



# Krzysztof Banas

*Everything must be taken into account. If the fact will not  
fit the theory - let the theory go.  
Agatha Christie, The Mysterious Affair at Styles*

## Education

- 1997–2002 **Ph.D in Physics**, *Radiospectroscopy Department, Institute of Physics, Faculty of Mathematics and Physics, Jagiellonian University, Cracow, Poland.*
- 1991–1996 **M.Sc in Physics (with Distinctions)**, *Radiospectroscopy Department, Institute of Physics, Faculty of Mathematics and Physics Jagiellonian University, Cracow, Poland.*

## PhD thesis

- title *Measurements on biopolymers using NMR methods*
- supervisor Prof. Barbara Blicharska

## Experience

### Vocational

- 2016–present **Senior Research Fellow**, *Singapore Synchrotron Light Source National University of Singapore.*
- 2011–2015 **Research Scientist**, *Singapore Synchrotron Light Source National University of Singapore.*
- 2008–2011 **Research Scientist A**, *Singapore Synchrotron Light Source National University of Singapore.*
- 2007–2008 **Casual Laboratory Officer**, *Singapore Synchrotron Light Source National University of Singapore.*  
Project Fast and accurate characterization of explosives by means of synchrotron radiation
- 2004–2007 **Adjunct**, *Institute of Nuclear Physics Polish Academy of Sciences, Cracow, Poland.*
- 2002–2004 **Post-doc position - Marie Curie Fellowship**, *Faculty of Physics and Earth Science, University Leipzig, Leipzig, Germany, Project: Diffusion-based Performance Optimization of Microporous Membranes and Particle.*
- 1996–1997 **Research Assistant**, *Institute of Physics, Faculty of Mathematics and Physics, Jagiellonian University, Cracow, Poland.*

### Teaching

5 Research Link – 117603 – Singapore

☎ +65 6516 7837 • ✉ [slskb@nus.edu.sg](mailto:slskb@nus.edu.sg) • 🌐 [banas.netlify.com](http://banas.netlify.com)

- 2014–2016 **Lecturer**, *A Brief History of Science*, National University of Singapore.
- 2012–2012 **Main Coordinator**, *SSLS Open House*, Singapore.
- 2008–present **Beam-line Scientist**, *Introduction of synchrotron radiation and SSLS to Visitors and Users*, Singapore.
- 2001–2002 **Physics Teacher**, *High School*, Gdow, Poland.
- 1999–2002 **Course Lecturer**, *Preparation and Conducting Preparation Courses for Entry Exams in Physics for Medicine Student*, Cracow, Poland.
- 1996–2002 **Academic Teacher**, *Teaching at Institute of Physics Jagiellonian University Krakow Poland (Laboratory Classes, Lecture Demonstrations, Physics for Students of Chemistry and Biology)*, Cracow, Poland.
- 1991–2006 **Private Tutor**, *private teaching of physics and mathematics*, Cracow, Poland.

#### Research background

- Statistical multivariate methods for spectral data evaluation, dimension reduction, clustering and identification
- Fourier transform infrared spectroscopy and microscopy (FTIR)
- Nanoscale infrared spectroscopy and imaging
- X-ray based imaging and tomography
- X-ray fluorescence spectroscopy (XRF)
- Nuclear magnetic resonance relaxometry and spectroscopy
- Magnetic resonance imaging

#### Languages

Polish	Native
English	Fluent
German	Basic
Russian	Basic

#### Computer skills

OS	DOS, Window, OS X, Linux
Word Processing	LaTeX, MS Word, Pages, Ulysses, Markdown
Statistics	R Environment, RStudio, Origin
Data Processing	ImageJ, Opus, PyMCA, Gwydion

#### Interests

- Photography
- Logic puzzles
- Running

5 Research Link – 117603 – Singapore

☎ +65 6516 7837 • ✉ [slskb@nus.edu.sg](mailto:slskb@nus.edu.sg) • 🌐 [banas.netlify.com](http://banas.netlify.com)