Anita Karsa MSc, MRes

PhD student in Magnetic Resonance Imaging at University College London, UK

E-mail address: anita.karsa.14@ucl.ac.uk

Education:

2003 – 2009	Fazekas Mihály Secondary School Budapest, special Maths stream: 5.0 out of 5 GPA every year
2009	Hungarian Érettségi (school-leaving qualification): Maths: 100%, Physics: 95%
2009 – 2012	Budapest University of Technology and Economics, BSc in Physics: 4.86 out of 5 GPA Grade of the degree: Excellent
2012 – 2014	Budapest University of Technology and Economics, MSc in Medical Physics: 4.75 out of 5 GPA Grade of the degree: Diploma with Honours
2014 – 2015	University College London, Master of Research (MRes) in Medical and Biomedical Imaging Grade of degree: Distinction
2015 –	University College London, PhD research student in Magnetic Resonance Imaging Department of Medical Physics and Biomedical Engineering Topic: Susceptibility Mapping in Head-and-Neck Phase Images Supervisors: Dr Karin Shmueli and Dr Shonit Punwani Expected graduation in September 2018

Research Experience:

2009	Budapest University of Technology and Economics, supervisor: Prof Ferenc Simon Research internship in microwave cavity perturbation
Summer 2010	École Politéchnique Fédérale de Lausanne, supervisor: Prof László Forró Research internship performing temperature dependent electrical and thermal conductivity measurements on carbon nanotube composites
Summer 2011	École Politéchnique Fédérale de Lausanne, supervisor: Prof László Forró Calibration and testing of a home-built system measuring thermal conductivity
2010 – 2012	Budapest University of Technology and Economics, supervisor: Prof Ferenc Simon BSc project in microwave cavity perturbation measurements of carbon nanotubes
Summer 2012	Budapest University of Technology and Economics, supervisor: Prof Ferenc Simon Laboratory research assistant studying the Coffey-Clem model in reference to a phenomenon observed in the temperature dependent resistance of K_3C_{60}
2012 – 2014	Budapest University of Technology and Economics, supervisors: Dr Mónika Bokor (Wigner Research Centre for Physics) and Prof Ferenc Simon MSc project titled: Temperature Dependent ^{23}Na and ^{35}Cl NMR of saline solutions

Summer 2013	Imperial College London, Robert Steiner Unit, supervisor: Dr Pawel Tokarczuk Research studentship in Susceptibility Weighted Imaging
2014 – 2015	University College London, supervisors: Dr Karin Shmueli and Dr Shonit Punwani MRes project titled: Technical Challenges of Magnetic Susceptibility Mapping with Low Resolution MRI Data of the Head and Neck

Prizes and Awards:

2008 Hungarian Mathematical and Physical Journal for Secondary Schools, Measurement problems competition: 1st
National Secondary School Academic Competition, Mathematics (highest category, finals): 12th
Eötvös National Physics Competition: Honourable mention

2009 Eötvös National Physics Competition: 2nd
Hungarian Mathematical and Physical Journal for Secondary Schools, Measurement problems competition: 3rd
National Secondary School Academic Competition, Physics (highest category, finals): 6th
Competition to qualify for the Hungarian team for the 40th International Physics Olympiad: 8th

2015 Runner-up for the Prize of Best MRes Student in the Engineering and Physical Sciences Research Council Centre for Doctoral Training in Medical Imaging, University College London

2016 Runner-up for the Prize of Best Poster in the category of Built Environment, Engineering Sciences, Mathematical and Physical Sciences in the University College London Doctoral School Research Poster Competition
Received educational stipend from ISMRM covering the registration fee for the ISMRM Annual Meeting 2016

2017 Received £800 travel grant from Guarantors of Brain for the ISMRM Annual Meeting 2017
Received £300 travel grant from the Institute of Physics (UK) for the ISMRM Annual Meeting 2017
Received educational stipend from ISMRM covering the registration fee for the ISMRM Annual Meeting 2017
Received educational stipend from ISMRM British Chapter covering the registration fee for the ISMRM British Chapter Annual Meeting 2017

Teaching Experience:

2014	Budapest University of Technology and Economics, Department of Medical Physics Laboratory instructor of the Medical Physics NMR MSc Practical Lab
2016 – 2017	University College London, Department of Medical Physics and Biomedical Engineering Postgraduate Teaching Assistant marking and grading courseworks and examination scripts as part of the module: MRI and Biomedical Optics
2017	University College London, Department of Medical Physics and Biomedical Engineering Supervising a year-12, 17-year-old, high-school research student for a week as part of In2scienceUK

Publications:

Journal articles

Durighel, G., P. F. Tokarczuk, P. F., **Karsa, A.**, Gordon, F., Cook, S. A., and O'Regan D. P. Acute myocardial infarction: susceptibility-weighted cardiac MRI for the detection of reperfusion haemorrhage at 1.5 T. *Clinical radiology* 71, no. 3 (2016): e150-e156

Peer Reviewed Conference Abstracts

Karsa, A., Quintavalle D., Forro L., and Simon F. On the low temperature microwave absorption anomaly in single-wall carbon nanotubes. *physica status solidi (b)* 249, no. 12 (2012): 2487-2490

Karsa, A., Biondetti, E., Punwani, S., and Shmueli, K. The effect of large slice thickness and spacing and low coverage on the accuracy of susceptibility mapping. In *Proceedings of the 24th Annual Meeting of the ISMRM, Singapore* (2016): p. 1555

Karsa A., Punwani S., and Shmueli K. Investigating the Effect of Large Slice Thickness on the Accuracy of Susceptibility Mapping Using a Realistic Head and Neck Numerical Phantom. *4th International Workshop on MRI Phase Contrast and Quantitative Susceptibility Mapping* (2016)

Karsa, A., Punwani, S., and Shmueli, K. Resolution and Coverage for Accurate Susceptibility Maps: Comparing Brain Images with Simulations. In *Proceedings of the 25th Annual Meeting of the ISMRM, Honolulu* (2017): p. 3677

Skills:

Computing skills	Matlab, LateX, R, C++, Microsoft Office, GnuPlot, Maple, Origin
Language skills	Hungarian (native), English (fluent), French (good), Japanese (good)