

Highlighting Reproducibility: NeuroLibre in MRM Highlights

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What is MRM Highlights?

**MAGNETIC RESONANCE
IN MEDICINE**

ISMIRM

ONE
COMMUNITY
FOR CLINICIANS
AND SCIENTISTS



Three Pillars of Highlights



Monthly Interviews



Annual Magazine



ISMRM Afterparty

Q&A Interviews

<https://twitter.com/hashtag/MRFRidays>



**Q&A with Berk Silemek
and Lukas Winter**



**Q&A with Hannah
Scholten and Herbert
Köstler**



**Q&A with Moritz
Blumenthal and Martin
Uecker**



**Q&A with Ayse Sila
Dokumaci and David
Carmichael**



**Q&A with Julien Songeon
and Antoine Klauser**



**Q&A with Layla Tabea
Riemann and Ariane
Fillmer**



**Q&A with Agah Karakuzu
and Nikola Stikov**



**Q&A with Yaël Balbastre
and Martina F. Callaghan**



**Q&A with Joseph Woods
and Divya Bolar**



**Q&A with Kyle Gilbert and
Corey Baron**



**Q&A with Jakob Assländer
and Daniel Sodickson**



**Q&A with Jianpan Huang
and Kannie WY Chan**



**Q&A with Antonio Tristán-
Vega and Santiago Aja-
Fernández**

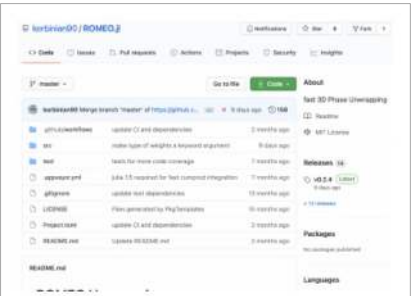


**Q&A with Aaron T. Hess
and Mark Chiew**

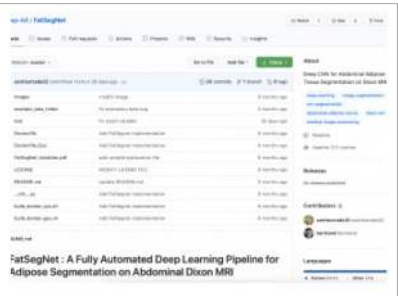


**Q&A with Christopher
Rowley and Christine
Tardif**

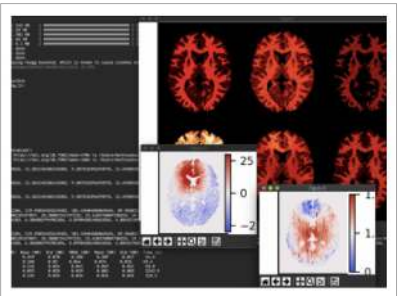
Reproducible Research Insights



Reproducible Research Insights with Barbara Dymerska, Korbinian Eckstein and Simon Robinson



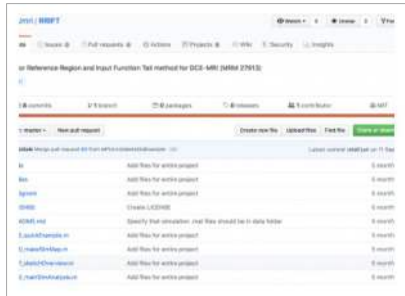
Reproducible Research Insights with Santiago Estrada and Martin Reuter



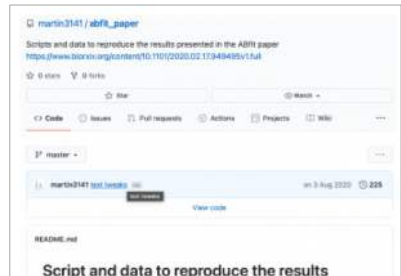
Reproducible Research Insights with Steven Whitaker, Jon-Fredrik Nielsen and Jeff Fessler



Reproducible Research Insights with Sebastiano Barbieri, Oliver Gurney-Champion, and Harriet Thoeny



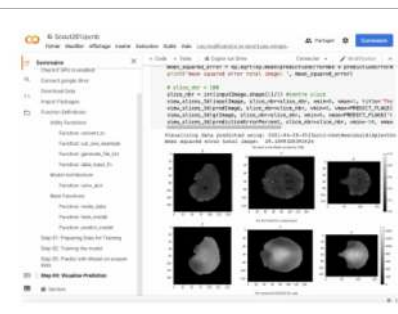
Reproducible Research Insights with Zaki Ahmed and Ives Levesque



Reproducible Research Insights with Martin Wilson



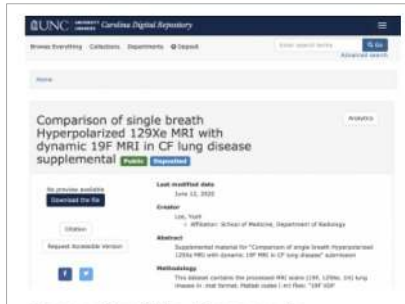
Reproducible Research Insights with Paula Ramos Delgado and Thoralf Niendorf



Reproducible Research Insights with Shahrokh Abbasi-Rad, Markus Barth, and Steffen Bollmann



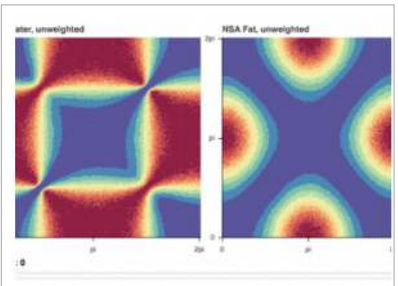
Reproducible Research Insights with Rohan Kapre and Angelique Y. Louie



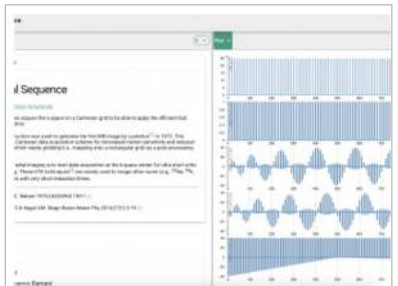
Reproducible Research Insights with Sang Chung, Yueh Lee, and Jennifer Goraliski



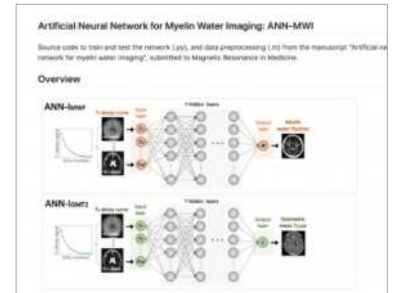
Reproducible Research Insights with Frank Ong and Miki Lustig



Reproducible Research Insights with Henric Rydén and Stefan Skare



Reproducible Research Insights with Cristoffer Cordes and Matthias Günther



Reproducible Research Insights with Jieun Lee and Jongho Lee



Reproducible Research Insights with Shaihan Malik

EDITORIAL | [Free Access](#)

Reproducibility and the future of MRI research

Nikola Stikov✉, Joshua D. Trzasko, Matt A. Bernstein

First published: 10 August 2019 | <https://doi.org/10.1002/mrm.27939> | Citations: 7

SECTIONS



PDF



TOOLS



SHARE

Most would agree that transparency in science is an essential goal, but there are differing opinions on how open our science really should be. The questions surrounding open science and research transparency are particularly relevant for fields like magnetic resonance, in which much of the innovation over the past 50 years has been driven by intellectual property, including patents and copyrighted software, and there is a tight link between industry and academia.

EDITORIAL | [Free Access](#)

On the open-source landscape of *Magnetic Resonance in Medicine*

Mathieu Boudreau✉, Nikola Stikov, Peter Jezzard

First published: 28 July 2022 | <https://doi.org/10.1002/mrm.29366>[Click here](#) for author-reader discussions

SECTIONS



PDF



TOOLS



SHARE

Abstract

The tides of the open-source movement reached the coast of our journal just prior to the coronavirus disease 2019 (COVID-19) pandemic with an editorial¹ on reproducibility and the future of MRI research. In it the authors argued that, for improved reproducibility, the

TABLE 1 Summary of the reproducible research analysis of *Magn Reson Med* papers

% of total papers that shared ...	2019	2020	2021
code OR data	11	14	31
code	9	12	24
data	5	6	18

NeuroLibre in MRMH: June 2024 Roundtable

Received: 17 October 2023 | Revised: 21 March 2024 | Accepted: 23 March 2024

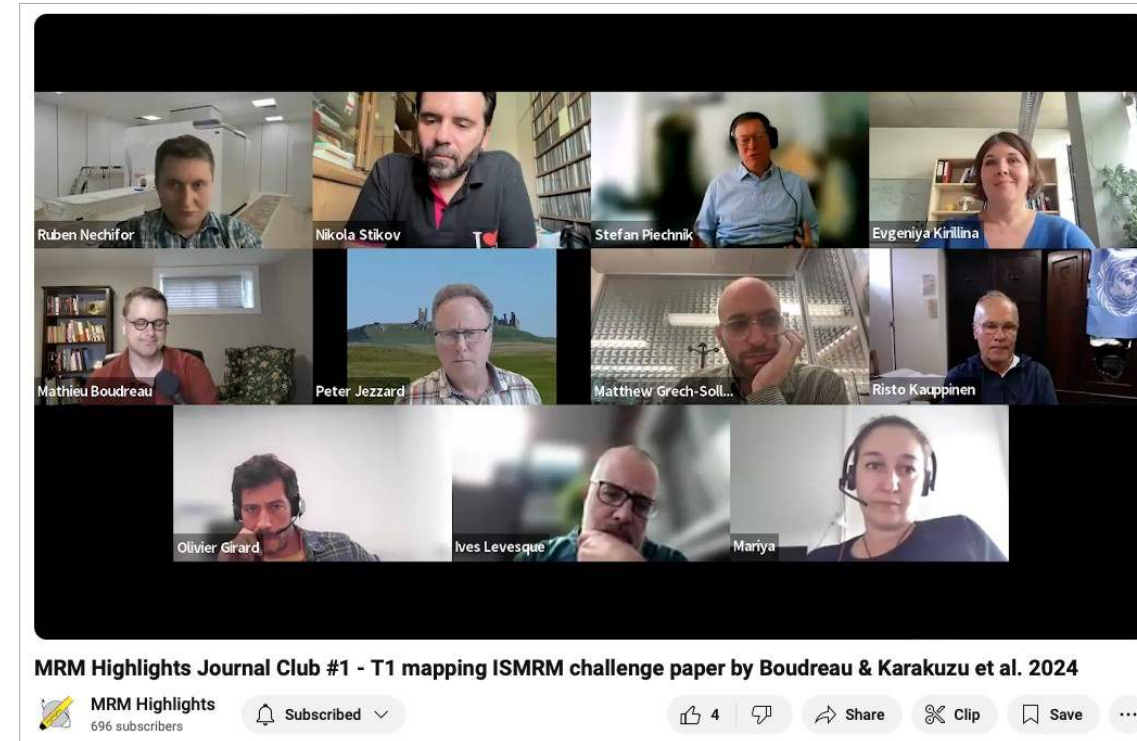
DOI: 10.1002/mrm.30111

TECHNICAL NOTE

Magnetic Resonance in Medicine

Repeat it without me: Crowdsourcing the T_1 mapping common ground via the ISMRM reproducibility challenge

Mathieu Boudreau^{1,2}  | Agah Karakuzu¹  | Julien Cohen-Adad^{1,2,3,4,5}  |
Ecem Bozkurt⁶ | Madeline Carr^{7,8}  | Marco Castellaro⁹ | Luis Concha¹⁰  |
Mariya Doneva¹¹ | Seraina A. Dual¹² | Alex Ensworth^{13,14} | Alexandru Foias¹ |
Véronique Fortier^{15,16} | Refaat E. Gabr¹⁷  | Guillaume Gilbert¹⁸ |
Carri K. Glide-Hurst¹⁹ | Matthew Grech-Sollars^{20,21}  | Siyuan Hu²²  |
Oscar Jalnefjord^{23,24}  | Jorge Jovicich²⁵ | Kübra Keskin⁶ | Peter Koken¹¹ |
Anastasia Kolokotronis^{13,26} | Simran Kukran^{27,28} | Nam G. Lee⁶  | Ives R. Levesque^{13,29} |
Bochao Li⁶  | Dan Ma²² | Burkhard Mädler³⁰ | Nyasha G. Maforo^{31,32} |
Jamie Near^{33,34}  | Erick Pasaye¹⁰ | Alonso Ramirez-Manzanares³⁵  | Ben Statton³⁶  |
Christian Stehning³⁰  | Stefano Tambalo²⁵ | Ye Tian⁶  | Chenyang Wang³⁷ |
Kilian Weiss³⁰ | Niloufar Zakariaei³⁸ | Shuo Zhang³⁰  | Ziwei Zhao⁶  |
Nikola Stikov^{1,2,39}   | on behalf of the ISMRM Reproducible Research Study Group and
the ISMRM Quantitative MR Study Group



<https://doi.org/10.1002/mrm.30111>

<https://www.youtube.com/@mrmhighlights>



Paper is not enough: Crowdsourcing the T_1 mapping common ground via the ISMRM reproducibility challenge

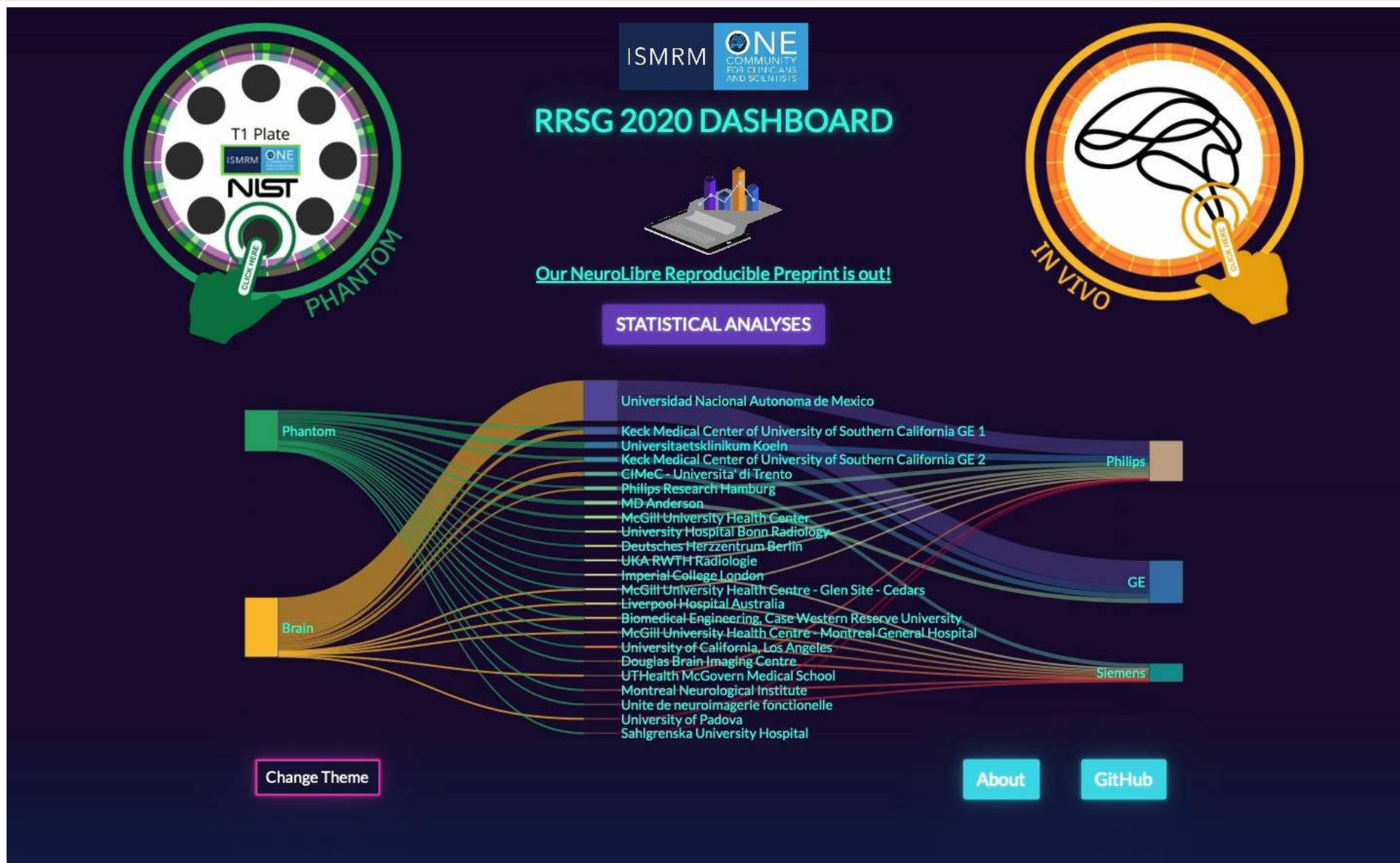
***Mathieu Boudreau^{1,2}, *Agah Karakuzu¹, Julien Cohen-Adad^{1,3,4,5}, Ecem Bozkurt⁶, Madeline Carr^{7,8}, Marco Castellaro⁹, Luis Concha¹⁰, Mariya Doneva¹¹, Seraina A. Dual¹², Alex Ensworth^{13,14}, Alexandru Foias¹, Véronique Fortier^{15,16}, Refaat E. Gabr¹⁷, Guillaume Gilbert¹⁸, Carri K. Glide-Hurst¹⁹, Matthew Grech-Sollars^{20,21}, Siyuan Hu²², Oscar Jalnefjord^{23,24}, Jorge Jovicich²⁵, Kübra Keskin⁶, Peter Koken¹¹, Anastasia Kolokotronis^{13,26}, Simran Kukran^{27,28}, Nam. G. Lee⁶, Ives R. Levesque^{13,29}, Bochao Li⁶, Dan Ma²², Burkhard Mädler³⁰, Nyasha Maforo^{31,32}, Jamie Near^{33,34}, Erick Pasaye¹⁰, Alonso Ramirez-Manzanares³⁵, Ben Statton³⁶, Christian Stehning³⁰, Stefano Tambalo²⁵, Ye Tian⁶, Chenyang Wang³⁷, Kilian Weiss³⁰, Niloufar Zakariaei³⁸, Shuo Zhang³⁰, Ziwei Zhao⁶, Nikola Stikov^{1,2,39}**

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Abstract

Dashboard



MRI Online Course

Educational Content

Interactive Jupyter Book GitHub Code

Nan-kuei Chen
2020-03-26
Reconstruction, DTI basics, RF pulse, Fitting

Quantitative T1 mapping

Educational Content

Interactive Jupyter Book GitHub Code

Mathieu Boudreau Agah Karakuzu
Katy Keenan Nikola Stikov
2021-03-26
T1 mapping, Interactive tutorial

Image processing with Spinal Cord Toolbox (SCT)

Educational Content

Interactive Jupyter Book GitHub Code

Mathieu Boudreau Julien Cohen-Adad
2020-03-26
Spinal cord, Analysis pipeline

Steady-state imaging with inhomogeneous magnetization transfer contrast using multiband radiofrequency pulses

Abstract

Interactive Jupyter Book GitHub Code

MRM 10.1002/mrm.27984

Shaihan J. Malik Rui P. A. G. Teixeira
Daniel J. West Tobias C. Wood Joseph V. Hajnal
2020-03-26
ihMT, Multiband RF

A gradient optimization toolbox for general purpose time-optimal MRI gradient waveform design

Abstract

Interactive Jupyter Book GitHub Code

MRM 10.1002/mrm.28384

Michael Loecher Matthew J. Middione
Daniel B. Ennis
2020-03-26
Gradient, Optimization

Pharmacokinetic modeling of dynamic contrast-enhanced MRI using a reference region and input function tail

Abstract

Interactive Jupyter Book GitHub Code

MRM 10.1002/mrm.27913

Zaki Ahmed Ives R. Levesque
2020-03-26
DCE, Cancer, Perfusion

Time-optimized 4D phase contrast MRI with real-time convex optimization of gradient waveforms and fast excitation methods

Abstract

Interactive Jupyter Book GitHub Code

MRM 10.1002/mrm.27716

Michael Loecher Patrick Magrath Eric Aliotta Daniel B. Ennis
2020-03-26
Phase unwrapping, Low SNR

The use of Fourier-domain analyses for unwrapping phase images of low SNR

Abstract

Interactive Jupyter Book GitHub Code

MRM 10.1002/mrm.27719

Nan-kuei Chen Pei-Hsin Wu
2020-03-26
Phase unwrapping, Low SNR