This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.

Canadian Common CV commun canadien

Protected when completed

Dr. Agah Karakuzu

Correspondence language: English
Date of Birth: 9/08
Canadian Residency Status: Student Work Permit
Applied for Permanent Residency?: No
Country of Citizenship: Turkey

Contact Information

The primary information is denoted by (*)

Address

Home (*)

5-7222 rue Durocher
Montreal Quebec H3N1Z9
Canada

Telephone

Mobile (*)	1-438-9219419

Email

Personal (*)	agahkarakuzu@gmail.com

Website

Personal	https://agahkarakuzu.github.io

This is a draft version only. Do not submit to any funding organization. Only the final version from the History page can be submitted.

Protected when completed

Dr. Agah Karakuzu

Language Skills

Language	Read	Write	Speak	Understand	Peer Review
English	Yes	Yes	Yes	Yes	Yes
French	Yes	No	No	Yes	No
Turkish	Yes	Yes	Yes	Yes	Yes

Degrees

2017/1 - 2022/3

Doctorate, Ph.D. in Biomedical Engineering, Quantitative MRI for Neuroimaging, École Polytechnique de Montréal
Degree Status: Completed
Thesis Title: Bringing Myelin Imaging Under One Umbrella
Transferred to PhD without completing Masters?: No

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Supervisors: Nikola Stikov, Ph.D., 2017/1 -

Fields of Application: Biomedical Aspects of Human Health

2013/9 - 2015/6

Master's Thesis, M.Sc. in Biomedical Engineering, Musculoskeletal MRI, Bogazici University
Degree Status: Completed
Thesis Title: MRI assessment of local deformations along human medial gastrocnemius muscle fibers on submaximal plantarflexion activity

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Supervisors: Prof. Dr. Can Ali Yucesoy, 2013/9 - 2016/12; Prof. Dr. Burak Acar, 2013/9 - 2015/6

Fields of Application: Biomedical Aspects of Human Health

2009/9 - 2013/6

Bachelor's, B.Sc. in Biomedical Engineering, Medical Imaging, Erciyes University, Turkey
Degree Status: Completed
Thesis Title: A quantitative approach to the volumetric assessment of multipl sclerosis lesions using semi-automatic segmentation of MR images.

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Supervisors: Prof. Dr. Aysegul Guven, 2009/9 - 2013/6

Fields of Application: Biomedical Aspects of Human Health

Recognitions

2022/6 - 2022/6

QBIN Open Science Award - 2,000 (Canadian dollar)
Quebec Bio-Imaging Network (QBIN)
Prize / Award

Areas of Research: Biomedical Technologies

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Fields of Application: Biomedical Aspects of Human Health

2022/5 - 2022/5

ISMRM White Matter Study Group - Best Presentation Award - 350 (Canadian dollar)
International Society for Magnetic Resonance in Medicine
Prize / Award

Research Disciplines: Biomedical Engineering and Biochemical Engineering

2022/5 - 2022/5

Summa Cum Laude - ISMRM 2022 Annual Meeting (Canadian dollar)
International Society for Magnetic Resonance in Medicine
Distinction
Top 5% among all studies presented at the conference that year (~8000 submissions in 2022).

Research Disciplines: Biomedical Engineering and Biochemical Engineering

2022/5 - 2022/5

ISMRM Reproducible Research Study Group - Best Abstract Award - 300 (Canadian dollar)
International Society for Magnetic Resonance in Medicine
Prize / Award

Research Disciplines: Biomedical Engineering and Biochemical Engineering

2021/5 - 2021/5

ISMRM Reproducible Research Study Group Award - 180 (Canadian dollar)
The International Society for Magnetic Resonance in Medicine, CA, USA
Prize / Award
Please see: https://ismrm.github.io/rrsg/mrpub/

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Fields of Application: Biomedical Aspects of Human Health

2021/5 - 2021/5

Innovation in MRI Education by ISMRM (Canadian dollar)
The International Society for Magnetic Resonance in Medicine, CA, USA
Prize / Award
Please see: https://www.ismrm.org/online-education-program/innovation-in-mri-education-award/

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Fields of Application: Biomedical Aspects of Human Health

2019/5 - 2019/5

ISMRM Quantitative MRI Study Group Award - 300 (United States dollar)
The International Society for Magnetic Resonance in Medicine, CA, USA
Prize / Award
Awarded for outstanding research on the standardization of quantitative magnetic resonance imaging methods.

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Fields of Application: Biomedical Aspects of Human Health

2018/6 - 2018/6	ISMRM Magnetic Moments Public Engagement Competition, People's Choice Award - 150 (Canadian dollar) The International Society for Magnetic Resonance in Medicine, CA, USA Prize / Award About competition: https://blog.ismrm.org/2018/04/19/magnetic-moments-taking-our-science-to-the-people/ Research Disciplines: Biomedical Engineering and Biochemical Engineering Fields of Application: Biomedical Aspects of Human Health
2016/10 - 2016/10	Prof. Dr. Zeki Korkusuz Biomechanics Research Award, 1st place - 500 (Turkish lira) National Biomechanics Society of Turkey Prize / Award Research Disciplines: Biomedical Engineering and Biochemical Engineering Fields of Application: Biomedical Aspects of Human Health
2013/6 - 2013/6	B.Sc. Honors student (Canadian dollar) Erciyes University, Turkey Honor Graduated top 1%. Research Disciplines: Biomedical Engineering and Biochemical Engineering Fields of Application: Biomedical Aspects of Human Health

User Profile

Researcher Status: Post-doctoral Student
Research Career Start Date: 2013/09/01
Engaged in Clinical Research?: Yes

Key Theory / Methodology: Magnetic Resonance Imaging

Research Interests: Quantitative Magnetic Resonance Imaging Neuroimaging Open-source development Reproducible publishing Musculoskeletal Biomechanics

Research Experience Summary: My research career took off in 2013 with a M.Sc. degree at Bogazici University, a flagship academic institute in Turkey. I developed novel Magnetic Resonance Imaging (MRI) methods to evaluate in-vivo musculoskeletal mechanics in an interdisciplinary research environment, which involved 2 research labs of different expertise and a clinical imaging site. After publishing my M.Sc. thesis, I kept on working with the same research team for 2 more years, which resulted in high impact journal and conference publications. I obtained my PhD from Polytechnique Montreal in 2022. I worked on the standardization of quantitative MRI methods for the imaging of human brain. Developing open-source software and a globally recognized data standard, I established end-to-end MRI workflows that are reproducible from the scanner site to journal publication. This work demonstrated for the first time that open-source and vendor-neutral approach to qMRI significantly improve multicenter reproducibility.

Fields of Application: Biomedical Aspects of Human Health

Disciplines Trained In: Biomedical Engineering and Biochemical Engineering

Technological Applications: Radiology / Imaging

Countries: Canada, Turkey

Areas of Research: Neurodegenerative Diseases

Research Specialization Keywords: mri, medical imaging, qmri, neuroimaging, open-source software

Research Centres: Other

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Geographical Regions: Central Canada, Near and Middle East

Employment

2022/9 - 2024/9	Postdoctoral Researcher Full-time
2017/1 - 2022/3	PhD Student Biomedical Engineering Institute, École Polytechnique de Montréal
2019/2 - 2019/4	Intern Researcher MRI software development, HeartVista Inc., Palo Alto, CA
2013/9 - 2017/1	Research Assistant Biomedical Engineering Institute, Kandilli Campus, Bogazici University
2012/5 - 2012/7	Intern Engineer Bosnia Herzegovina, Siemens Healthineers

Affiliations

The primary affiliation is denoted by (*)

(*) 2022/4	Postdoctoral Fellow, Biomedical Engineering Institute, École Polytechnique de Montréal
2017/1 - 2022/3	PhD Student, Biomedical Engineering Institute, École Polytechnique de Montréal Funded by grants available to Dr. Nikola Stikov. Responsibilities include: * Development of vendor-neutral MRI pulse sequences * Development of open-source software for image processing * Development of open-source end-to-end workflows for myelin imaging * Development of a data standard for quantitative MRI * Contributing to cyber-infrastructure of open publishing platforms * Writing and publishing journal and conference articles
2013/9 - 2016/12	Research project assistant, Biomedical Engineering Institute, Bogazici University Funded by grants available to Prof. Dr. Can Ali Yucesoy. Activities included: * Conducted musculoskeletal MRI experiments * Implemented medical image analysis methods * Prepared journal and conference articles * Had a part in intraoperative (clinical research) experiments * Performed volumetric analysis and visualisation onmusculoskeletal MRI data using DT tractographyand image registration methods.

Research Funding History

Awarded [n=2]

Principal Applicant	ISMRM Research Exchange Grant, Grant Clinical Research Project?: Yes **Funding Sources:** 2022/1 - 2023/1 International Society for Magnetic Resonance in Medicine (ISMRM) Total Funding - 6,000 (United States dollar) Portion of Funding Received - 1 (Canadian dollar)
Principal Applicant	TransmedTech Postdoc Fellowship, Fellowship Clinical Research Project?: Yes **Funding Sources:** 2022/4 - 2024/4 Institut TransMedTech Excellence Scholarship Total Funding - 63,000 (Canadian dollar) Portion of Funding Received - 50,000 (Canadian dollar)

Completed [n=2]

Principal Applicant

Canadian Open Science (CONP) PhD Scholar, Scholarship
Clinical Research Project?: Yes

Funding Sources:

2019/3 - 2020/3
Canadian Open Neuroscience Platform
CONP PhD Scholarship
Total Funding - 12,500 (Canadian dollar)
Portion of Funding Received - 12,500 (Canadian dollar)

2019/9 - 2022/3
Principal Applicant

TransMedTech Excellence Scholarship (PhD), Scholarship
Clinical Research Project?: Yes

Research Disciplines: Biomedical Engineering and Biochemical Engineering

Funding Sources:

2018/1 - 2021/1
Institut TransMedTech
Excellence Scholarship
Total Funding - 40,500 (Canadian dollar)
Portion of Funding Received - 40,500 (Canadian dollar)

Declined [n=1]

Principal Applicant

TUBITAK 2213 PhD in Abroad Scholarship, Scholarship
Clinical Research Project?: Yes

Funding Sources:

2017/1 - 2020/1
The Scientific and Technological Research Council of Turkey
PhD Scholarship
Total Funding - 180,000 (United States dollar)
Portion of Funding Received - 1 (United States dollar)
Funding Reference Number: 2213

Under Review [n=2]

Collaborator

Foundation for the National Institutes of Health (FNIH) - Quantitative MRI Biomarker Translation (q-BiX) into Clinical Practice, Grant
Clinical Research Project?: Yes

Funding Sources:

2022/7 - 2026/7
Foundation for the National Institutes of Health (FNIH)
Quantitative MRI Biomarker Translation (q-BiX) into Clinical Practice
Total Funding - 3,000,000 (United States dollar)
Portion of Funding Received - 1 (United States dollar)

2022/11 - 2024/11
Principal Applicant

Chan Zuckerberg Initiative Advancing Imaging through Collaborative Projects, Grant, Infrastructure
Clinical Research Project?: Yes
Project Description: To develop open-source MRI acquisition software, interfaces, and data structures that will level the field for vendor-neutral and reproducible MRI.

Areas of Research: Bioprocesses and Biomedical systems

Fields of Application: Biomedical Aspects of Human Health

Co-applicant : Adrienne Campbell-Washburn; John-Freidrick Nielsen; Matthias Gunther;

Principal Investigator : Nikola Stikiov

Journal Review Activities

2019/1	Reviewer,Journal of Open Source Software (JOSS),Open Journals Number of Works Reviewed / Refereed: 3
2018/1	Reviewer,Magnetic Resonance in Medicine,John Wiley & Sons Inc. Number of Works Reviewed / Refereed: 2
2018/1	Reviewer,Journal of Magnetic Resonance Imaging,John Wiley & Sons Inc. Number of Works Reviewed / Refereed: 2

Event Participation

Speaker, ISMRM 27th Annual Meeting & Exhibition, Conference, 2018/5 - 2018/5

Tutor, BrainHack School 2020, Course, 2020/5 - 2020/6
https://school2020.brainhackmtl.org/

Invited speaker, Workshop on MRI Acquisition and Reconstruction, Workshop, 2021/9 - 2021/9
https://mriworkshop.mgh.harvard.edu/

Tutor, BrainHack School 2019, Course, 2019/8 - 2019/8
https://brainhackmtl.github.io/school2019

Attendee, ISMRM 28th Annual Meeting & Exhibition, Conference, 2019/5 - 2019/5

Invited speaker, Open and reproducible neuroimaging: Integration of community developed tools from data acquisition to publication, Workshop
Organized by The Neuroimaging Unit at the University of Oldenburg, Germany.

Invited speaker, Open MR Benelux 2020, Workshop, 2020/1 - 2020/1
Nijmegen, Netherlands https://openmrbenelux.github.io/2020/page-openmrb-2020/

Invited speaker, Quebec Bioimaging Network SciComm Series 2021, Workshop, 2021/3 - 2021/4
https://www.rbiq-qbin.qc.ca/article404-SciComm-Seminar-Series-2021

Invited speaker, ISMRM White Matter Study Group Business Meeting 2020, Workshop, 2020/1 - 2020/1
https://www.ismrm.org/20m/2020-study-group-business-meetings/

Speaker, XXIe La Journée de la recherche L'Institut de Cardiologie de Montréal, Seminar, 2018/6 - 2018/6

Speaker, SMRM & SMRT Virtual Conference & Exhibition, Conference, 2020/8 - 2020/8

Presenter, XXIVe La Journée de la recherche L'Institut de Cardiologie de Montréal 2022, Conference

Invited speaker, ISMRM Turkish Chapter 3rd Virtual Workshop, Workshop, 2020/11 - 2020/11
https://www.ismrm.org/Chapters/ISMRM_TurkishChapter_Nov_Workshop.pdf

Organizator, MRathon: A Hackathon for MRI professionals, Workshop, 2019/5 - 2019/5
https://mrathon.github.io/montreal2019/

Invited speaker, Cross-invalidation: Quality Conversations webinar series, Seminar, 2021/7 - 2021/9
https://crossinvalidation.com/2021/07/19/announcing-quality-conversations-webinar-series-on-niqc-open-science-etc/

Invited speaker, 2021 ISMRM & SMRT Annual Meeting & Exhibition, Conference, 2021/5 - 2021/5
Virtual conference.

Poster presenter, Quebec Bioimaging Network Annual Scientific Day, Conference, 2018/3 - 2018/3

Invited speaker, Neuro-Gairdner Open Science in Action Symposium, Seminar, 2020/11 - 2020/11
https://www.mcgill.ca/neuro/open-science/open-science-action-symposium

Invited speaker, Joint Annual Meeting ISMRM-ESMRMB & ISMRT 31st Annual Meeting, Conference, 2022/5 - 2022/5

Invited speaker, Organization for Human Brain Mapping Annual Meeting 2022, Conference, 2022/6 - 2022/6

Attendee, OHBM 2017 Annual Meeting, Conference, 2017/6 - 2017/6

Keynote speaker, 2020 OHBM Annual Meeting, Conference, 2020/6 - 2020/6
https://ohbm.github.io/osr2020/

Tutor, OHBM BrainHack Global 2020, Workshop, 2020/11 - 2020/12
https://brainhack.org/global2020/

Speaker, Joint Annual Meeting ISMRM-ESMRMB 2018, Conference, 2018/6 - 2018/6
Paris Expo Porte de Versailles, Paris, France

Other Memberships

2017/1	Trainee, International Society for Magnetic Resonance in Medicine
2017/1	Trainee, The Organization for Human Brain Mapping

Presentations

1. (2022). Towards comparable MRI: The role of open-source software and community building. OHBM 2022 Annual Meeting Educational Lectures, Glasgow, United Kingdom
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No, Competitive?: No
2. (2022). Multicenter reproducibility of quantitative MRI using vendor-neutral sequences. 31st Annual Meeting of the ISMRM, London, United Kingdom
   Main Audience: Researcher
   Invited?: No, Keynote?: No, Competitive?: Yes
3. (2021). In search of common ground for myelin imaging. ISMRM Turkish Chapter 3rd Virtual Workshop,
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No, Competitive?: No

4. (2021). Interactive plots and the spectrum of data visualization. Quebec Bio-imaging Network SciComm Seminar Series, Montreal, Canada
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No, Competitive?: No

5. (2021). Scientific computing with Python: From acoustic dissonance to magnetic resonance. ISMRM 2021 Annual Meeting,
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No, Competitive?: Yes

6. (2021). VENUS: Vendor-neutral pulse sequences. Workshop on MRI Acquisition and Reconstruction,
   Invited?: Yes, Keynote?: No, Competitive?: No

7. (2021). Vendor-neutral applications for Quantitative MRI QC. Cross-invalidation: Quality Conversations webinar series,
   Main Audience: Researcher
   Invited?: Yes, Keynote?: No, Competitive?: No

8. Nikola Stikov. (2021). Communicating Science Openly. Quebec Bio-imaging Network SciComm Seminar Series,
   Invited?: Yes, Keynote?: No, Competitive?: No

9. (2021). Updates from T1 mapping challenge for reproducible research study group. Joint RRSG and qMRI-SG Business Meeting,
   Invited?: Yes, Keynote?: No, Competitive?: No

10. Gilles de Hollander Tibor Auer. (2020). qMRI-BIDS: A BIDS extension for quantitative MRI. OHBM 202 Annual Meeting,
    Main Audience: Researcher
    Invited?: No, Keynote?: No, Competitive?: No

11. (2020). Thinking outside the black-box: A fully transparent T1 mapping pipeline. ISMRM Annual Meeting,
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No, Competitive?: Yes

12. Matteo Mancini. (2020). An interactive meta-analysis of MRI biomarkers of myelin. ISMRM White Matter Study Group Business Meeting,
    Invited?: Yes, Keynote?: No, Competitive?: No

13. (2020). Divide and Conquer m-scripts. OHBM BrainHack 2020,
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No, Competitive?: No

14. (2020). And end-to-end solution for reproducible qMRI: Open-source development and vendor-neutrality. Open and reproducible neuroimaging: Integration of community developed tools from data acquisition to publication, Oldenburg, Germany
    Main Audience: Researcher
    Invited?: Yes, Keynote?: Yes, Competitive?: No

15. (202). Transparent workflows - From scanner to publication. 2020 OHBM Annual Meeting, Conference,
    Main Audience: Researcher
    Invited?: Yes, Keynote?: Yes, Competitive?: No

16. (202). Docker for MRI scientists. Open MR Benelux 2020, Nijmegen, Netherlands
    Main Audience: Researcher
    Invited?: Yes, Keynote?: No, Competitive?: No

17. Elizabeth DuPre. (202). NeuroLibre: A sprout of living publications. Neuro-Gairdner Open Science in Action Symposium, Montreal, Canada
    Invited?: Yes, Keynote?: No, Competitive?: No

Publications

Journal Articles

1. Agah Karakuzu, Elizabeth DuPre, Loic Tetrel, Patrick Bermudez, Mathieu Boudreau, Mary Chin, Jean-Baptiste Poline, Samir Das, Pierre Bellec, Nikola Stikov. NeuroLibre: A preprint server for full-fledged reproducible neuroscience. OSF Preprints.
http://dx.doi.org/10.31219/osf.io/h89js
First Listed Author,
Refereed?: No, Open Access?: Yes, Synthesis?: Yes
Contribution Percentage: 81-90

2. Elizabeth DuPre, Chris Holdgraf, Agah Karakuzu, Loic Tetrel, Pierre Bellec, Nikola Stikov, Jean-Baptiste Poline. (2022). Beyond advertising: New infrastructures for publishing integrated research objects. PLOS Computational Biology. 18(1)
http://dx.doi.org/10.1371/journal.pcbi.1009651
Co-Author, PLOS,
Refereed?: Yes, Open Access?: Yes
Contribution Percentage: 11-20

3. Guiomar Niso, Rotem Botvinik-Nezer, Stefan Appelhoff, Alejandro De La Vega, Oscar Esteban, Joset A. Etzel, Karolina Finc, Melanie Ganz, Remi Gau, Yaroslav O. Halchenko, Peer Herholz, Agah Karakuzu, David Keator, Camille Maumet, Christopher J. Markiewicz, Dr Cyril Pernet, Franco Pestilli, Nazek Queder, Tina Schmitt, Weronika Sójka, Adina Svenja Wagner, Kirstie Whitaker, Jochem Rieger. (2022). Open and reproducible neuroimaging: from study inception to publication. NeuroImage.
http://dx.doi.org/10.31219/osf.io/pu5vb
Accepted, Elsevier,
Contribution Percentage: 41-50

4. Agah Karakuzu, Stefan Appelhoff, Tibor Auer, Mathieu Boudreau, Franklin Feingold, Ali R. Khan, Alberto Lazari, Chris Markiewicz, Martijn Mulder, Christophe Phillips, Taylor Salo, Nikola Stikov, Kirstie Whitaker, Gilles de Hollander. (2022). qMRI-BIDS: An extension to the brain imaging data structure for quantitative magnetic resonance imaging data. Scientific Data. 9: 517.
http://dx.doi.org/10.1038/s41597-022-01571-4
First Listed Author
Published, Springer Nature,
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 13
Contribution Percentage: 81-90

5. Levitis, Elizabeth; van Praag, Cassandra D Gould; Gau, Rémi; Heunis, Stephan; DuPre, Elizabeth; Kiar, Gregory; Bottenhorn, Katherine L; Glatard, Tristan; Nikolaidis, Aki; Whitaker, Kirstie Jane;. (2021). Centering inclusivity in the design of online conferences—An OHBM–Open Science perspective. GigaScience. 10(8): giab051.
http://dx.doi.org/10.1093/gigascience/giab051
Co-Author
Published, Oxford University Press,
Refereed?: Yes, Open Access?: Yes, Synthesis?: Yes
Number of Contributors: 110
Contribution Percentage: 0-10
Description of Contribution Role: Revised the manuscript.

6. Agah Karakuzu, Stefan Appelhoff, Tibor Auer, Mathieu Boudreau, Franklin Feingold, Ali R. Khan, Alberto Lazari, Chris Markiewicz, Christophe Phillips, Taylor Salo, Nikola Stikov, Kirstie Whitaker, Gilles de Hollander. (2021). An extension to the brain imaging data structure (BIDS) for quantitative MR imaging data. Nature Scientific Data. : 0-0.
http://dx.doi.org/10.1101/2021.10.22.21265382
First Listed Author
Submitted,
Refereed?: Yes
Number of Contributors: 13
Contribution Percentage: 71-80
Description of Contribution Role: Coordinated regular meetings, established and published the data standard, collected example datasets, prepared the manuscript.

7. Maier, Oliver; Baete, Steven Hubert; Fyrdahl, Alexander; Hammernik, Kerstin; Harrevelt, Seb; Kasper, Lars; Karakuzu, Agah; Loecher, Michael; Patzig, Franz; Tian, Ye; Wang, Ke; Gallichan, Daniel; Knoll, Florian. (2021). CG-SENSE revisited: Results from the first ISMRM reproducibility challenge. Magnetic Resonance in Medicine. 85(4): 1821-1839.
http://dx.doi.org/10.1002/mrm.28569
Co-Author
Published, Wiley and Sons Inc.,
Refereed?: Yes, Open Access?: Yes, Synthesis?: No
Number of Contributors: 14
Contribution Percentage: 11-20
Description of Contribution Role: Data collection, analysis and the manuscript revision.

8. Gau R, Noble S, Heuer K, Bottenhorn KL, Bilgin IP, Yang YF, Huntenburg JM, Bayer JM, Bethlehem RA, Rhoads SA, Vogelbacher C. and The BrainHack Community. (2021). Brainhack: Developing a culture of open, inclusive, community-driven neuroscience. Neuron. 109(11): 1769-1775.
http://dx.doi.org/10.1016/j.neuron.2021.04.001
Co-Author
Published, Cell Press,
Refereed?: Yes, Open Access?: Yes, Synthesis?: Yes
Number of Contributors: 220
Contribution Percentage: 0-10
Description of Contribution Role: Revised the manuscript.

9. Agah Karakuzu, Labonny Biswas, Julien Cohen-Adad, Nikola Stikov. (2021). Vendor-neutral sequences improve multi-center reproducibility of quantitative magnetic resonance imaging. Magnetic Resonance in Medicine. 88(3): 1212-1228.
http://dx.doi.org/10.1002/mrm.29292
First Listed Author
Published, Wiley,
Refereed?: Yes
Number of Contributors: 3
Contribution Percentage: 81-90
Description of Contribution Role: Conceptualized and the developed the methodology, developed the software, performed the analyses, prepared the original manuscript.

10. Badji, Atef; de la Colina, Adrián Noriega; Boshkovski, Tommy; Sabra, Dalia; Karakuzu, Agah; Robitaille-Grou, Marie-Christine; Gros, Charley; Joubert, Sven; Bherer, Louis; Lamarre-Cliche, Maxime; Girouard M. Helene. (2020). A cross-sectional study on the impact of arterial stiffness on the corpus callosum, a key white matter tract implicated in Alzheimer's disease. Journal of Alzheimer's Disease. : 1-15.
http://dx.doi.org/10.3233/JAD-200668
Co-Author
In Press, IOS press,
Refereed?: Yes
Number of Contributors: 11
Contribution Percentage: 11-20
Description of Contribution Role: Analysis and interpretation of the results, manuscript revision.

11. Karakuzu, Agah; Boudreau, Mathieu; Duval, Tanguy; Boshkovski, Tommy; Leppert, Ilana R; Cabana, Jean-François; Gagnon, Ian; Beliveau, Pascale; Pike, G Bruce; Cohen-Adad, Julien; Stikov, Nikola. (2020). qMRLab: Quantitative MRI analysis, under one umbrella. Journal of open source software. 5(53): 2343.
http://dx.doi.org/10.21105/joss.02343
First Listed Author
Published, Open Journals,
Refereed?: Yes
Number of Contributors: 12
Contribution Percentage: 91-100
Description of Contribution Role: Study conception and design, manuscript preparation, and final revision.

12. Mancini, Matteo; Karakuzu, Agah; Cohen-Adad, Julien; Cercignani, Mara; Nichols, Thomas E; Stikov, Nikola;. (2020). An interactive meta-analysis of MRI biomarkers of myelin. Elife. 9: e61523.
http://dx.doi.org/10.7554/eLife.61523
Co-Author
Published, eLife Sciences Publications Limited,
Refereed?: Yes, Open Access?: Yes, Synthesis?: Yes
Number of Contributors: 6
Contribution Percentage: 41-50
Description of Contribution Role: Interpretation of results, manuscript preparation and creating online-executable publication material.

13. Badji, Atef; de la Colina, Adrián Noriega; Karakuzu, Agah; Duval, Tanguy; Desjardins-Crépeau, Laurence; Parizet, Matthieu; Joubert, Sven; Bherer, Louis; Lamarre-Cliche, Maxime; Stikov, Nikola; Cohen-Adad, Julien. (2020). Arterial stiffness cut-off value and white matter integrity in the elderly. Neuroimage: Clinical. 26: 577-585.
http://dx.doi.org/10.1016/j.nicl.2019.102007
Co-Author
Published, Elsevier,
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 10
Contribution Percentage: 21-30
Description of Contribution Role: Analysis and interpretation of the results, manuscript preparation and revision.

14. Badji, Atef; de la Colina, Adrián Noriega; Karakuzu, Agah; Duval, Tanguy; Desjardins-Crépeau, Laurence; Joubert, Sven; Bherer, Louis; Lamarre-Cliche, Maxime; Stikov, Nikola; Girouard, Hélène;. (2019). Arterial stiffness and white matter integrity in the elderly: A diffusion tensor and magnetization transfer imaging study. Neuroimage. 186: 577-585.
http://dx.doi.org/10.1016/j.neuroimage.2018.11.015
Co-Author
Published, Academic Press,
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 9
Contribution Percentage: 31-40
Description of Contribution Role: Designed and performed the statistical analysis, revised the manuscript.

15. Badji, A; de la Colina, A Noriega; Sabra, D; Karakuzu, A; Bherer, L; Lamarre-cliche, M; Stikov, N; Gauthier, C; Cohen-Adad, J; Girouard, H;. (2019). The relationship between cognitive function, cortical blood flow and sub-cortical white-matter health in the elderly. JOURNAL OF CEREBRAL BLOOD FLOW AND METABOLISM. 39: 29-30.
Co-Author
Published, SAGE PUBLICATIONS INC 2455 TELLER RD, THOUSAND OAKS, CA 91320 USA,
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 9
Contribution Percentage: 11-20
Description of Contribution Role: Revised the statistical analysis methods and the manuscript.

16. Hafyane, Tarik; Karakuzu, Agah; Duquette, Catherine; Mongeon, François-Pierre; Cohen-Adad, Julien; Jerosch-Herold, Michael; Friedrich, Matthias G; Stikov, Nikola;. (2018). Let's talk about cardiac T1 mapping. bioRxiv. : 343079.
http://dx.doi.org/10.1101/343079
Co-Author
Published, Cold Spring Harbor Laboratory,
Refereed?: No, Open Access?: Yes, Synthesis?: No
Number of Contributors: 9
Contribution Percentage: 81-90
Description of Contribution Role: Designed and performed all the analyses, wrote and revised the manuscript, created reproducible publication material.

17. Gözübüyük, Ömer B; Moen, Maarten H; Akman, Mehmet; Ipseftel, Ioakim; Karakuzu, Agah;. (2018). Successful return to play following adductor longus proximal tendon rupture in professional soccer without re-injury at 12 months: a case report. Journal of back and musculoskeletal rehabilitation. 31(3): 583-587.
http://dx.doi.org/10.3233/BMR-170857
Last Author
Published, IOS press,
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 5
Contribution Percentage: 51-60
Description of Contribution Role: Designed and performed the statistical analyses, revised the manuscript.

18. Demirkiran, Aytac; Karakuzu, Agah; Erkol, Hakan; Torun, Hamdi; Unlu, Mehmet B;. (2018). Analysis of microcantilevers excited by pulsed-laser-induced photoacoustic waves. Optics express. 26(4): 4906-4919.
http://dx.doi.org/10.1364/OE.26.004906
Co-Author
Published, Optical Society of America,
Refereed?: Yes, Open Access?: No, Synthesis?: No
Number of Contributors: 5
Contribution Percentage: 71-80
Description of Contribution Role: Designed the computational framework, contributed to the draft, revised the manuscript.

19. Gozubuyuk, Omer Batin; Karakuzu, Agah; Pamuk, Uluc; Yucesoy, Can A;. (2018). The Role of Intra- and Epimuscular Fasciae Beyond Being Passive Structural Elements: MRI Analyses Indicate That They Interfere with, and Affect Muscle's Active Mechanics. Journal of Bodywork and Movement Therapies. 22(4): 852-853.
    Co-Author
    Published, Churchill Livingstone,
    Refereed?: Yes, Open Access?: No, Synthesis?: No
    Number of Contributors: 5
    Contribution Percentage: 31-40
    Description of Contribution Role: Performed the data analysis, revised the manuscript.

20. Karakuzu, Agah; Pamuk, Uluç; Ozturk, Cengizhan; Acar, Burak; Yucesoy, Can A;. (2017). Magnetic resonance and diffusion tensor imaging analyses indicate heterogeneous strains along human medial gastrocnemius fascicles caused by submaximal plantar-flexion activity. Journal of biomechanics. 57: 69-78. http://dx.doi.org/10.1016/j.jbiomech.2017.03.028
    First Listed Author
    Published, Elsevier,
    Refereed?: Yes, Open Access?: No, Synthesis?: No
    Number of Contributors: 5
    Contribution Percentage: 81-90
    Description of Contribution Role: Took the lead in writing the manuscript, conceived and carried out the experiments, performed the analyses, revised the manuscript.

    Funding Sources: Science Research Foundation (SRF) (Turkey) - 111E084

21. Pamuk, Uluç; Karakuzu, Agah; Ozturk, Cengizhan; Acar, Burak; Yucesoy, Can A;. (2016). Combined magnetic resonance and diffusion tensor imaging analyses provide a powerful tool for in vivo assessment of deformation along human muscle fibers. Journal of the mechanical behavior of biomedical materials. 63: 207-219.
    http://dx.doi.org/10.1016/j.jmbbm.2016.06.031
    Co-Author
    Published, Elsevier,
    Refereed?: Yes, Open Access?: No, Synthesis?: No
    Number of Contributors: 5
    Contribution Percentage: 71-80
    Description of Contribution Role: Conceived and planned the experiments, carried out the experiments, performed the analyses, revised the manuscript.

    Funding Sources: Science Research Foundation (SRF) (Turkey) - 111E084

Thesis/Dissertation

1. Bringing Quantitative Magnetic Resonance Imaging Under One Umbrella. École Polytechnique de Montréal.
    Contribution Percentage: 91-100
    Description / Contribution Value: Conventional MR images are just pictures, they require years long medical training to be evaluated for diagnoses. Quantitative MRI (qMRI) transforms these images into "maps" of meaningful numbers, offering a more objective and robust assessment of pathology. Nevertheless, to bring this advantage to the clinics, qMRI methods must be standardized. To that end this thesis: i) developed an open-source software capable of calculating more than 45 quantitative images, ii) developed a global qMRI data standard that has already been adopted by hundreds of research labs and iii) standardized the acquisition process by developing vendor-neutral pulse sequences (software that runs the MRI scanners) and fully reproducible processing pipelines. Nominated for the best thesis award (2022, Polytechique Montreal).

2. MRI assessment of local deformations along human medial gastrocnemius muscle fibers on submaximal plantarflexion activity. (2015). Bogazici University. Master's Thesis.
   Contribution Percentage: 91-100
   Description of Contribution Role: Drawing upon a previous project on calculating in-vivo deformations in human skeletal muscles using image registration algorithm, I developed a novel analysis framework, incorporating Diffusion Tensor Imaging (DTI) to probe muscle fibers in 3D and to calculate physiologically highly relevant metric for in-vivo muscle function. For this project, I worked in two research labs: Biomechanics Laboratory and Volumetric Analysis and Visualization Laboratory in Bogazici University, where I wrote all the necessary analysis code and performed the experiments. This line of research I initiated with my M.Sc. thesis is still active (2021) and being improved by new lab members.

Conference Publications

1. Agah Karakuzu, Julien Cohen-Adad, Nikola Stikov. Developing MRI with community in mind: Vendor-neutral sequences improve multi-center reproducibility. Organization for Human Brain Mapping Annual Meeting, Glasgow, United Kingdom,
   Conference Date: 2022/6
   Abstract
   First Listed Author
   Refereed?: Yes, Invited?: Yes
   Number of Contributors: 3
   Contribution Percentage: 91-100

2. Agah Karakuzu, Julien Cohen-Adad, Nikola Stikov. Multicenter reproducibility of quantitative MRI using vendor-neutral sequences (VENUS). Joint Annual Meeting ISMRM-ESMRMB & ISMRT 31st Annual Meeting, London, United Kingdom,
   Conference Date: 2022/5
   Abstract
   First Listed Author
   Refereed?: Yes, Invited?: Yes
   Number of Contributors: 3
   Contribution Percentage: 91-100

3. Agah Karakuzu, Mathieu Boudreau, Julien Cohen-Adad, Nikola Stikov. (2020). Thinking outside the blackbox: A fully transparent VFA T1 mapping pipeline under version control. Proceedings of ISMRM & SMRT Virtual Conference & Exhibition. ISMRM & SMRT Virtual Conference & Exhibition, ,
   Conference Date: 2020/8
   Poster
   First Listed Author
   Published
   Refereed?: Yes
   Contribution Percentage: 81-90
   Description of Contribution Role: Conceptualized and developed the methodology, developed the software, collected the data, performed the analysis and prepared the manuscript.

4. Agah Karakuzu, Gilles Hollender, Stefan Appelhoff, Tibor Auer, Mathieu Boudreau, Franklin Feingold, Ali R. Khan, Alberto Lazari, Christophe Phillips, Nikola Stikov, Kirstie Whitaker. (2020). A joint-community effort to standardize quantitative MRI data: updates from the BIDS extension proposal. Proceedings of ISMRM & SMRT Virtual Conference & Exhibition. ISMRM & SMRT Virtual Conference & Exhibition, ,
   Conference Date: 2020/8
   Poster
   First Listed Author
   Published
   Refereed?: Yes
   Contribution Percentage: 71-80
   Description of Contribution Role: Coordinated regular meetings, established the data standard, collected example datasets and prepared the manuscript.

5. Agah Karakuzu, Mathieu Boudreau, Julien Cohen-Adad, Nikola Stikov. (2020). Fully transparent qMRLab pipelines to quantify brain microstructure: From scanner to publication. Proceedings of OHBM 2020 Annual Meeting. OHBM 2020 Annual Meeting, ,
   Conference Date: 2020/6
   Poster
   First Listed Author
   Published
   Refereed?: Yes
   Contribution Percentage: 81-90
   Description of Contribution Role: Conceptualized and developed the methodology, developed the software and prepared the manuscript.

6. Agah Karakuzu, Mathieu Boudreau, Tanguy Duval, Ilana Leppert, Tommy Boshkovski, Julien Cohen-Adad, Nikola Stikov. (2019). The qMRLab workflow: From acquisition to publication. Proceedings of ISMRM 27th Annual Meeting & Exhibition. ISMRM 27th Annual Meeting & Exhibition, ,
   Conference Date: 2019/5
   Poster
   First Listed Author
   Published
   Refereed?: Yes
   Number of Contributors: 7
   Contribution Percentage: 81-90
   Description of Contribution Role: Conceptualized and developed the methodology, developed the software and prepared the manuscript.

7. Pamuk, Uluc; Karakuzu, Agah; Sanli, Goktug; Yucesoy, Can A;. (2017). Muscles' Activation State Affects Medial Gastrocnemius Fiber Strain Heterogeneity: Assessment Using MRI And DTI Methods. Proceedings of XXVI Congress of the International Society of Biomechanics. XXVI Congress of the International Society of Biomechanics, Brisbane, Australia,
   Conference Date: 2017/7
   Poster
   Co-Author
   Published
   Refereed?: Yes, Invited?: No
   Contribution Percentage: 61-70
   Description of Contribution Role: Conducted the experiment, performed the analysis and revised the manuscript.

8. Karakuzu, Agah; Pamuk, Uluc; Acar, Burak; Yucesoy, Can A;. (2015). Using advanced MRI techniques for estimating strain distributions along muscle fibers during isometric plantar-flexion activity of human medial gastrocnemius, in vivo. Proceedings of XXV Congress of the International Society of Biomechanics. XXV Congress of the International Society of Biomechanics, Glasgow, United Kingdom,
Conference Date: 2015/6
Poster
First Listed Author
Published
Refereed?: Yes, Invited?: No
Contribution Percentage: 71-80
Description of Contribution Role: Conducted the experiment, performed the analyses and prepared the manuscript.

9. Pamuk, Uluc; Karakuzu, Agah; Ozturk, Cengizhan; Acar, Burak; Yucesoy, Can A;. (2015). MRI and DTI analyses combined provide a powerful tool for quantifying deformation along human muscle fibers in vivo. Proceedings of International Society of Biomechanics XXVth Congress. International Society of Biomechanics XXVth Congress, Rome, Italy,
Conference Date: 2015/4
Poster
Co-Author
Published
Refereed?: Yes, Invited?: No
Contribution Percentage: 61-70
Description of Contribution Role: Conducted the experiment, performed the analyses and revised the manuscript.

10. Pamuk, Uluç; Karakuzu, Agah; Akyazı, Pınar; Acar, Burak; Öztürk, Cengizhan; Yücesoy, Can A;. (2014). MRI analyses indicate non-uniform human muscle tissue deformations and confirm theoretically anticipated sarcomere length heterogeneity, in vivo. Proceedings of 18th National Biomedical Engineering Meeting. 2014 18th National Biomedical Engineering Meeting, Istanbul, Turkey. IEEE,
Conference Date: 2014/5
Paper
Co-Author
Published
Refereed?: Yes, Invited?: No
Contribution Percentage: 51-60
Description of Contribution Role: Conducted the experiment, performed the analysis and revised the manuscript.

11. Karakuzu, Agah; Pamuk, Uluç; Öztürk, Cengizhan; Yücesoy, Can A;. (2014). Assessment of in-vivo skeletal muscle mechanics during joint motion using multimodal magnetic resonance imaging based approaches. Proceedings of 18th National Biomedical Engineering Meeting. 2014 18th National Biomedical Engineering Meeting, Istanbul, Turkey. IEEE,
Conference Date: 2014/5
Paper
First Listed Author
Published
Refereed?: Yes, Invited?: No
Contribution Percentage: 71-80
Description of Contribution Role: Designed and conducted the experiments, performed the analyses, prepared the manuscript.