



23rd-24th Floor, East Main Building, Guanghua Towers, Fudan University,
Yangpu District, Shanghai, China
POSTCODE: 200433
TEL: 86-21- 5566 5563
EMAIL: istbi@fudan.edu.cn
WEB: istbi.fudan.edu.cn



INSTITUTE OF SCIENCE
AND TECHNOLOGY
FOR BRAIN-INSPIRED
INTELLIGENCE
FUDAN UNIVERSITY

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AND TECHN
FOR BRAIN-IN
INTELLIGEN



Handan Campus



Fenglin Campus



Jiangwan Campus

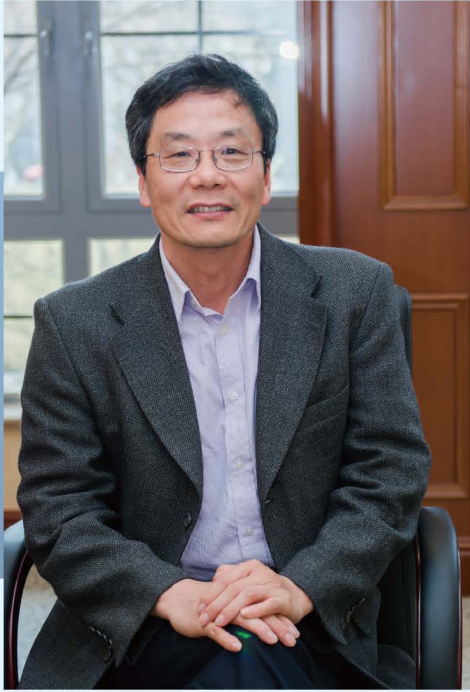
About FUDAN

Fudan University was established in 1905 as Fudan Public School. With a long and glamorous history, it becomes one of the first National Key Universities, and has developed into a comprehensive research university, with Departments of Philosophy, Economics, Law, Education, Literature, History, Science, Engineering, Medicine, and Management. According to the latest QS World University Rankings, the university ranks 34th in the world and 3rd in China. The university is comprised of 35 schools (or departments) and 17 affiliated hospitals. The university consists of four campuses including Handan, Fenglin, Zhangjiang and Jiangwan, covering a total area of 2.4391 square kilometers.

www.fudan.edu.cn



Zhangjiang Campus



Welcomed by

Professor Jianfeng Feng

Dean of ISTBI

“

The brain is most mysterious, complex and inspiring, and attracts great interests of people in both brain and intelligence sciences. ISTBI constitutes a global research hub for scientists across neurosciences, mathematics, computing, clinical medicine and engineering, working together to tackle challenging questions within brain and brain-inspired intelligence sciences. The institute focuses on the interaction of intelligence science with normal cognition as well as psychiatric and neurological disorders, contributes to the development of fundamental theories on brain-inspired artificial intelligence, and translates this cutting-edge research into innovative technologies for diagnosis and treatment of brain diseases. Combining multi-disciplinary research from applied mathematics, computational neuroscience, cognitive neuroscience, and translational medicine, the institute aims to investigate neural mechanisms underlying cognition, emotion, consciousness, to develop brain-inspired theories and whole brain computational models and systems, and to explore the impact of interactions among cultural, developmental, environmental, genetic and cognitive factors on healthy humans and those with psychiatric and neurological disorders. Our ultimate goal is to understand, model and enhance human cognitive processes, develop technological solutions for the diagnosis, treatment and rehabilitation of neurological diseases and psychiatric disorders. The institute is dedicated to making significant, world-class contributions to the growing challenges in the enrichment of brain health worldwide, and to leading pioneering innovations for an intelligence-oriented society.

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Can machines think
ALAN TURING

2

About ISTBI

The Institute of Science and Technology for Brain-inspired Intelligence (ISTBI), is an interdisciplinary research institution of Fudan University, one of the leading universities in China. It was launched in May 2015. The predecessor of ISTBI was the Centre for Computational Systems Biology, founded in 2008 and was one of the first international and interdisciplinary research centres in China. ISTBI covers several research fields including applied mathematics, statistics, computer science, informatics and neuroscience. The research carried out in ISTBI is interdisciplinary per se, with computational neuroscience playing a pivotal role. ISTBI aims to make significant contributions in the development of basic theories, core algorithms and key frameworks for artificial intelligence. It also has the aims of developing intelligent diagnosis and treatment systems for brain diseases, and establishing principles of cognitive neuroscience. Ultimately, ISTBI will contribute to the innovation and the development of an intelligence-oriented society.



3

Research Directions



Bioinformatics and Neuroscience

Building on our previous interdisciplinary research in neuroscience, cognitive psychology and computer science, we combine multi-level techniques, including protein, synapse, neural projection and system, with multi-scale techniques, including molecular, neural network and behavioral paradigm, to establish a biology-based theoretical system for demystifying the brain's principles of information processing and cognition.



Whole-brain Computation and Brain Simulation

We are studying and simulating the neural network on a whole-brain scale by using brain atlas data to build a cross-scale neural network computing model. We are simulating various neural circuits and cognitive functions, uncovering the pathogenic mechanism of brain diseases, and ultimately illuminating the path for a new theory, algorithm and framework of brain-inspired intelligence learning, so as to instigate a new generation of Artificial Intelligence.



Cognitive and Neuromodulation

We analyze the brain's mechanisms of memory, decision-making, emotion and other cognitive activities at micro, meso and macro scales and explore the synergistic mechanism of the brain's functional network and its role in the higher cognitive function. From there, we carry out translational research on the precision diagnosis and treatment of neurological and mental diseases, achieved through cutting-edge theories and technologies such as brain-computer interactive intelligent neuromodulation, brain-computer interactive cognitive behavior intervention, and closed-loop neural rehabilitation.



Brain-inspired Intelligence Technology and Application

By developing new theories, algorithms and frameworks of intelligence science, we are laying the groundwork to heal brain diseases with personalized treatment. We are also developing intelligent perception, decision-making, control theories and new-generation unmanned systems that are currently applied in autonomous driving, intelligent manufacturing, smart city and other fields as pilot projects.



Neuroimaging and Translational Medicine

We are using AI algorithms and models built from multi-omics and multi-modal biomedical big data to develop biomarkers, drug targets and a range of theories and technologies, from health risk prediction, intelligent diagnosis and treatment to intervention, prognosis assessment and intelligent neuromodulation. At the same time, we are also developing brain imaging technology and translational medicine. Based on high-field and animal magnetic resonance systems, we are developing new MRI technology, reconstruction technology and hardware. We are also improving the measurement accuracy on multiple scales, including structural, functional and metabolic, while combining MEG, EEG and near-infrared to construct a multi-modal brain measurement system.



Research Centre

A Centre for Cognitive Neuroscience

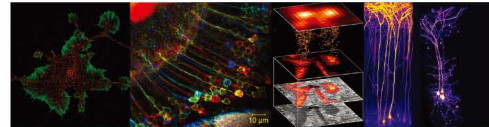
The Cognitive Neuroscience Center (CNC) is an integrative research platform that investigates the biological basis of cognition from micro-scale individual neurons to systems-level neural circuits. Combining multi-disciplinary research from cognitive, comparative, computational and clinical neurosciences with state-of-the-art neuroimaging, electrophysiological recording and behavioral testing methods, the CNC aims to characterize the neural mechanisms underlying perception, attention, motivation, decision-making, learning and memory, emotions and consciousness.

RESEARCH DIRECTION :

Molecular mechanisms and neural circuits in cognitive functions

Computational modeling for cognitive processing

Cognitive neuroscience in neurological and psychiatric disorders



C Centre for Artificial Intelligence Algorithms Shanghai Institute of Artificial Intelligence Algorithms

The Centre aims to develop modern mathematics and statistical methods based on principles of the brain to develop a new generation of artificial intelligence, especially neural network model at the whole brain scale through data assimilation methods and computational modeling. By constructing a network of whole brain electrical impulse neurons, the Centre strives to implement learning algorithms such as the algorithm of pattern recognition, attention, and reinforcement learning. For a given input and output electrical pulse array, we rely on the moment neural network framework to build a learning algorithm to implement a multi input and output model, which will consolidate the basis of mathematical statistics of artificial intelligence algorithms such as the algorithm of supervised learning, semi-supervised learning, and unsupervised learning and will promote the development of an intelligent algorithms library. In 2019, based on the core team of the center, Shanghai Institute of Artificial Intelligence Algorithms was established and unveiled at the 2019 World Artificial Intelligence Conference.

RESEARCH DIRECTION :

Whole brain pulse network

Random pulse network learning algorithm

Learning algorithms and mathematical theories of artificial neural network

B Centre for Computational Systems Biology

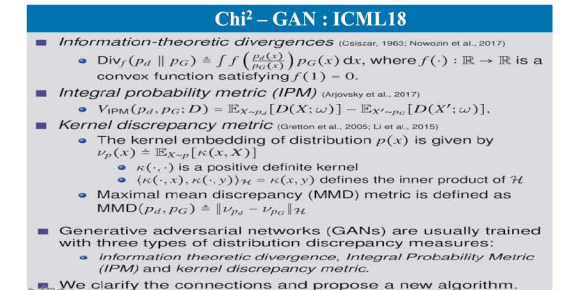
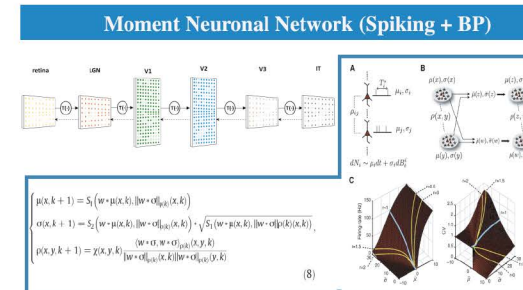
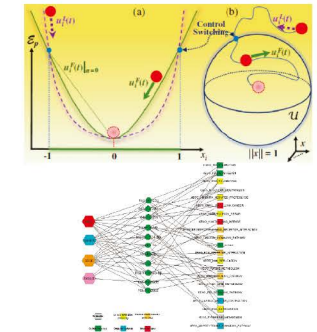
Interdisciplinary activities involving mathematics, physics, chemistry, and information science, have led to major developments in the life sciences. The Centre aims to establish a platform for computer-aided simulation, along with mathematical and physical analyses of the dynamics of life, based on the fusion of multiple disciplines including big data techniques and newly-developed experimental technologies.

RESEARCH DIRECTION :

Computational neuroscience and neuromorphology

Nonlinear science and its applications to complex systems

Evolutionary biology and genetical modelling

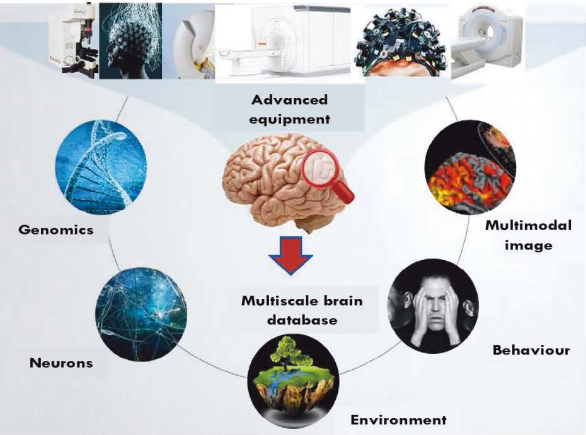


Research Centre

D Centre for Big Data of Biomedical Sciences Zhangjiang International Brain Biobank (ZIB)

The Centre is devoted to building the largest multimodal, multiscale and multicenter datasets for biomedical science (brain science), and developing computational approaches in analyzing these datasets. The Centre promotes researches on precision medicine and personalized medical care for brain diseases, cancers, cardiovascular disease, etc.

RESEARCH DIRECTION :



Zhangjiang International Brain Biobank Cohorts

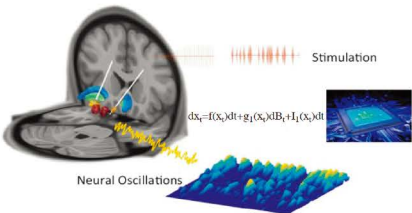
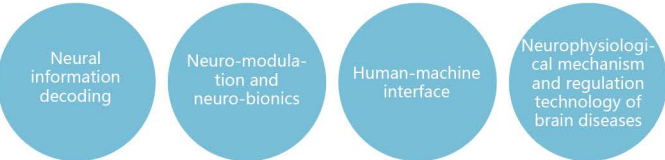
6 Cohorts, 15,000 Samples					
First episode schizophrenic	First episode depression	Stroke	Alzheimer's disease	Autism	Normal
Shanghai Mental Health Centre	Xiangya Hospital Huashan Hospital	Zhongshan Hospital	Shanghai 6th Hospital	Xinhua Hospital	Zhongjiang Brain Imaging Center
Case/Control 1000/1000 (2000 Brain imaging and genetic data)	Case/Control 500/500 (23 times of follow-up, 2000 Brain imaging and genetic data)	Case/Control 1000/1000 (2000 Brain imaging and genetic data)	Case/Control 1000/1000 (2000 Brain imaging and genetic data)	Family Cohorts 300x3 (Genetic follow-up, 1500 Brain imaging and genetic data)	Normal Individuals 5000 (5000 imaging and genetic data)



E Centre for Neural and Intelligent Engineering

To improve the clinical treatment of some key neurological and psychiatric disorders, the Centre aims to develop the neural sensing and processing approaches to neuro-dynamics information, and explore the integration strategy of brain information and plasticity mechanisms of brain functions. By combining neural coding and intelligent theories, the Centre will develop neural sensing, neural modulating, neural computing technologies, and innovation in brain-intelligence technology. It will also build intelligent systems on-chip, and create a self-learning intelligent human-machine interface. Through research in intelligent neuro-modulation and neural-bionics, our goals are to provide intelligent devices and creative solutions to protect, improve and modulate the human brain.

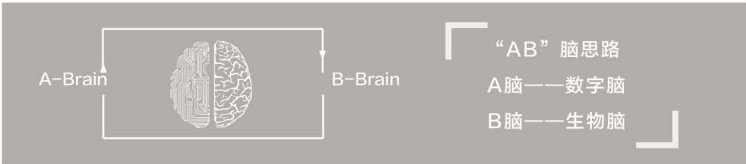
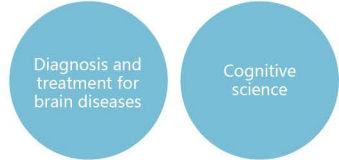
RESEARCH DIRECTION :



F Whole Brain Computation Platform

The mission is to simulate human cerebral functions by constructing a digital twin of an individual human brain through digital assimilation, which encompasses neurons, neurotransmitters and neural connections. We develop mesoscopic data assimilation theory for large-scale computational simulation of the brain, in order to generate novel algorithms for brain-inspired intelligence that allow multimodality integration. Implementing this project will lead us to the cutting edge of brain-inspired intelligence, revolutionary breakthroughs in brain-inspired algorithm and application, and acceleration of a new generation of AI theory.

RESEARCH DIRECTION :



Research Centre

F Centre for Biomedical Imaging Zhangjiang Brain Imaging Centre (ZIC)

In 2016, the Shanghai Municipal Government and Fudan University have invested RMB400M (equal to \$65M) to establish the Zhangjiang International Brain Imaging Centre (ZIC). With an area of 114,000 square-meters, ZIC has become the largest imaging platform for brain science and brain-inspired intelligence in China. ZIC is the home to the world's most advanced MRI instruments including an ultra-high-field 7T Siemens Terra MR scanner, a Siemens 3T Connectome MR scanner, a Siemens 3T Prisma MR scanner, and a Bruker 11.7T Biospec MR scanner. In addition, ZIC equips with a series of real-time brain function monitoring systems including a near-infrared spectrometer, an electroencephalography system, a magnetoencephalography system, and neuromodulation systems including transcranial direct current stimulation, transcranial magnetic stimulation, and transcranial focused ultrasound stimulation.

RESEARCH DIRECTION :

Developing
unique MRI and
MRS methodolo-
gies

Exploring normal
brain cognitive
mechanisms and
the etiology of
brain disorders

Developing
brain-inspired
artificial
intelligence



F Center for Population Neuroscience and Precision Medicine (PONS)

PONS integrates neuroimaging, cognitive neuroscience, (epi) genomics and epidemiological research with novel tools for environmental assessments, such as ecological momentary assessments using smart phone applications, social media analyses, and satellite-based remote sensing acquisitions. It aims at the identification of markers and brain mechanisms of risk and resilience for mental illness in different environmental contexts, such as pandemics, pollution, climate change, migration or urbanicity. This knowledge will be applied to develop neurobehavioural interventions targeted at causal brain mechanisms for prevention and early intervention of disease on a public health-relevant scale.

PONS coordinates a network consisting of cohorts of up to 195,000 people, including >25,000 neuroimaging scans in China, Europe, India and the United States, such as the European IMAGEN, STRATIFY and the Indian cVEDA cohort.

PONS works in close partnership with the Charite, one of Europe's largest university hospitals and research institutions, affiliated with Humboldt University and Free University Berlin, and collaborates with other leading research centres in Europe and the US, i.e. Cambridge University, USC, KCL and Emory University.



Prisma 3T

Connectom 3T

Terra 7T

BioSpec 11.7T

Leading Scientists

(in alphabetical order)



Jianfeng Feng

Winner of the Royal Society
Wolfson Research Merit
Award
Chair Professor of Shanghai
National Centre for Mathe-
matical Sciences



Trevor Robbins

Fellow of the Royal Society
Fellow of the British
Psychological Society
Fellow of the Academy of
Medical Sciences
Winner of 2014 Brain Prize



Edmund Rolls

Fellow and Tutor in
Psychology at Corpus
Christi College, Oxford
Research direction:
Computational
neuroscience



Barbara Sahakian

Fellow of the British
Academy
Fellow of the Academy
of Medical Sciences
Research direction:
Cognitive neuroscience



Gunter Schumann

Research direction:
Physiological
psychiatry



Valerie Voon

Research direction:
cognitive neuroscience,
neuromodulation,
neuroimaging, computa-
tional psychiatry



David Waxman

Overseas Thousand Talents
Program Professor of China
2013 Friendship Award of the
Chinese Government
Member of the Board of
Reviewing Editors, Science



Qibao Zheng

Research direction:
Brain-inspired
Intelligence



Peer Bork

Member of the German
Academy of Sciences
Head of EMBL
Structural and
Computational Biology
Winner of Felix Burda
Medical and Science
Award



**Keith Maurice
Kendrick**

Research direction:
Psychiatry
Neuroscience

Faculty

Directors



Jianfeng Feng



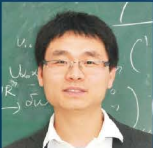
Xiangyang Xue



Xiaohua Xie



Shouyan Wang



Peng Ji

Research Professor
Research direction:
Nonlinear Dynamics
Computational Systems Biology



Shanfeng Zhu

Research Professor
Research direction:
Artificial Intelligence and Big
Biomedical Data Mining Machine
Learning and Text Mining



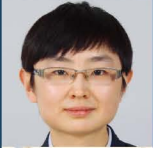
Tianye Jia

Young Principal Investigators
Research direction:
Behaviour and Neuroimaging
Genetics



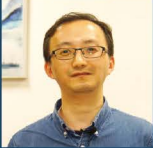
Zhuoyi Song

Young Principal Investigators
Research direction:
computational neuroscience
systems neuron modelling neural
coding
biomimetic vision



Xiao Chang

Young Principal Investigators
Research direction:
Clinical Neuroscience; Brain
Connectome



Y. Thomas Yang

Young Principal
Investigators
Research direction:
Computational Genomics



Qiang Luo

Research Professor
Research direction:
Computational Systems Biology



Chunhe Li

Associate Professor
Research direction:
Computational Systems
Biology



Yuwei Jiang

Young Principal Investigators
Research direction:
using MRI, MEG, EEG,
ECoG



Deniz Vatansever

Young Principal Investigators
Research direction:
Cognitive Neurosciences
Brain Imaging



Jingqi Cheng

Young Principal Investigators
Research direction:
Quantitative MRI of the Brain
Functional MRI
Molecular Imaging



Jing Wang

Young Principal Investigators
Research direction:
application of brain-computer
interactive interface imaging
technology in intelligent modulation
of brain health



He Wang

Research Professor
Research direction:
Magnetic resonance imaging
Medical image analysis



Miao Cao

Young Principal Investigators
Research direction:
Human brain connectome
Human brain early development
with multimodal neuroimaging
technology neuroimaging



Junyi Luo

Young Principal Investigators
Research direction:
Neuroimaging
Connectomics



Xiaoqian Yan

Young Principal Investigators
Research direction:
uses neuroimaging



Zhensen Chen

Young Principal Investigators
Research direction:
Magnetic Resonance Imaging,
Medical Image Processing and
Analysis, Vascular Disease



Zhiyuan Yuan

Young Principal Investigators
Research direction:
bioinformatics



Shouyan Wang

Research Professor
Research direction:
Neuroengineering
Biomedical engineering



Luis Pedro Coelho

Young Principal Investigators
Research direction:
Computational Biology
and Microbial Ecology
Big Data and Machine Learning



Jian Pu

Young Principal Investigators
Research direction:
Machine learning and its
application



Xiao Xiao

Young Principal Investigators
Research direction:
Neural circuit and molecular
mechanism of emotion and
memory



Fumin Jia

Young Principal Investigators
Research direction:
Neural circuit and neuromodu-
lation; Brain computer interface



Jie Zhang

Research Professor
Research direction:
Computational
Systems Biology



Wei Cheng

Young Principal Investigators
Research direction:
Neuroimaging
Statistic Modelling
Psychiatry



Yuchuan Qiao

Young Principal Investigators
Research direction:
Image registration and its clinical
applications, medical image analysis
based on dMRI, PET and T1/T2 MRI
for Alzheimer's disease



Xiaoyong Zhang

Young Principal Investigators
Research direction:
Quantitative MRI of the Brain
Functional MRI
Molecular Imaging



Hao Li

Young Principal Investigators
Research direction:
developing magnetic
resonance imaging and
image processing methods



Xingming Zhao

Professor
Research direction:
Artificial intelligence
Data Mining



Weiyang Ding

Young Principal Investigators
Research direction:
matrix and tensor
computation with applications



Hongming Shan

Young Principal Investigators
Research direction:
Machine learning, Medical
Imaging, Radiomics, and
Computer Vision



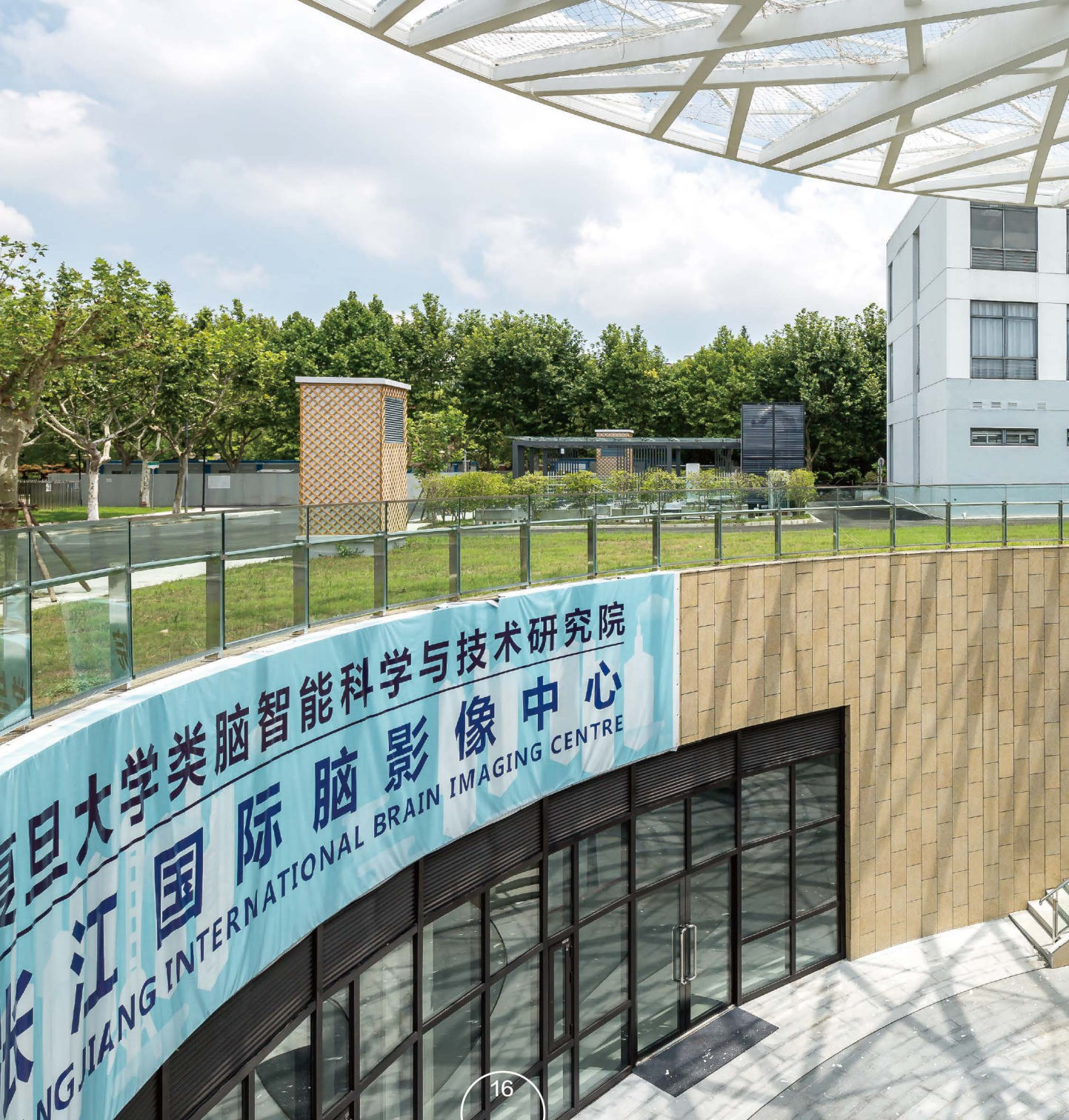
Rong Zhu

Young Principal Investigators
Research direction:
computational neuroscience,
reinforcement learning, statistical
methods and applications



Linbo Wang

Young Principal
Investigators
Research direction:
studying the pathological
mechanism

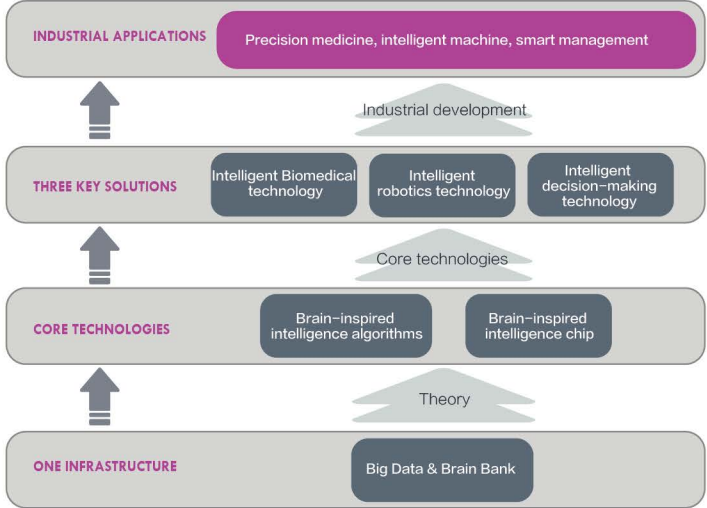


We have received research funding of RMB932M (\$ 131M) and have undertaken 100 national-level projects and 40 provincial-level projects since 2016.

We have 12 projects cooperating with companies with a total funding of RMB 38M (\$ 5M) since 2016.

Brain and Brain-inspired Intelligence Key Program – Shanghai Brain Research Initiatives RMB 840 M (\$119M)

In July 2018, the first Shanghai Municipal Brain and Brain-inspired Intelligence Major Project undertaken by Fudan University and Zhangjiang Laboratory with an implementation period of five years and a total investment amount of 840 million RMB was launched. Professor Ningsheng Xu, President of Fudan University and Academician of the Chinese Academy of Sciences, serves as the director of the project and Professor Jianfeng Feng, Dean of the Institute of Science and Technology for Brain-inspired Intelligence, Fudan University serves as the executive director. The project focuses on the construction of “One-two-three Project” (One infrastructure, two core competencies and three key technologies) in brain and brain-inspired field, dedicated to making great breakthroughs in the field of intelligent technologies such as brain-inspired intelligence algorithms, intelligent diagnosis and treatment of brain diseases, brain-inspired intelligence chips, brain-inspired intelligence engineering, so as to promote industrial upgrading, improve people’s livelihood in Shanghai and promote the development of smart cities, which will without doubt contribute Shanghai to become an influential brain-inspired technology innovation centre in the world.



High-level Scientific Achievements Consistently Emerging

Over the past five years, our team has made remarkable achievements in neuroscience, computational biology, computational neurology, artificial intelligence algorithms, intelligent diagnosis and treatment for brain diseases as well as other fields, publishing over 700 papers on world-top journals, including Nature Science, JAMA Psychiatry, PNAS, Brain, Molecular Psychiatry, etc.





Research-centred Education: Critical Thinking, Freedom of Mind and Challenge-oriented Strategy

The student is at the centre of the education at ISTBI. There is a focus on enabling students to develop their critical and analytical thinking skills, independent research skills, group work, problem solving and leadership skills to prepare them for their career. Education here at ISTBI is closely aligned to current research, often drawing on the interdisciplinary approach that has taken good advantage of Fudan's solid academic background in key disciplines such as mathematics, statistics, informatics, computer science, life sciences and basic medicine.

Our Strengths



Interdisciplinary Teaching

Multidisciplinary and multiplex cross-knowledge: applied mathematics, biomedical engineering, biophysics, computational linguistics, computational psychology, etc.

International Academic Exchange

We have established the "Education Fund (CSG) for China-UK Exchanges in Intelligent Robotics" to cultivate our students with the vision of top international scientists by establishing partnerships with more than 20 internationally renowned universities and research institutes such as University of Cambridge and University of Oxford.

Doctor Training Centres

National Key Laboratory of Computational Neuroscience and Brain-inspired Intelligence and other research centres in ISTBI together provide strong support for the cultivation of students.

Entrepreneur and Practical Training

We have constructed an innovative practice platform for training talents by establishing joint laboratories and joint research centers with more than 10 enterprises and more than 30 hospitals, forming joint research projects and projects to promote in-depth innovation and industrial practice of talent cultivation.

High-level International Collaborations

The Institute actively initiates and participates in international scientific cooperation programs, has collaborated with scientists from more than thirty internationally renowned universities, and established partnership with University of Cambridge, University of Oxford, Harvard University, King's College of London, Stanford University, and The University of Sydney, etc.

International Cooperation Centre

- Overseas Expertise Introduction Centre for Discipline Innovation (“111 Center”)
- The Joint Fudan-King's Centre for Population Neuroscience
- Brain and Intelligence Science Alliance
- Fudan-Cambridge Cognitive Neuroscience and Mental Health Institute (pending)

Harvard University

Stanford University

Massachusetts Institute of Technology

University of Southern California

University of Minnesota

Salk Institute for Biological Studies

Boston University

New York University

University of California

Johns Hopkins University

University of Cambridge

University of Oxford

Imperial College London

King's College London

The University of Warwick

The University of Edinburgh

University College London

Cardiff University

Belgian University

Max Planck Institute

Humboldt University of Berlin

French National Centre for Scientific Research

Swiss Federal Institute of Technology in Lausanne

The University of Sydney



International Cooperation Centre

Overseas Expertise Introduction Centre for Discipline Innovation (“111 Center”)

The base of Computational Neuroscience and Brain-inspired Intelligence for Discipline Innovation, jointly applied for by ISTBI, the University of Cambridge and the University of Oxford was approved by the Ministry of Education and the State Administration of Foreign Experts Affairs in 2018. We establish the “Overseas Expertise Introduction Centre for Discipline Innovation” (“111 Centre”), promoting collaborative research in computational neuroscience and brain-inspired intelligence.





International Cooperation Centre

The Joint Fudan–King's Centre for Population Neuroscience

In 2018, Fudan University and King's College London jointly established the Centre for Population Neuroscience and Precision Medicine (PONS) to investigate the complexity and heterogeneity of behaviour and mental illness on a population level by identifying environmental and genomic factors that shape the structure and function of the human brain. PONS integrates neuroimaging, cognitive neuroscience, (epi)genomics and epidemiological research with novel tools for environmental assessments, such as ecological momentary assessments using smart phone applications, social media analyses, and satellite-based remote sensing acquisitions.



Joint academic and research activities



International Cooperation Center

Fudan-Sydney Brain and Intelligence Science Alliance (BISA)

The Brain and Intelligence Science Alliance (BISA) has been established as a platform to raise the research impact of both institutions through inter-disciplinary translational research in the fields related to data science, neuroscience and intelligence. The ultimate goal of BISA is to train research leaders, advance technology innovation and scientific research, and to secure practical applications for science and technology. The four main research areas of BISA are: Cognitive Neuroscience and Brain Disorders, Computational Neuroscience and Neural Engineering, Impact of AI on Ethics, Arts and Society; and Artificial Intelligence and Brain-Inspired Intelligence.



Cambridge-Fudan Brain Health Institute (BHI)

In 2019, Fudan University and the University of Cambridge signed a MoA to facilitate academic collaboration in brain-inspired intelligence, cognitive neuroscience, mental health, ancient civilisation, future philosophy and other fields. The Cambridge-Fudan Brain Health Institute (BHI) is co-founded by the ISTBI and the University of Cambridge.



复旦大学-悉尼大学校际协议签署仪式 MOU SIGNING CEREMONY BETWEEN FUDAN AND USYD



Milestone of ISTBI

2008 / 03

The predecessor of ISTBI, the Centre for Computational Systems Biology, was established as one of Fudan's first Project 985 high-level research centres.



2016

08 ISTBI inducted the first young principal investigators

12 Facility procurement for the imaging centre was approved

2018

02 "Key Laboratory of Computational Neuroscience and Brain-inspired Intelligence, Ministry of Education" was approved

07 "Shanghai Municipal Major Project on Brain and Brain-inspired Intelligence Research and Application" was approved



2020

04 Dean Jianfeng Feng was appointed as Deputy Director of Shanghai Center for Brain Science and Brain-inspired Technology

06 The National Key R&D Program of Revolutionary Technology "Neuromorphic Computing Assimilation Platform and a New Generation of Brain-inspired Intelligent Algorithm Theory" was approved

11 Fudan-FAW Nine-Chapter's Algorithm Institute was established.

2015 / 05

ISTBI was officially established
Dean Jianfeng Feng led the first major project in Artificial Intelligence of brain science of the Shanghai Municipal Party Committee



2017

09 ISTBI enrolled the first postgraduates.

10 Construction of Zhangjiang Fudan International Innovation Centre started, with brain and brain-inspired intelligence being the main mission.

12 "Computational Neuroscience and Brain-inspired Intelligence Overseas Expertise Introduction Centre for Discipline Innovation", jointly applied for by ISTBI, the University of Cambridge and the University of Oxford, was approved

2019

07 Opening ceremony for Zhangjiang International Brain Imaging Centre



2021

04 Three faculty members were recognised as 'World's Top 2% Scientists 2020' in the field of neuroscience.

07 Staged products of the "Shanghai Municipal Major Project on Brain and Brain-inspired Intelligence Research and Application" were released at the 2021 World Artificial Intelligence Conference.

Join us

- Distinguished Professor (Chair)

Applicants must have been internationally recognized and have outstanding academic achievements in brain-inspired artificial intelligence or related fields. Applicants must be capable of leading scientists and establishing a world-class research team. The appointed Distinguished Professors will become leaders or co-leaders of one of the six research centres and will, with their research teams, carry out work that achieves the mission of their centre. The Distinguished Professors also have the duties of recruiting and managing their teams.

- Young Principal Investigator/Associate Research Fellow/Associate Professor (Tenure-track or Tenured)

Applicants should have excellent publications in related areas and be under 36 years of age. Applicants should be well-recognized by the international academic community, and have the potential to apply for the Young Thousand Talents Program or for an Outstanding Young Scholar of the NSF of China. The appointed applicants will carry out work either individually or cooperatively in the Chair Professor's research team.

- Adjunct Professor

Applicants are outstanding scientists from well-known universities, research institutes, and leading companies in related industries. Applicants should have a broad interdisciplinary vision and international peer recognition, and have the strong potential to collaborate with scientists of the ISTBI in scientific research and postgraduate education.

All individuals of tenure-track positions will be subject to an international academic evaluation after six years of employment. Successful individuals will be qualified to transfer to a tenured position and/or promote their academic qualifications to higher-levels. The qualifications of tenured positions could be Distinguished Professor, Professor, Research Fellow, and Associate Professor.

Applications can be submitted to the email address with the subject line containing the position applied for. Paper-based submissions are not initially necessary. An application should include:

- (i) A cover letter that contains a brief research plan and how suited the plan is to the position applied for;
- (ii) A CV in English that contain a full list of publications and contact information of at least five full professors who can act as referees;
- (iii) Five representative works (include journal papers, monographs and patents);
- (iv) Certificate of highest degree

- Principal Investigator/Research Fellow/Professor (Tenured)

Applicants must have high-level academic achievements in the field of brain-inspired artificial intelligence or related fields. Applicants can be scientists or engineers and should have a wide interdisciplinary vision have the potential to become a Chair Professor. The appointed applicants will carry out work under the direction of a Chair Professor of the ISTBI.

- Postdoctoral Research Fellow

Applicants must hold PhD from well-known universities or research institutes with a solid foundation in mathematics, statistics, physics, informatics and computer science, neurobiology, materials, biomedical engineering, and robotics, etc. The appointed applicants will work in the area of brain-inspired intelligence and will enter a specific group affiliated to one of the six research centres to conduct research work.

EMAIL : istbi@fudan.edu.cn
Tel : +86-21-6564-8171

- 1 Guanghua Building
- 2 Zhangjiang Library
- 3 ZhangJiang International Science and Technology Innovation Centre, Fudan University
- 4 Zhangjiang International Brain Imaging Centre





ISTBI FAMILY

