.

Beijing Normal University, China

Dr. Xi Yu received her BS in psychology from Beijing Normal University and her PhD in cognitive neuroscience from The University of Hong Kong. She further did her post-doctoral training at the Gaab Lab of Boston Children's Hospital/Harvard Medical School, where she worked on several longitudinal imaging projects tracking brain and cognitive development in children from infancy to school age with the aim to 1) characterize the neural trajectories of language and reading development in children with and without familial risk; 2) explore how the genetic (familial risk) and environmental (poverty and home literacy environment) factors interact with each other and shape the brain mechanisms underlying the course of learning to read. Dr. Yu recently joined the State Key Laboratory of Cognitive Neuroscience and Learning at Beijing Normal University. Her lab will be focusing on the neural mechanisms underlying early language development in infants and toddlers and how parental and family characteristics impact this process. Dr. Yu is also interested in the sculpting effects of culture/environment on human development during the period of heightened brain growth/plasticity.

Symposium Venue: Yingdong Lecture Hall
会议地点：英东学术会堂

Organizer
主办单位

Beijing Normal University
北京师范大学

Beijing Children's Hospital
北京儿童医院

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