

# Boris Epel

5207 S. Ingleside Ave 3N, Chicago, IL 60615 • (773) 834-1938 • [bepel@uchicago.edu](mailto:bepel@uchicago.edu) • [boep.specman4epr.com](http://boep.specman4epr.com)

---

## » Profile

Experimental physicist working in the field of biological and biomedical applications of magnetic resonance. International experience. Magnetic resonance imaging, spectroscopy and hardware design.

---

## » Education

**Kazan State University**, Russia. Ph.D., 1999. Physics, specialization in quantum electronics. Quantum mechanics, statistics, electronics, semiconductors, vacuum and microwave devices.

---

## » Skills

### Academic

Research planning, organization and execution. Scientific and laboratory manager of large P41 Center. Author of 40+ peer-reviewed publications. Fields of interest: magnetic resonance, electron paramagnetic resonance; biomedical and oxygen imaging, image registration, medical statistics.

### Programming

15 years of experience in scientific and hardware programming using C++, C#, LabView™, Matlab™, SQL, HTML, PHP. Author of commercial software and multiple Matlab™ toolboxes.

---

## » Work Experience

**Center for EPR Imaging in Vivo Physiology**, University of Chicago, Illinois ([epri.uchicago.edu](http://epri.uchicago.edu))  
*Research Associate (Assistant Professor, then Associate Professor), lab. manager, 2006-present*

- Development of pulse Electron Paramagnetic Resonance oxygen imaging;
- Application of in vivo oxygen imaging to cancer radiation treatment optimization.

**Max-Planck Institute for Bioinorganic Chemistry**, Germany  
*Postdoctoral fellow, 2003-2006*

- Application of pulse EPR methodologies to the study of structure and function of metalloproteins and electronic transfer in plant photosystems I and II

**Weizmann Institute of Science**, Israel.  
*Postdoctoral fellow, 1999-2002*

- Development of High Field EPR methodology and instrumentation.
  - Study of the metalloenzymes and metalloproteins using advanced EPR methodologies
- 

## » Business

**SpecMan4EPR software, 2002-2012**

- Sole proprietor, author of software ([www.specman4epr.com](http://www.specman4epr.com))
- Software and services for research laboratories (flexible spectrometer/imager control, C++, Windows, client-server TCP/IP based architecture, 100000 lines of code).
- Spectrometer design consulting