

海内外
SCI文章加强合作交流

Scientific Paper Augmented
Collaboration and Exchange
(SPACE)

合作的一些个人经验

杨一鸿

非诚勿扰

The logo for the Chinese dating show '非诚勿扰' (I Don't Care) is displayed in a stylized, 3D font. The characters '非' and '诚勿扰' are in red, while '非' is in blue. To the right of the text is a black silhouette of a woman in a high-heeled dress, leaning against a large red arrow that points upwards and to the right.

合作三要素

1. 目标一致

- 共同的科研兴趣、共同的科研方向

2. 资源互补

- 国外优势：视野广、技术新
- 国内优势：人材多、费用低

3. 互利双赢

- 共享数据，同发论文
- 申请基金，提职加薪



一个合作例子(与臧玉峰教授)

2006: 开始合作

2007: 发表论文1篇 (NeuroImage)

2008: 发表论文2篇 (J Neurosci Med)

2009: 发表论文2篇 (NeuroImage, HBM)

2010: 获得**NFSC**基金资助

2011: 2-3篇论文准备中...

祝大家合作成功！

你相信一见钟情吗？

只要对上眼就行！



联系信息

杨一鸿, 高级研究员

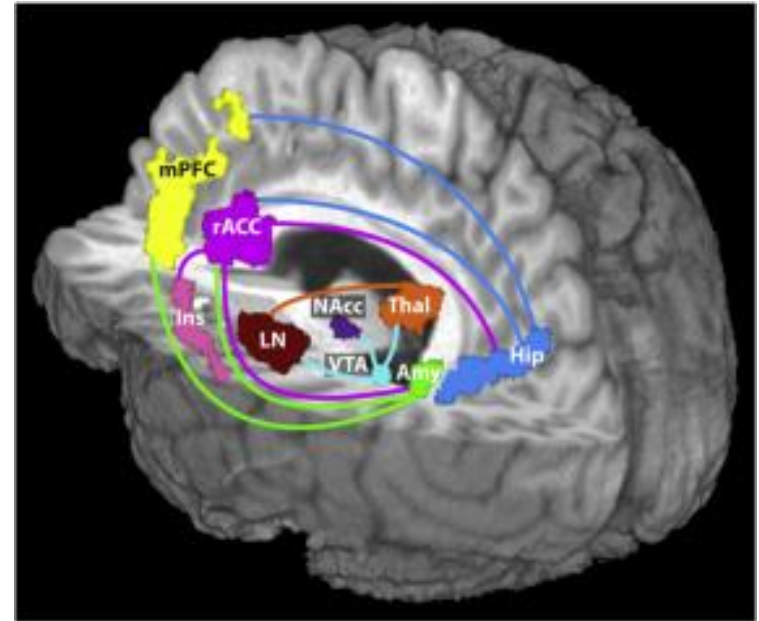
美国国家卫生研究院 (NIH)

yihongyang@mail.nih.gov

1-443-740-2648 (USA)

专长领域

- 脑功能磁共振影像
- 静息脑功能影像
- 灌注影像 (ASL)
- 弥散张量影像(DTI)
- 磁共振频谱(MRS)
- 磁共振影像在药物成瘾及其它精神疾病的研究



合作意向

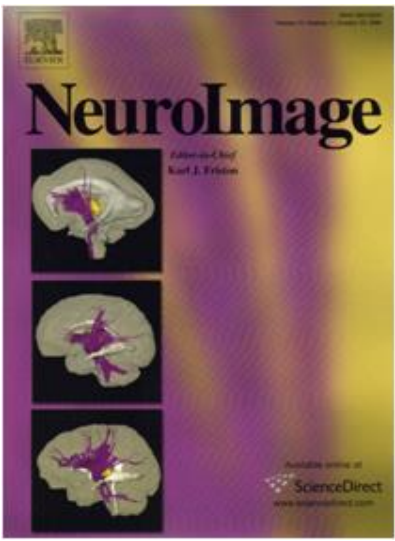
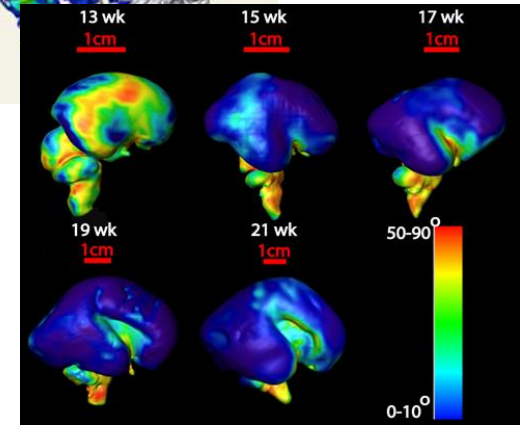
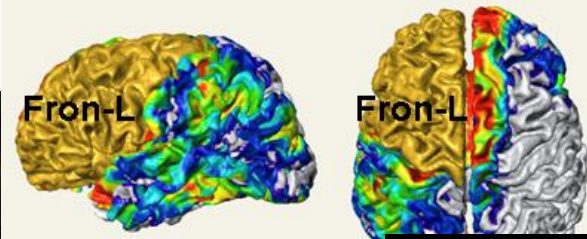
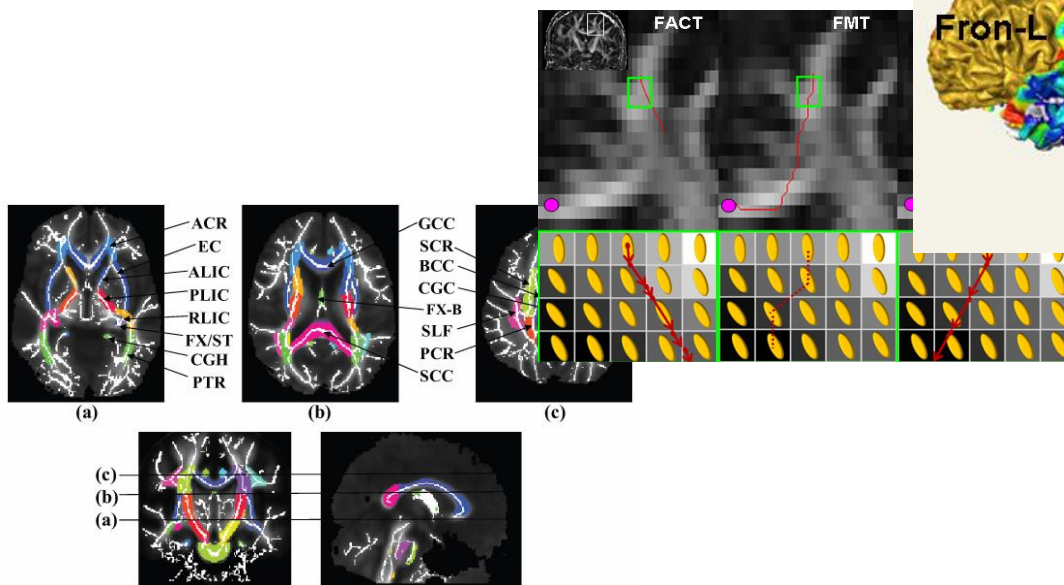
- 磁共振影像在药物成瘾及其它脑疾病的研究
 - 可卡因、海洛因、大麻等毒品成瘾
 - 吸烟成瘾
 - 网络游戏成瘾
 - 精神分裂症
 - 创伤后应激障碍 (PTSD)
 - 脑外伤 (TBI)



黄浩，博士
助理教授, 研究室主任
美国德州大学西南医学中心
放射学系

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电话: 001-214-6452881



Huang, et al 2005

扩散张量成像，high-b 扩散成像，high angular resolution diffusion imaging (HARDI), 图像分析与重建



Huang, et al 2011

实验室研究领域与寻求合作方向：

疾病标记定位与分析：

Alzheimer's disease;

忧郁症；

脑肿瘤；

孤独症

典型与非典型大脑发育研究：

正常大脑白质发育；

神经网络发育

个人简历:

宋无名 (Allen W. Song) 博士
杜克大学脑成像中心 (www.biac.duke.edu) 教授, 主任
杜克大学医学院执行委员会常务委员



1991年在上海交通大学试点班毕业

1995年获威斯康辛医学院博士学位

1996年在美国国家卫生研究院 (NIH) 从事博士后研究

1997年获聘为Emory大学副教授, 从事大脑功能磁共振造影研究

1999年获聘于杜克大学 (Duke University) 脑成像中心副主任, 兼放射系副教授

2001年获美国国家科学基金会青年教授奖

2003年升任杜克大学放射系副教授

2006年升任杜克大学放射系正教授, 终身职, 兼任生物医学工程系、精神病学系及神经生物学系正教授。同年随后担任杜克大学医学院直属之脑成像中心主任, 及杜克大学医学院执行委员会常务委员至今。

宋无名教授已发表长篇小说超过70篇, 短篇小说超过100篇。他与Scott Huettel及Gregory McCarthy教授在2004年 (第一版) 和2009年 (第二版) 合写的《Functional Magnetic Resonance Imaging》是现在美国大学本科和研究所在该领域最通用的专业教科书。他是美国国家科学基金会 (NSF) 和美国国家卫生院 (NIH) 研究基金评审, NeuroImage杂志编委, 其他杂志如《美国科学院报》、《生物医学成像》、《医学磁共振》及国际磁共振年会的评审。

研究领域及方向:

- 功能磁共振(**fMRI**)的成像方法及应用
- 扩散张量成像(**DTI**)的方法及应用
- 快速成像方法(**Fast Imaging**)及应用
- 对比度原理 (**Contrast Mechanism**)
- 磁共振神经电成像(**Neuroelectric MRI**)

寻求合作方向:

- 功能磁共振(**fMRI**)的临床应用
- 扩散张量成像(**DTI**)的临床应用
- 多中心大型合作项目
- 短期或长期合作培养国内磁共振人才

钟健晖 (Jianhui Zhong)

**Professor (Radiology, BME, Physics)
University of Rochester**

**jianhui.zhong@rochester.edu
1-585-273-4518**

<http://www.urmc.rochester.edu/radiology/research/Zhong.cfm>

<http://www.rcbi.rochester.edu/>

http://www.pas.rochester.edu/urpas/faculty_page/zhong_jianhui

专长领域与合作意向

- 大脑磁共振技术和应用

- 弥散成像技术
- 大脑成像定量分析
- 纵向数据分析

- 脑损伤的成像和力学模拟
- 多中心成像的数据整合分析处理
- 弥散张量成像的phantom构建与分析
- 单一病人纵向数据的wild bootstrap分析方法

专长领域与合作意向

- 磁共振物理(MRI biophysics)
 - 大脑成像 Compressed Sensing方法
 - 多量子相干新型对比脑功能成像技术

诚征合作者!

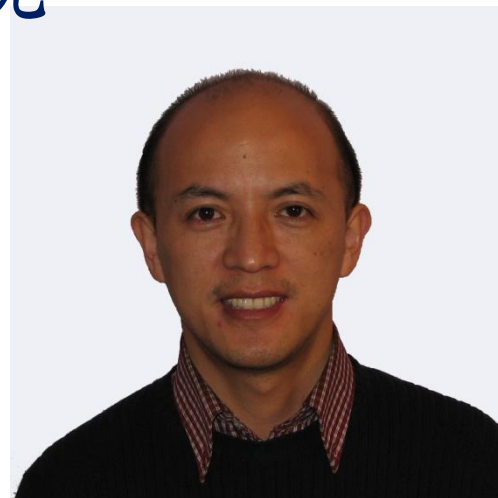
王泽

Ze Wang, PhD

研究助理教授，宾夕法尼亚大学佩雷尔曼医学院，
工程及应用科学学院。

实验室主页：cfn.upenn.edu/~zewang

- 研究兴趣：1. 动脉血标注灌注成像技术 (ASL perfusion MRI) 和数据处理
2. 吸烟和吸可卡因成瘾功能成像研究
3. 神经衰退类疾病功能成像研究



研究工作简介

- 开发了一系列的ASL 和BOLD fMRI数据处理方法。
- 免费提供了一个ASL数据处理软件包，并不断加入最新的研究成果。请参见cfn.upenn.edu/~zewang。
- 开发了新一代的ASL MRI成像序列，该技术包括采样，重建和数据处理。
- 在吸烟研究方面进行了一系列的功能成像研究。
- 在可卡因上瘾方面进行了多年的合作研究。
- 在老年病脑功能研究方面有多年的研究经历。
- 目前已发表41篇杂志文章。



合作意向

- 技术合作：提供ASL成像和后处理技术支持
- 应用合作：吸烟上瘾脑功能研究，老年病特别是AD, ALS和PD的脑功能跟踪研究。
- 有兴趣的国内同仁请在会场或会后联系
- zewang@mail.med.upenn.edu



吕正荣

Zheng-Rong (Z-R) Lu

M. Frank and Margaret Domiter Rudy Professor
Case Western Reserve University
Cleveland , Ohio

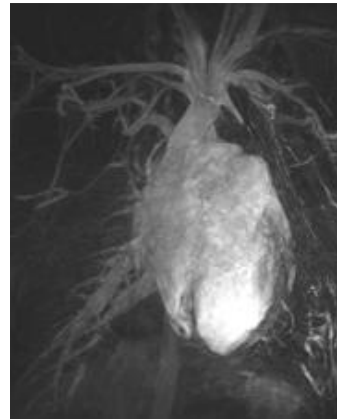
Email: zxl125@case.edu

216-3680187

1. Biodegradable macromolecular MRI contrast agents

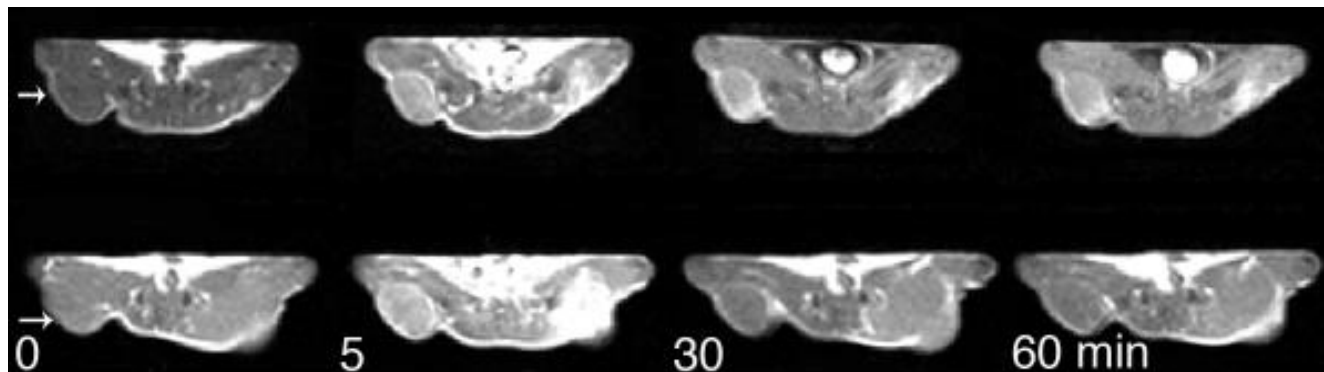


Precontrast



GDCC-18

2. Targeted MRI contrast agents



Targeted Agent

Omniscan

Collaboration Interests

Development of new MRI contrast agents:

Cancer imaging

Vascular imaging

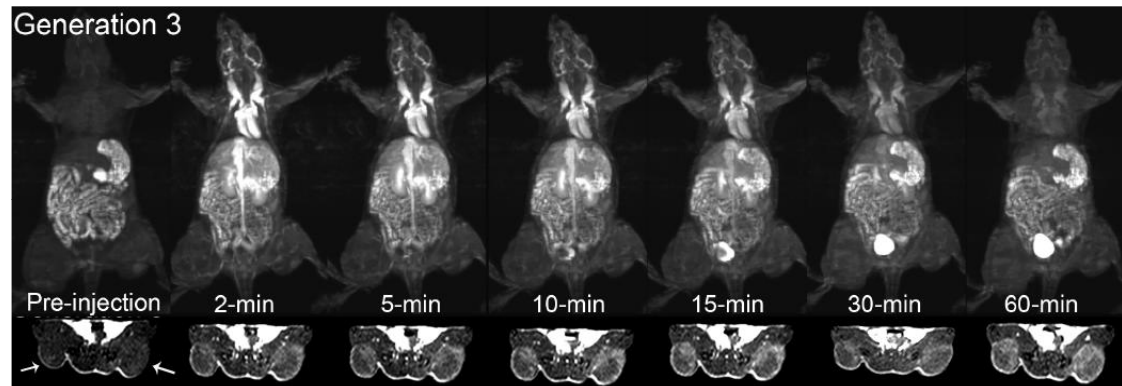
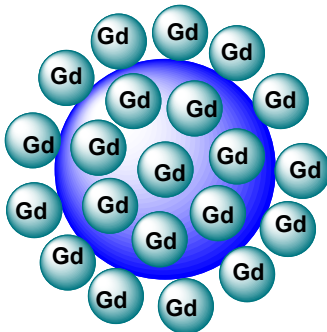
Fibrosis imaging (Hong Kong University)

Drug development – non-invasive drug screening

Commercialization of novel MRI contrast agents

Targeted MRI contrast agents

Nanoglobular MRI contrast agents



Multimodal Imaging of Cancer

Lydia Min-Ying Su, PhD (蘇敏瑩)
(msu@uci.edu, 1-949-824-4925)

Professor, Department of Radiological Sciences, and

Tu & Yuen Center For Functional Onco-Imaging

University of California, Irvine

Multi-modal Imaging Modalities for Cancer

MRI



Ultrasound



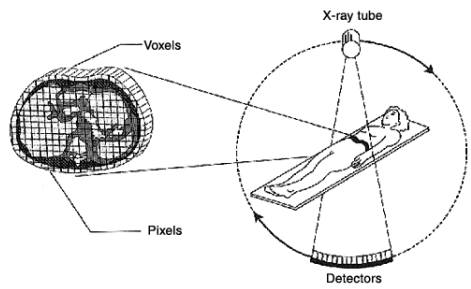
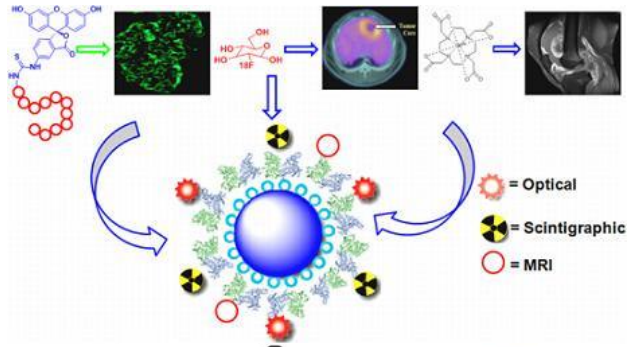
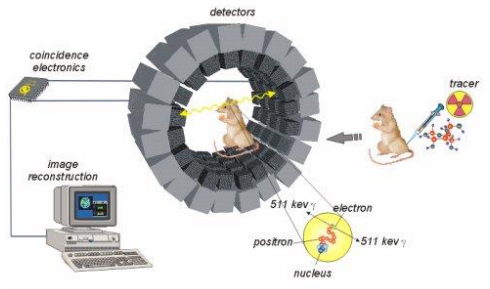
Mammography



Optical Imaging



PET



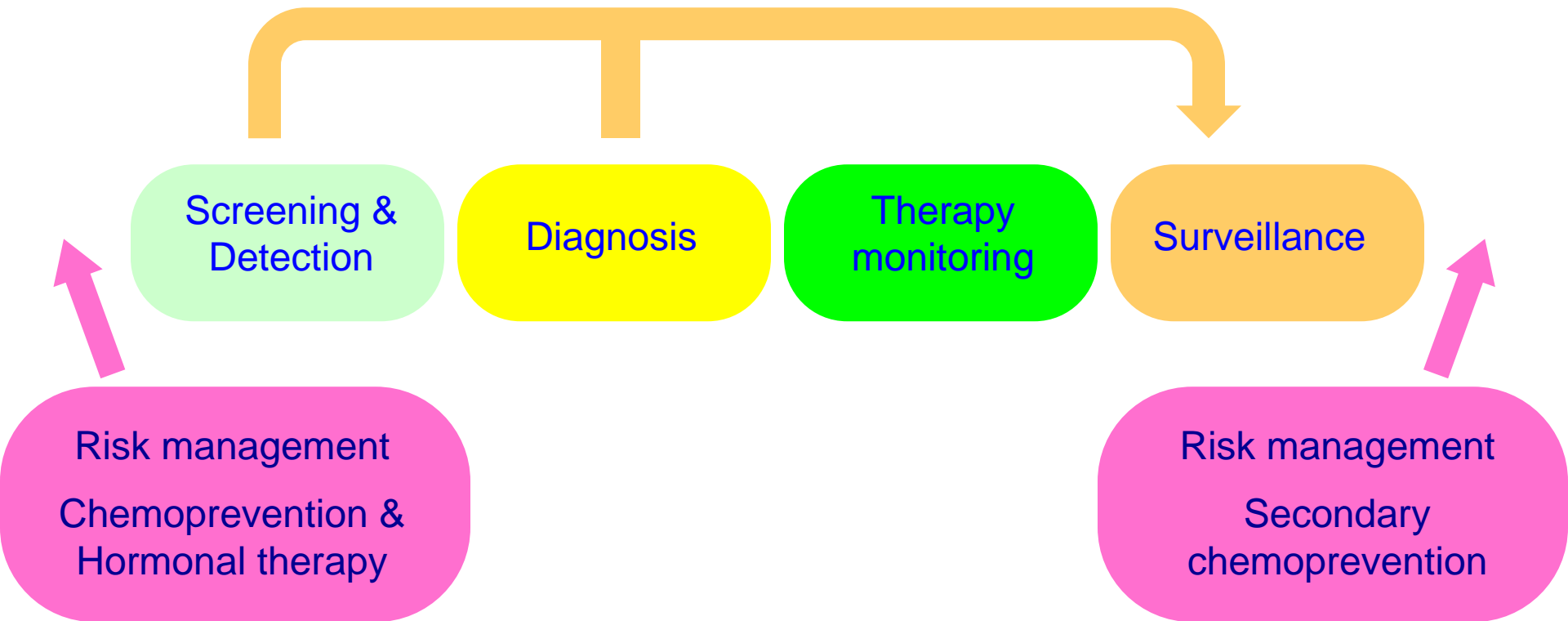
CT

Positive Emission Mammography

y



Clinical/Emerging Role of Multi-modality Breast Imaging





王成波, PhD

放射学助理教授

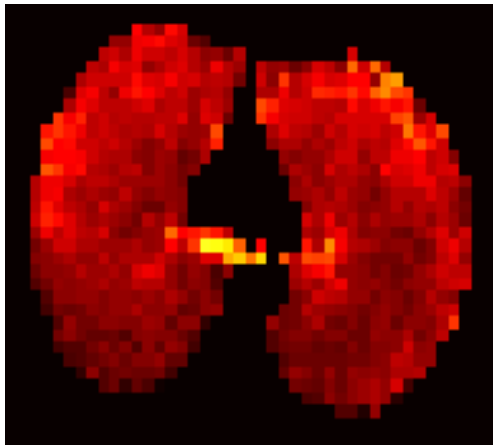
美国弗吉尼亚大学

Email: cw4u@virginia.edu

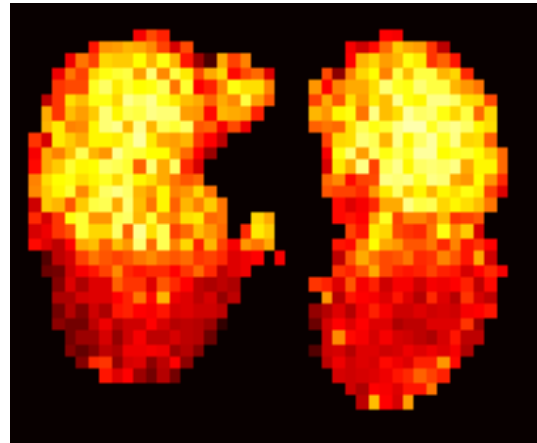
Phone: +1-434-2434955

王成波： 专长领域

- 磁共振物理
- 序列开发与优化
- 超极化气体核磁共振成像
- 灌注成像



健康



哮喘



慢性阻塞性肺病

超极化气体核磁共振成像

1



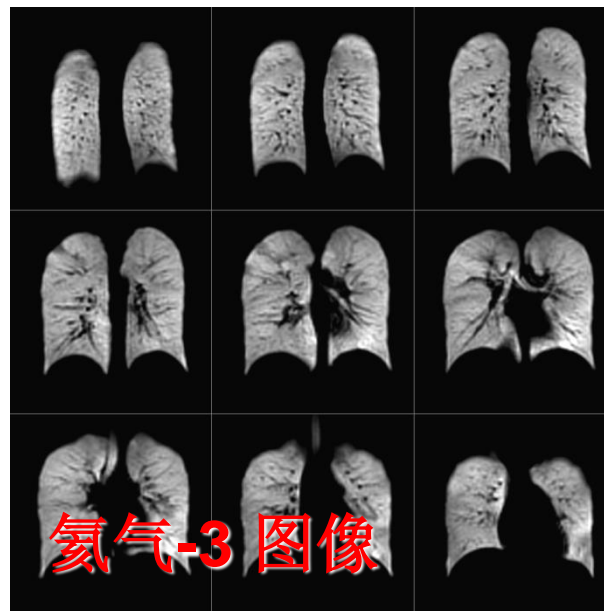
2



3



4



联系信息

Zheng Chang, Ph.D., MCCPM, DABR, DABMP
Assistant Professor, Radiation Oncology, Duke University

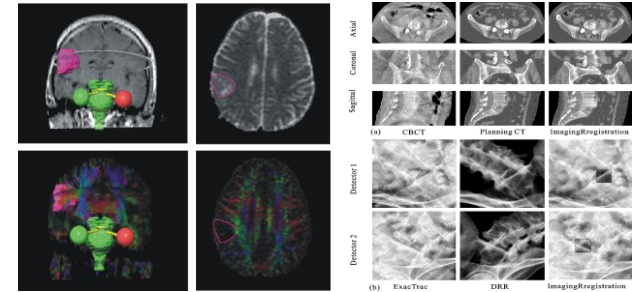
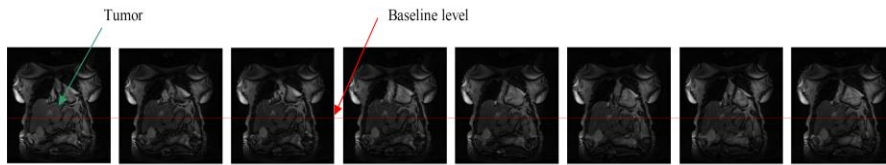
Email: zheng.chang@duke.edu

Phone: 1-919-681-2608

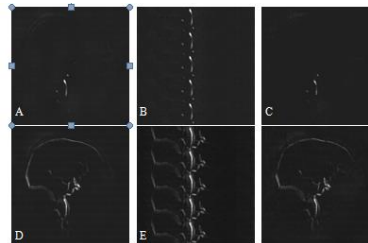
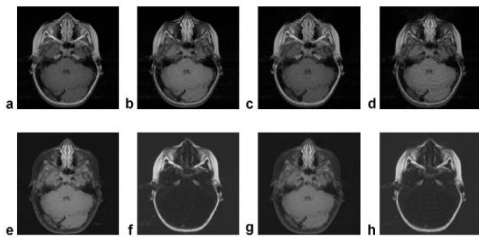


专长领域

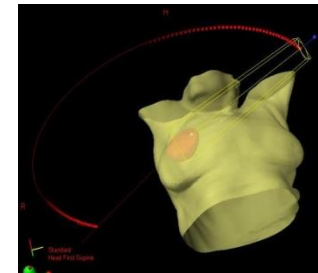
Image-guided radiotherapy/radiosurgery



Fast imaging method to highly accelerate MRI/MRA



Development of radiotherapy/radiosurgery technique



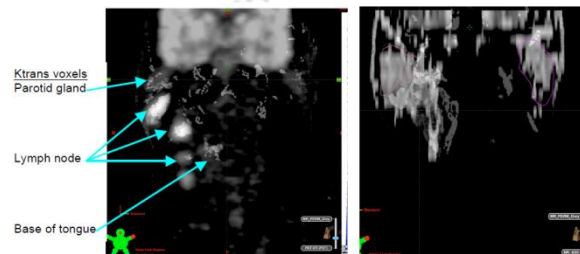
合作意向

Motion management using MRI to guide radiotherapy/radiosurgery:

tumor motion probability distribution function

4D MRI technique using internal or external surrogate

Functional study using MRI to guide radiotherapy/radiosurgery



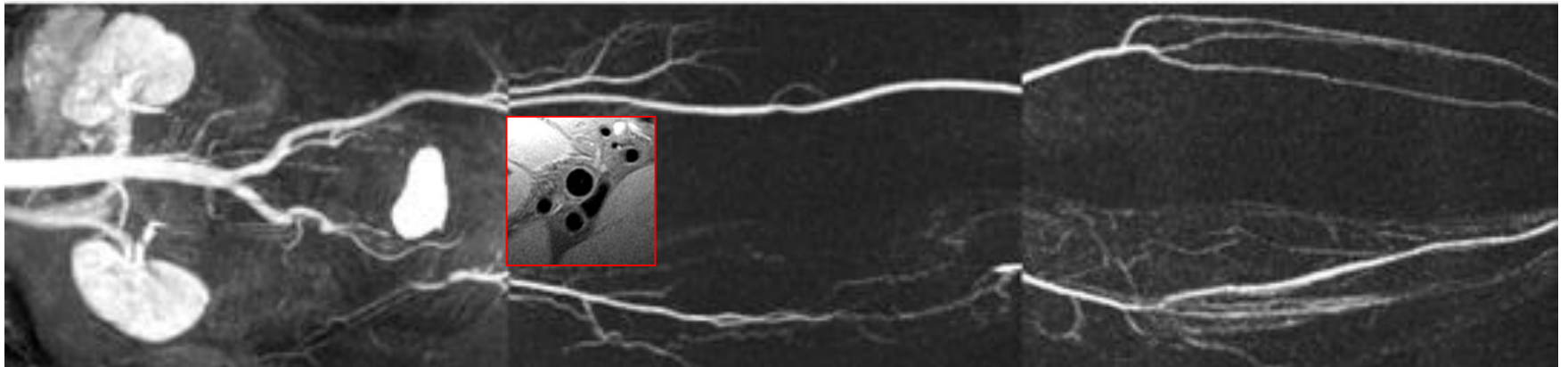
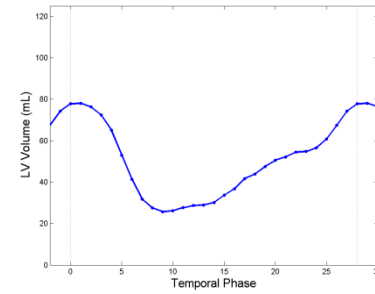
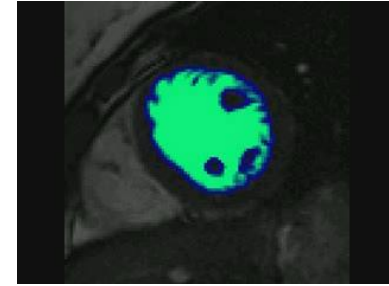
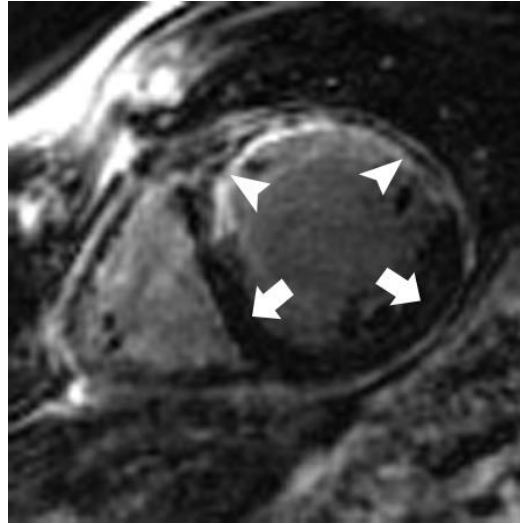
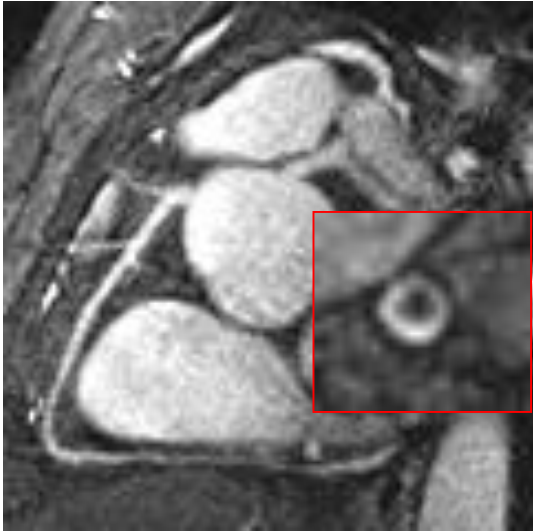
Fast imaging/parallel imaging

王乙教授 , Yi Wang, Professor
康乃尔大学 , Cornell University

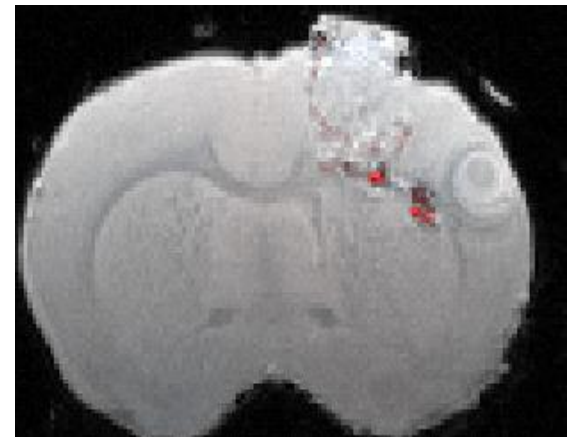
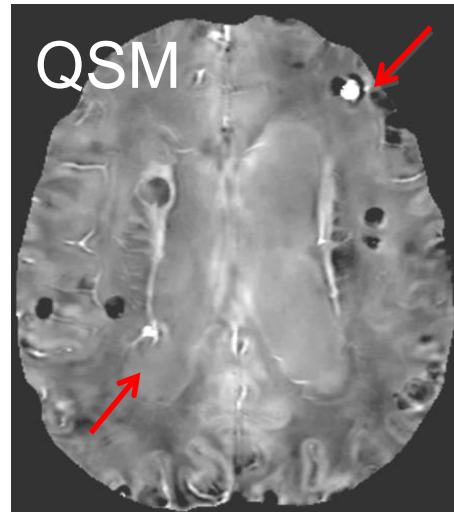
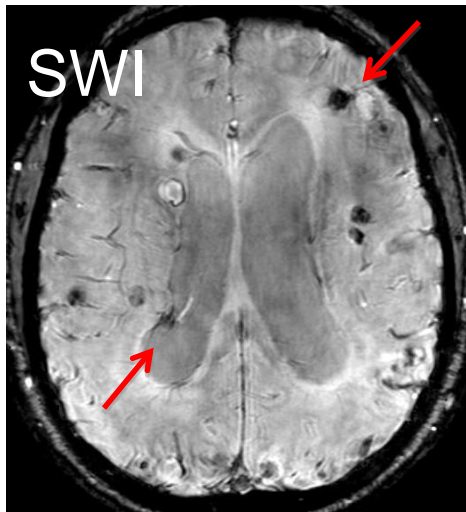
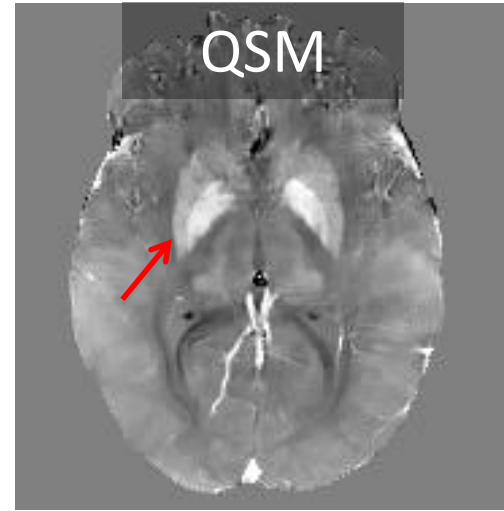
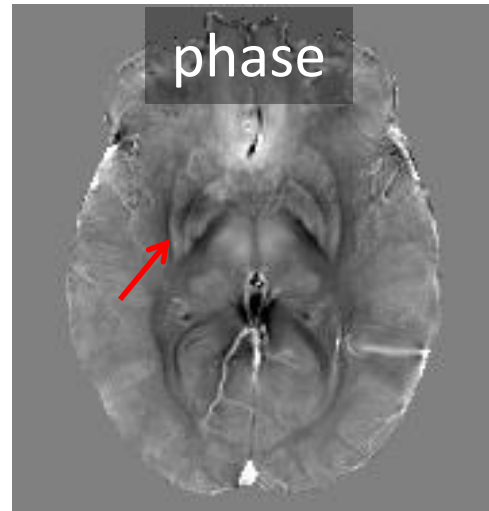
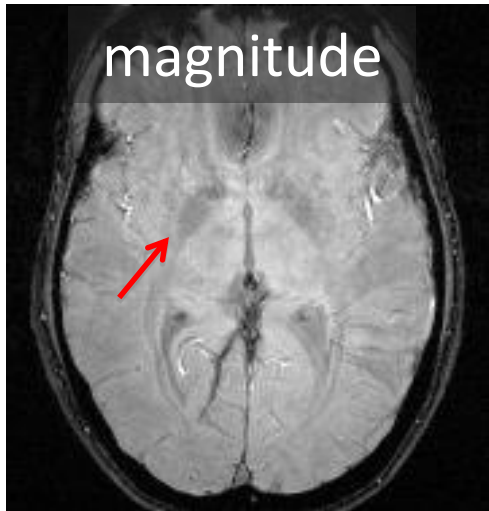
yiwang@med.cornell.edu

1.212.746.6880

王乙:心血管cardiovascular MRI



王乙:磁量图QSM应用



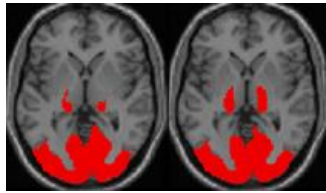
Hanzhang Lu, 陆汉璋, 副教授

美国德州大学西南医学中心

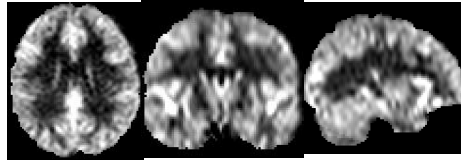
University of Texas Southwestern
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hanzhang.lu@UTSouthwestern.edu

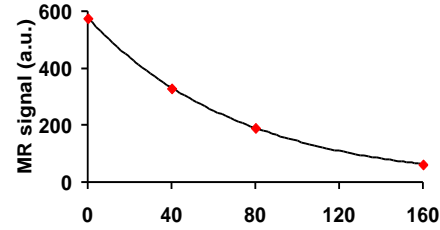
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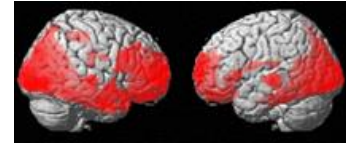
Mechanism of fMRI signal



Cerebral blood flow



Oxygen Content & Consumption



Neural deficit in Schizophrenia

Normal physiology

Brain MRI techniques

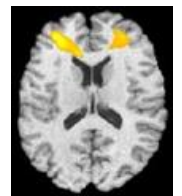
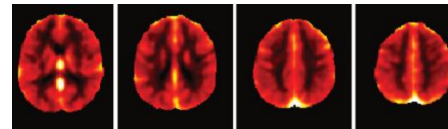
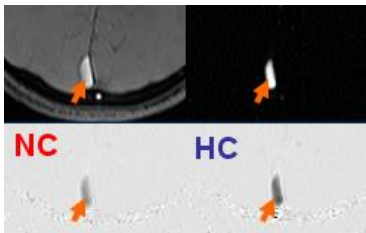
Brain disorders

CO2 suppresses neural activity

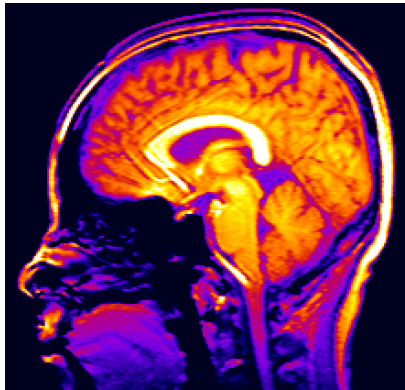
Cerebral blood volume

Vessel elasticity

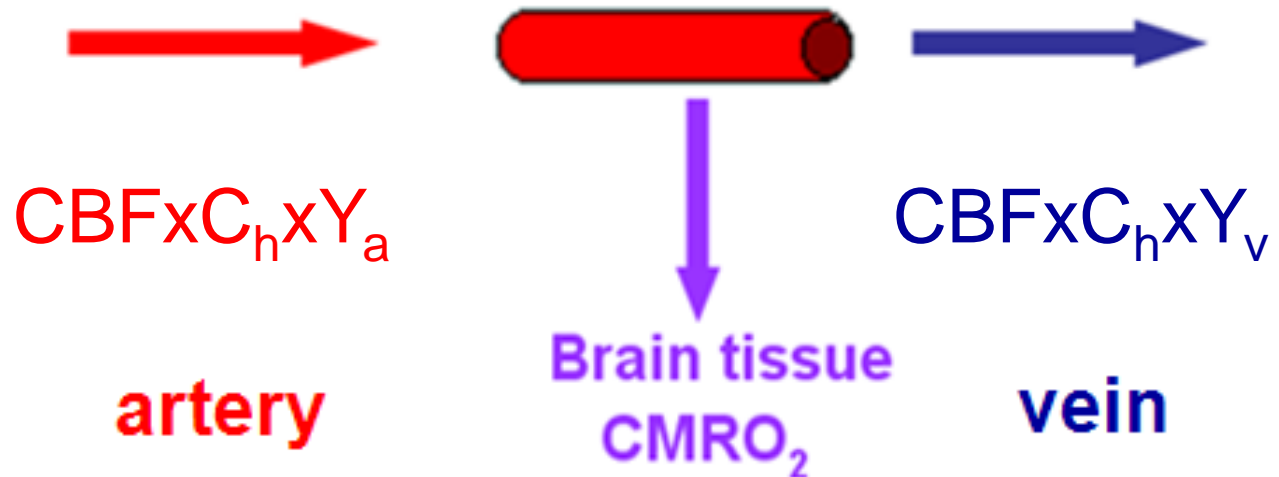
Vascular change in aging and Alzheimer's



Non-invasive measurement of CMRO₂ using MRI



$$\text{CMRO}_2 = \text{CBF} \times C_h \times (Y_a - Y_v)$$



CBF: Cerebral Blood Flow(ml/min/100g)

Y_a : arterial oxygenation (%) 96 – 99%

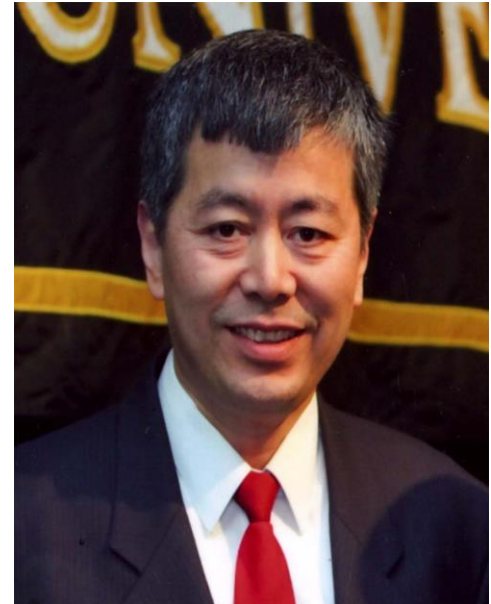
Y_v : venous oxygenation (%) 50 – 75%

C_h : the amount of O₂ for unit blood can carry (μmol/ml)

Duration < 5 minutes, day-to-day variation ~5%

Yang Xia, PhD 夏阳 博士

**Professor of Physics
物理学教授**



Department of Physics
Oakland University, Rochester, MI 48309, USA
(www.oakland.edu/~xia)

奥克兰大学物理系,
密歇根州 罗切斯特, 48309, USA

Email: xia@oakland.edu

Phone: 248-370-3420

Web: www.oakland.edu/~xia

Xia Lab

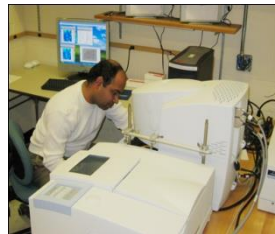
- As a faculty at Oakland University (since 1994), my major research effort has been concentrated on multidisciplinary microscopic imaging study of articular cartilage.
- I have been supported by three 5-year RO1 grants from the National Institutes of Health (NIH) since 1999.
- We use multidisciplinary micro-imaging to discover molecular markers that are sensitive to specific tissue degradation.



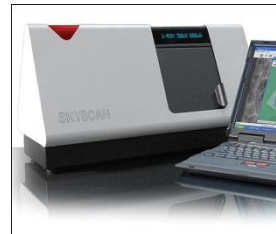
μMRI
Bruker 7T/8.9cm
(~ 10μm in 2D)



PLM
Leica /12bit CCD
(0.25μm at 400x)



FT IRI
PerkinElmer 300
(1.56μm or 6.25μm)



μCT
Skyscan 1174
(6μm isotropic)



Mech Testing
EnduraTEC 3200



Leica CM1950
VIP Tissue-Tek
Tec 5 Embedding



Research in Xia Lab

Areas of Expertise

高场显微磁共振成像, 定量光学成像(偏光显微镜, 傅立叶变换红外显微镜, 显微计算机断层扫描), 骨关节炎关节软骨的退化.

Microscopic MRI at high field, quantitative Optical Imaging (Polarized light microscopy, Fourier-transform Infrared microscopy, Microscopic Computer Tomography), the degradation of articular cartilage in osteoarthritis

Collaboration Directions

软骨退化的早期阶段的分子标记, 关节软骨在荷载作用下的调整, 骨性关节炎, 从显微磁共振成像到临床磁共振成像.

Development of the molecular markers at the early stage of cartilage degradation, the load-induced adaptations of articular cartilage

MRI of osteoarthritis, from micro-MRI to clinical MRI.

寻求中国合作伙伴 Seeking Chinese Partners.





吳學奎

香港大學生物醫學成像實驗室

Professor Ed X. Wu, PhD

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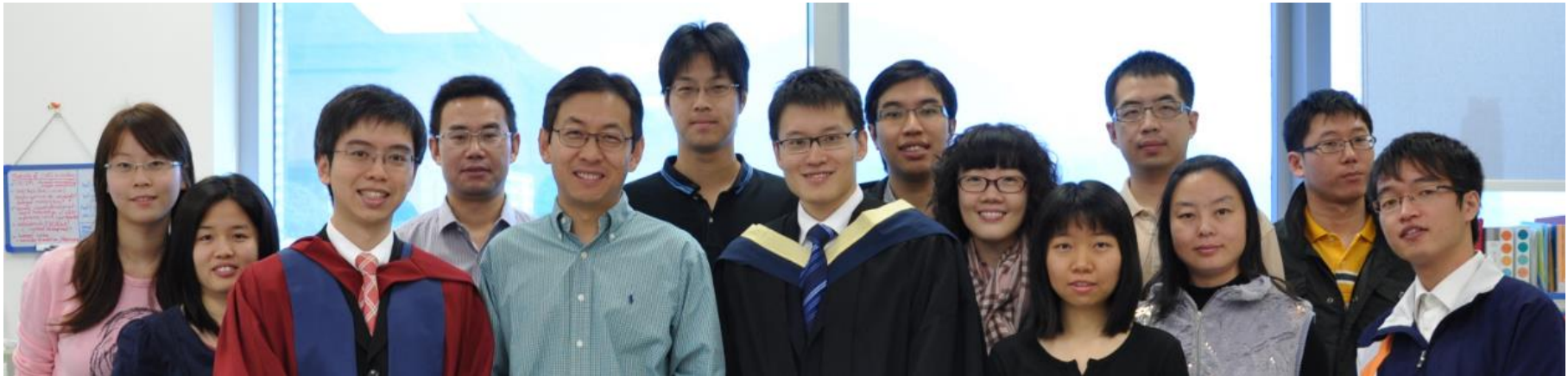
**Laboratory of Biomedical Imaging and Signal Processing
HKU 3T MRI Unit**

**Department of Electrical and Electronic Engineering
Departments of Anatomy, Medicine and Diagnostic Radiology**

The University of Hong Kong

Research Interests

- MR diffusion; molecular imaging; contrast agents; fMRI
- Preclinical MRI; neuroscience; heart function and structure
- Imaging system instrumentation
- Biomedical engineering



Ongoing Academic MRI Research Collaboration in Mainland China

Xian Jiaotong University
Professor Jian YANG

Other collaborators for blue sky research ?

