

Diana SITARCIKOVA

Curriculum Vitae

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Education

- 2018–present : **PhD Student: Medical physics**, *Medical University of Vienna, Vienna*.
Thesis: Multi-parametric non-invasive liver evaluation
- 2016–2018 : **Master of Biomedical physics**, *Faculty of mathematics, physics and informatics, Comenius University, Bratislava*.
Thesis: Multi-parametric non-invasive monitoring of hepatobiliary system with magnetic resonance imaging
- 2013–2016 : **Bachelor of Biomedical physics**, *Faculty of mathematics, physics and informatics, Comenius University, Bratislava*.
Thesis: In vivo phosphorus magnetic resonance spectroscopic imaging of the brain with 23channel head coil at 7T – comparison of the quality between 3T vs 7T and 1 receive channel vs 23 receive channels

Scholarships

- 2018 **Aktion Austria-Slovakia**, *Medical University of Vienna, Austria*, supported by OeAD-GmbH/ICM and SAIA, n.o. on behalf of and financed by the Aktion Austria-Slovakia.
Jan 2018–Apr 2018

Publications

Journal Articles

- 2023 **Diana Bencikova**, Martijn A. Cloos, Veronika Janacova, Siegfried Trattnig, and Vladimir Juras. Magnetic resonance fingerprinting in the knee cartilage compared to conventional methods using automated cartilage segmentation. *Osteoarthritis and Cartilage*, volume 31, pages S284–S285. Elsevier, 2023.
- 2023 Veronika Janacova, Vladimir Juras, Pavol Szomolanyi, **Diana Bencikova**, and Siegfried Trattnig. Ultrafast biomechanical t2 mapping of knee articular cartilage using a radial turbo-spin-echo sequence at 3t-initial results. *Osteoarthritis and Cartilage*, volume 31, pages S267–S268. Elsevier, 2023.
- 2021 **Diana Bencikova**, Fei Han, Stephan Kannengieser, Marcus Raudner, Sarah Poetter-Lang, Nina Bastati, Gert Reiter, Raphael Ambros, Ahmed Ba-Ssalamah, Siegfried Trattnig, and Martin Krššák. Evaluation of a single-breath-hold radial turbo-spin-echo sequence for t2 mapping of the liver at 3t. *European Radiology*, volume 32, pages 3388–3397. Springer, 2021.
- 2021 Lorenz Pflieger, Emina Halilbasic, Martin Gajdošík, **Diana Benčíková**, Marek Chmelík, Thomas Scherer, Siegfried Trattnig, Michael Krebs, Michael Trauner, and Martin Krššák. Concentration of gallbladder phosphatidylcholine in cholangiopathies: A phosphorus-31 magnetic resonance spectroscopy pilot study. *Journal of Magnetic Resonance Imaging*, volume 55, pages 530–540. Wiley, 2021.

In Conference Proceedings

- 2023 **Diana Bencikova**, Sarah Poetter-Lang, Markus Raudner, Siegfried Trattnig, Martin Krššák, and Ahmed Ba-Ssalamah. Additional value of t2 mapping and texture analysis for the improvement to mr elastography based liver fibrosis machine learning classification. In *Proc. Intl. Soc. Mag. Reson. Med.* 31, number XXX. ISMRM, 2023.
- 2022 **Diana Bencikova**, Veronika Janacova, Marcus Raudner, Ahmed Ba-Ssalamah, Siegfried Trattnig, and Martin Krššák. Optimization of glcm texture analysis settings in liver radial t2 maps: Fibrotic vs healthy liver. In *Proc. Intl. Soc. Mag. Reson. Med.* 30, number 1332. ISMRM, 2022.
- 2021 **Diana Bencikova**, Marcus Raudner, Sarah Poetter-Lang, Nina Bastati, Ahmed Ba-Ssalamah, Siegfried Trattnig, and Martin Krššák. The effect of hepatic fat on t2 of water signal in single voxel multi-echo mrs and fat-suppressed radial tse t2 mapping. In *Proc. Intl. Soc. Mag. Reson. Med.* 29, number 1873. ISMRM, 2021.
- 2020 **Diana Bencikova**, Stephan Kannengiesser, Gert Reiter, Ahmed Ba-Ssalamah, Siegfried Trattnig, and Martin Krššák. Fast radial t2 mapping of the liver. In *Proc. Intl. Soc. Mag. Reson. Med.* 28, number 3428. ISMRM, 2020.
- 2019 **Diana Bencikova**, Stephan Kannengiesser, Yutaka Natsuaki, Gert Reiter, Ahmed Ba-Ssalamah, Siegfried Trattnig, and Martin Krššák. In vitro and in vivo evaluation of radial turbo-spinecho-based t2 mapping of the liver. In *ESMRMB 2019 Congress, 36th Annual Scientific Meeting, Rotterdam, NL, October 3–October 5: Abstracts, Saturday*, pages S263–S264. ESMRMB, 2019.
- 2016 Marek Chmelik, **Diana Bencikova**, Christian Mirkes, Christopher T Rodgers, Gunamony Shajan, Klaus Scheffler, Siegfried Trattnig, and Wolfgang Bogner. 31p mrs signal-to-noise ratio in human brain at 3, 7, and 9.4 tesla using dual tuned head rf coils. In *24th Annual Meeting and Exhibition of the International Society for Magnetic Resonance in Medicine (ISMRM 2016)*, 2016.

Book chapters

- 2023 Marcos Wolf, **Diana Bencikova**, and Ewald Moser. T2 mapping of the kidney. In *Advanced Clinical MRI of the Kidney: Methods and Protocols*, pages 125–132. Springer, 2023.

Conferences and other scientific meetings

- 2023 **Czech-Austrian Workshop on Magnetic Resonance Imaging and Spectroscopy.**
23–25 October, Znojmo, Czech Republic
- 2023 **Joint Annual Meeting ISMRM-ESMRMB& ISMRT 32st Annual Meeting.**
3–8 June, Toronto, Canada
- 2023 **OARSI 2023 World Congress on Osteoarthritis.**
17–20 March, Denver, Colorado
- 2022 **Joint Annual Meeting ISMRM-ESMRMB& ISMRT 31st Annual Meeting.**
7–12 May, London, UK
- 2021 **Joint Annual Meeting ISMRM-ESMRMB& ISMRT 30th Annual Meeting.**
15–20 May, Vancouver, Canada → virtual
- 2021 **Czech-Austrian Workshop on Magnetic Resonance Imaging and Spectroscopy.**
13–15 September, Pozlovice, Czech Republic
- 2020 **Joint Annual Meeting ISMRM-ESMRMB& ISMRT 29th Annual Meeting.**
08–14 August, Sydney, Australia/Paris, France → virtual
- 2019 **ESMRMB 2019 Congress.**
3–5 October, Rotterdam, Netherlands
- 2019 **Czech-Austrian Magnetic Resonance Workshop 2019.**
18–20 September, Frein an der Mürz, Austria

2019 **15th YSA PhD-Symposium.**

13–14 June, Vienna, Austria

Research Experience

Medical University of Vienna

Machine learning Classification with linear and tree-based models, feature engineering, dimensionality reduction, cluster analysis

Texture analysis Grey-level co-occurrence matrix, local binary patterns

Image analysis Organ segmentation, volumetry, image registration, Gaussian-mixture-models for parameter extraction

Liver MRI Liver water and fat signals, T1, T2 and T2* relaxometry, liver 1H MR spectroscopy, liver elastography

Cartilage MRI MR Fingerprinting of knee articular cartilage, focus on T2 mapping

Computer skills

Python Data manipulation, machine-learning, data visualization, statistical analysis, image processing

R Data visualization, statistical analysis, data manipulation

Matlab Image processing, data analysis

MS Office MS Word, MS Excell, MS PwerPoint, MS Teams, MS Outlook

Other 3D Slicer, \LaTeX , Gimp, SPSS, StatsDirect, GnuPlot, Origin, jMRUI, JiveX

Languages

Slovak mother language

English advanced

German intermediate