

## **12.03.04 Biological Systems and Technologies**

### **Advanced Diagnostic Systems**

*Department of Computer Medical Systems*

#### **We are ready to involve you into**

advanced and complex information and measurement software and hardware development for nuclear medicine and telemedicine.

#### **We are able to offer**

traditionally profound and fundamental knowledge as a solid ground for future work with artificial intelligence systems that are intended to become an indispensable tool in the medical practice.

#### **We are seeking for**

willing young people who want to dive into medical agenda and develop modern devices to help doctors and patients be healthier and live longer!

#### **Key research and professional activities**

- Development of methods and instruments of digital image processing for medical diagnostics
- Software and hardware development of an intelligent decision support system (IDSS) for medical applications
- Development of methods and protocols with extensive use of artificial intelligence (AI) techniques for medical diagnosis and therapy
- Design and implementation of networks for remote medical consultations at rural areas
- Development of medical training systems
- Software development for information-gathering complexes

#### **Computer systems of clinical diagnostics for medical applications:**

histology, cytology, hematology, bacteriology, immunology, radiology, tomography, ultrasound and radioisotope diagnosis, endoscopy, electrocardiography

#### **Artificial intelligence systems**

(pattern recognition, knowledge base, expert systems) *in medicine, telemedicine and nuclear medicine*

#### **Practical training and employment opportunities**

- Blokhin National Medical Research Centre of Oncology of the Ministry of Health of the Russian Federation
- Burdenko Neurosurgery Institute
- Bach Institute of Biochemistry of the Russian Academy of Sciences
- Clinical hospitals of Federal Medical and Biological Agency of Russia
- Large multinational corporation and their subsidiaries (General Electric Healthcare (Russian Branch), Philips)