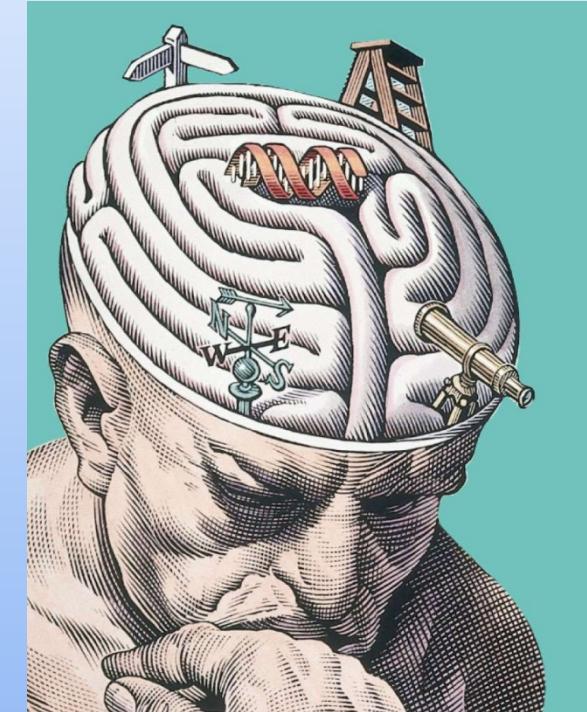


Toward Science

**Elene Iordanishvili
Georgian Technical University**

**Supervisors:
Prof. Ketevan Kotetishvili, prof. Nadim Jon Shah**





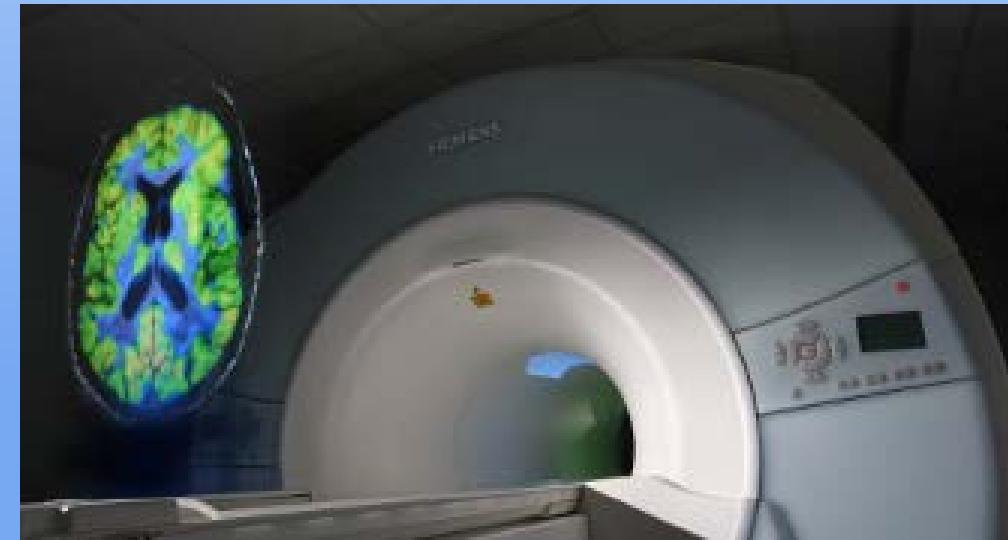
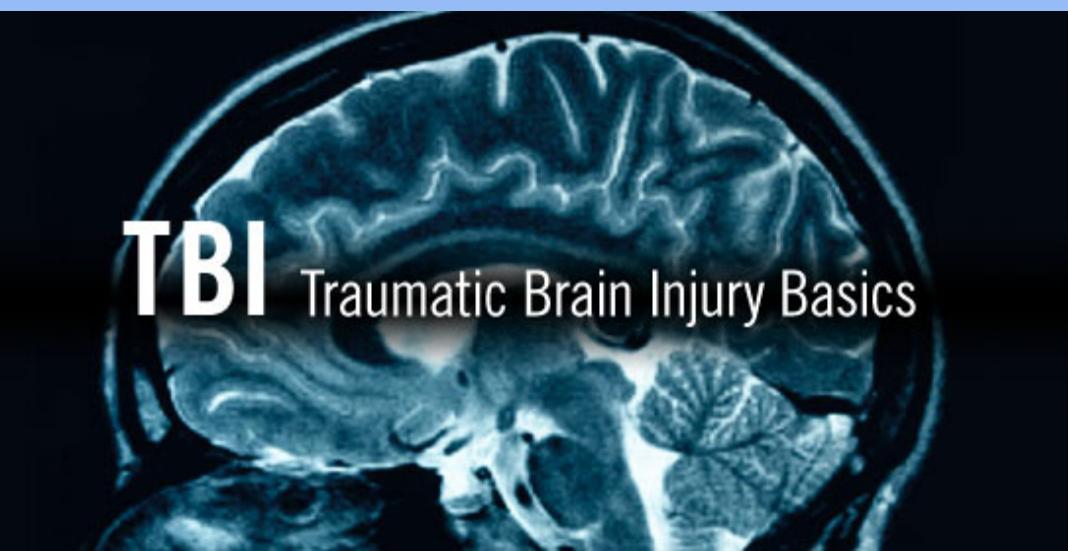
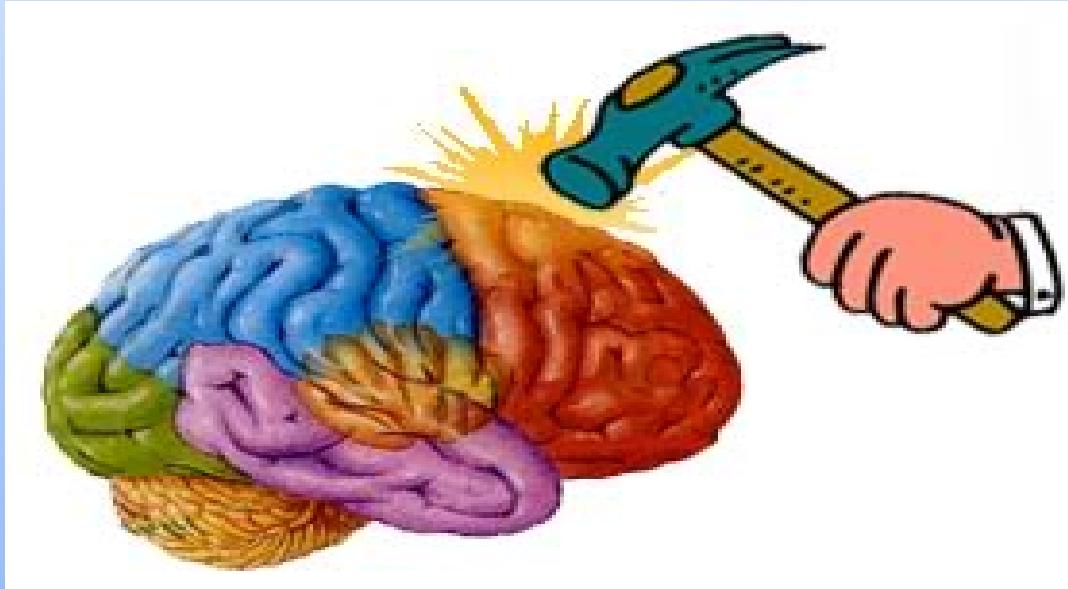
Scientific conference dedicated to the 10-years-anniversary of Georgian-German Science Bridge



<http://collaborations.fz-juelich.de/ikp/cgswhp/>
<http://studmedia.ge/autumn-lectures>

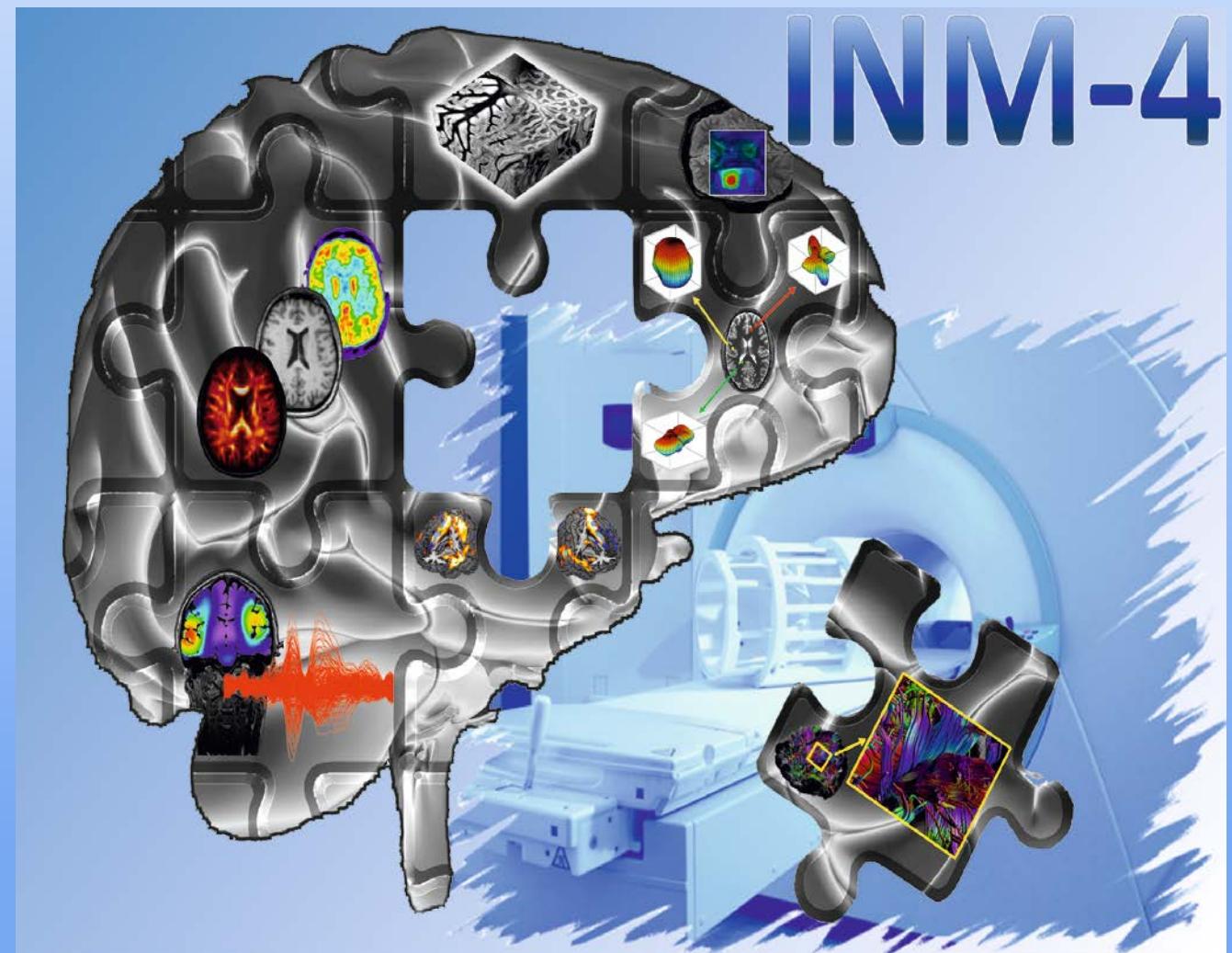


Development and Application of Methods for the Investigation of Traumatic Brain Injury



Institute of Neuroscience and Medicine – 4

- Medical imaging physics;
- Development of novel brain imaging methods;
- Experimental validation and clinical implementation of the methods.



INM-4

Prof. Dr. N. J. Shah

MR Physics

Prof. Dr. N. J. Shah

PET Physics

Prof. Dr. H. Herzog

MEG Physics

Dr. J. Dammers

Brain Tumors

Prof. Dr. K. J. Langen

PET Detector Technology

Prof. Dr. U. Pietrzik

Team

Sequence Development
Dr. T. Stöcker

Quantitative Imaging
Prof. N. J. Shah

Contrast Mechanisms
Dr. A. M. Oros-Peusquens

Sodium Imaging
Dr. S. Romanzetti

Diffusion Imaging
Prof. N. J. Shah

Hardware
Dr. J. Felder

MR-PET (Applications)
Prof. N. J. Shah

fMRI
Prof. N. J. Shah

Technical Aspects

PET

Prof. Dr. H. Herzog

Team

MEG Methods

Dr. J. Dammers

Technical Aspects

PET-MR

Prof. Dr. H. Herzog

Team

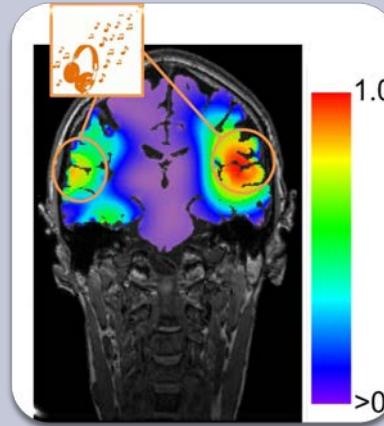
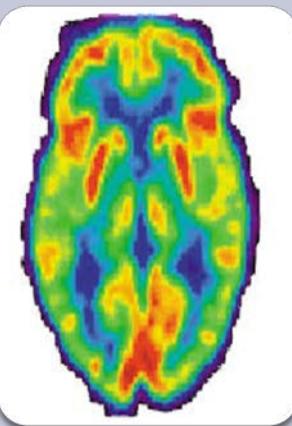
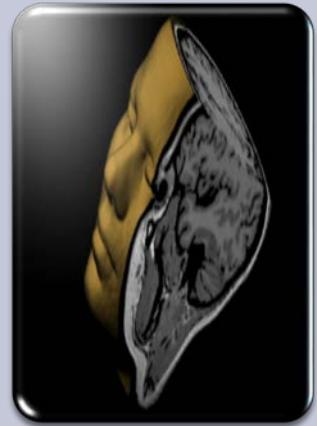
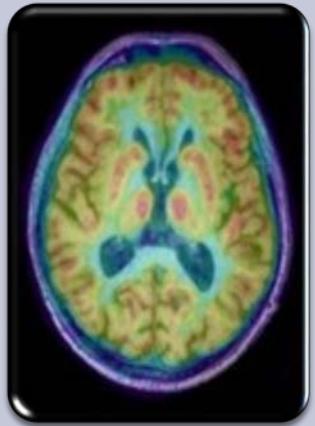
MEG-MR

Prof. N. J. Shah

Techn. Staff & Administration

P. Engels, D. Krug
M. Bunn, V. Nelles
B. Elghahwagi, A. Muren





MR-Pet Scanners: **Human scanners:**

> 3 Tesla MR-PET System (Siemens Healthcare)
> 9.4 Tesla MR-PET System and Parallel Transmit Capability (Siemens Healthcare)

MRT **Human scanners:**

> 3 Tesla Tim Trio System (Siemens Healthcare)
> 4 Tesla MedSpec
Animal scanners:
>9.4 Tesla Animal System with Clinical User Interface and Parallel Transmit Capability

Pet scanner

Ectat HR + (Siemens Healthcare)

MEG

248 magnetometer MEG system

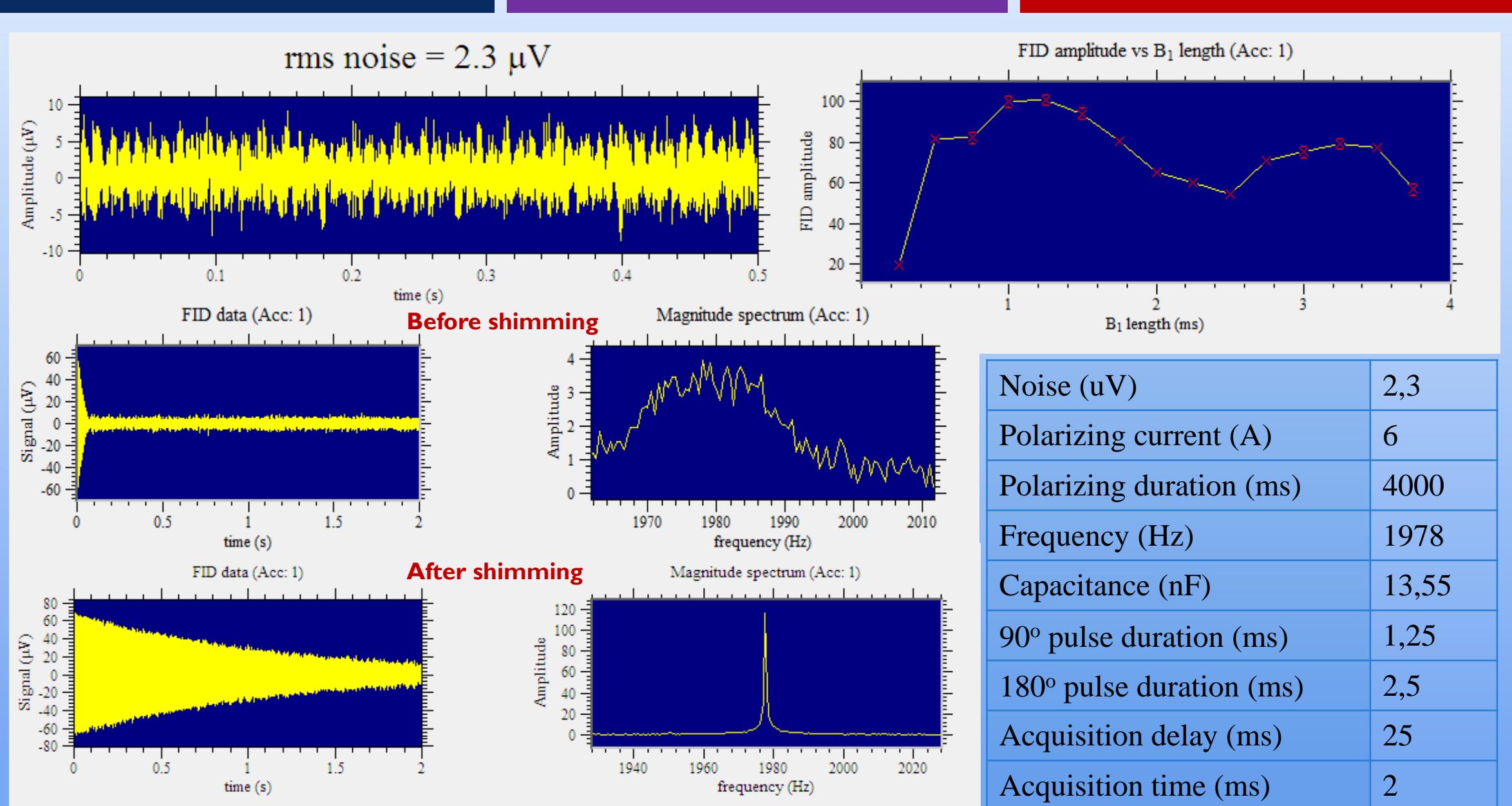
Other facilities

- > Computing systems;
- > Electronics lab;
- > Mechanics lab;
- > Chemistry lab.

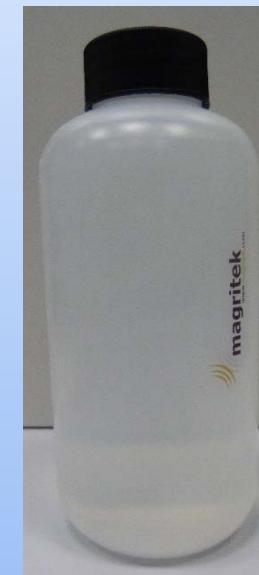
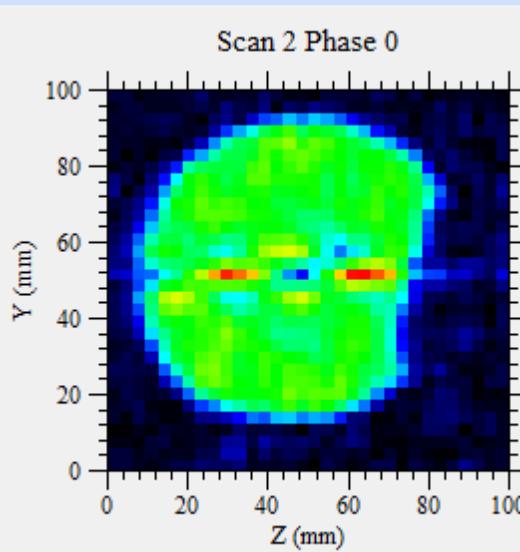
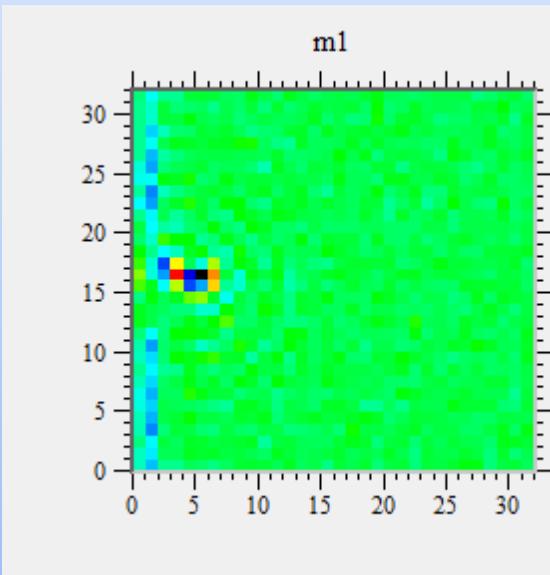
Visit in Institute of Neuroscience and Medicine -4

Terranova earth field MRI apparatus

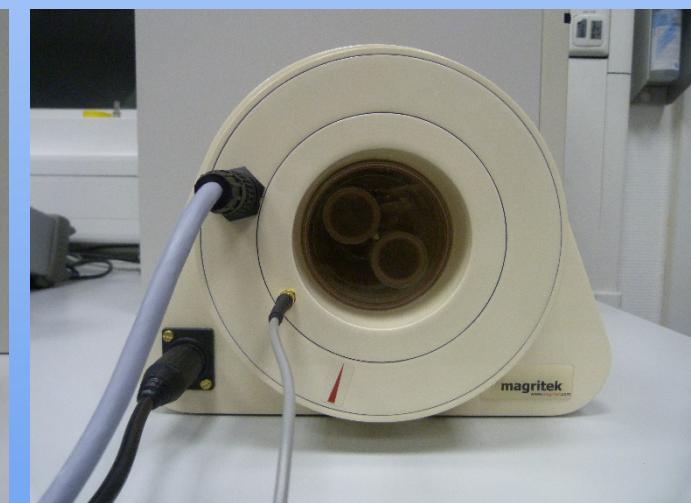
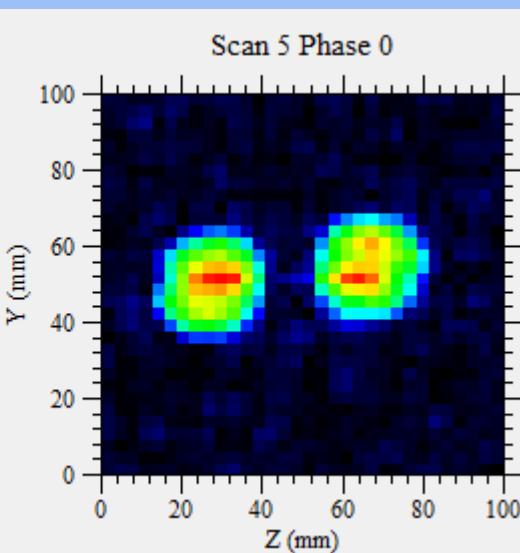
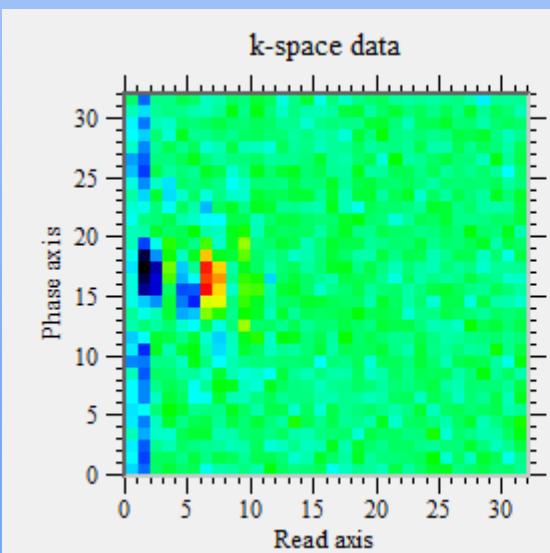




Spin echo imaging (2D)



bandWidth (Hz)	32
Matrix size	32x32
echoTime (ms)	150
tgrad (ms)	50
b1freq (Hz)	1978
orient	ZY



Thank you for your attetion!

