

# FRANCESCO GRUSSU

## CONTACT AND ONLINE PROFILES

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<i>Scopus</i>	56512026600
<i>Web of Science</i>	AAE-8109-2019
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<i>Twitter</i>	@fragrussu

## EDUCATION AND TRAINING

<i>Observer Researcher</i>	<i>Sept.-Nov. 2017</i>	New York University (NYU), USA <b>Affiliation:</b> Dept. of Radiology, NYU Langone Medical Center. <b>Training:</b> advanced denoising techniques for diffusion MRI.
<i>PhD in MR Physics</i>	<i>2012-2016</i>	University College London (UCL), UK <b>Information:</b> viva passed with no corrections on 15th/03/2016; thesis entitled “ <i>Microstructural imaging of the human spinal cord with advanced diffusion MRI</i> ”
<i>Master’s Degree in Bioengineering</i>	<i>2010-2012</i>	University of Genoa, Italy <b>Mark:</b> 110 out of 110 <i>cum laude</i> & <i>Dignità di Stampa</i> (Examination Panel award). <b>Dissertation:</b> “ <i>A study on a bidirectional brain-machine interface inspired by the corticospinal control of movement</i> ”.
<i>Bachelor’s Degree in Biomedical Engineering</i>	<i>2006-2009</i>	University of Cagliari, Italy <b>Mark:</b> 110 out of 110 <i>cum laude</i> . <b>Dissertation:</b> “ <i>Real time wavelet denoising on a DSP of neural signals coming from the peripheral nervous system</i> ”.

## WORK EXPERIENCE

<i>Vall d’Hebron Institute of Oncology</i>	<i>Oct.2020-now</i>	Senior Fellow, VHIO — BARCELONA, SPAIN <b>Affiliations:</b> Radiomics Group, Clinical Research Department. <b>Responsibilities:</b> development of microstructural MRI techniques in cancer.
<i>University College London</i>	<i>Sep.2020-Sep.22</i>	Honorary Senior Fellow, UCL — LONDON, UK <b>Affiliations:</b> Queen Square Institute of Neurology. <b>Responsibilities:</b> collaborator in MRI development in multiple sclerosis.
<i>University College London</i>	<i>Feb.2016-Sept.20</i>	Research Associate, UCL — LONDON, UK <b>Affiliations:</b> Institute of Neurology; Centre for Medical Image Computing. <b>Responsibilities:</b> quantitative MRI development (spinal cord, brain, prostate).

Queen Mary Univ.  
of London

May-June 2012

Research Assistant, QMUL — LONDON, UK

**Affiliation:** School of Electronic Engineering and Computer Science (EECS).

**Responsibilities:** image segmentation (Computed Tomography Angiography).

#### IMPACT STATS ON 11/10/2022

<i>h-index</i>	Google Scholar h-index: 16
<i>Citations</i>	Total Google Scholar citations: 1034

#### SCIENTIFIC ARTICLES — FIRST AUTHORSHIP

Magn Reson Med 2022	"Diffusion MRI signal cumulants and hepatocyte microstructure at fixed diffusion time: Insights from simulations, 9.4T imaging, and histology". Grussu F et al. Magnetic Resonance in Medicine (2022), 88(1): 365-379, doi: <a href="https://doi.org/10.1002/mrm.29174">10.1002/mrm.29174</a> .
Front Phys 2021	"Feasibility of data-driven, model-free quantitative MRI protocol design: application to brain and prostate diffusion-relaxation imaging". Grussu F et al. Frontiers in Physics (2021), 9: 752208, doi: <a href="https://doi.org/10.3389/fphy.2021.752208">10.3389/fphy.2021.752208</a> .
Sem Ultrasound CT MRI 2021	"Diffusion-weighted imaging: recent advances and applications". Martinez-Heras E*, Grussu F*, et al. Seminars in Ultrasound, CT and MRI (2021), 42(5): 490-506, doi: <a href="https://doi.org/10.1053/j.sult.2021.07.006">10.1053/j.sult.2021.07.006</a> . *: equal contribution (co-first authors).
NeuroImage 2020	"Multi-parametric quantitative in vivo spinal cord MRI with unified signal readout and image denoising". Grussu F et al. NeuroImage (2020), 217: 116884, doi: <a href="https://doi.org/10.1016/j.neuroimage.2020.116884">10.1016/j.neuroimage.2020.116884</a> .
Magn Reson Med 2019	"Relevance of time-dependence for clinically viable diffusion imaging of the spinal cord". Grussu F et al. Magnetic Resonance in Medicine (2019), 81(2): 1247-1264, doi: <a href="https://doi.org/10.1002/mrm.27463">10.1002/mrm.27463</a> .
Ann Clin Transl Neurol 2017	"Neurite dispersion: a new marker of multiple sclerosis spinal cord pathology?". Grussu F*, Schneider T* et al. Annals of Clinical and Translational Neurology (2017), 4(9):663-679, doi: <a href="https://doi.org/10.1002/acn3.445">10.1002/acn3.445</a> . *: equal contribution (co-first authors). Paper featured in Nature Reviews Neurology "Research Highlights" (Patel M, Nat Rev Neur (2017), 13(10): 578, doi: <a href="https://doi.org/10.1038/nrneurol.2017.127">10.1038/nrneurol.2017.127</a> ).
J Neurosci Meth 2016	"A framework for optimal whole-sample histological quantification of neurite orientation dispersion in the human spinal cord". Grussu F et al. Journal of Neuroscience Methods (2016), 273:20-32, doi: <a href="https://doi.org/10.1016/j.jneumeth.2016.08.002">10.1016/j.jneumeth.2016.08.002</a> .
NeuroImage 2015	"Neurite orientation dispersion and density imaging of the healthy cervical spinal cord in vivo". Grussu F et al. NeuroImage (2015), 111:590-601, doi: <a href="https://doi.org/10.1016/j.neuroimage.2015.01.045">10.1016/j.neuroimage.2015.01.045</a> .

#### SCIENTIFIC ARTICLES — SENIOR AUTHORSHIP

Front Neurol 2021	"Comparison of neurite orientation dispersion and density imaging and two-compartment spherical mean technique parameter maps in multiple sclerosis". Johnson D*, Ricciardi A*, ..., and Grussu F. Frontiers in Neurology (2021), 12: 662855, doi: <a href="https://doi.org/10.3389/fneur.2021.662855">10.3389/fneur.2021.662855</a> . *: equal contribution (co-first authors).
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#### SCIENTIFIC ARTICLES — CO-AUTHORSHIP

Neurology 2022	"Differentiating Multiple Sclerosis from AQP4-Neuromyelitis Optica Spectrum Disorder and MOG-antibody disease with imaging". Cortese R, ... Grussu F et al. Neurology (2022), e-pub ahead of print, doi: <a href="https://doi.org/10.1212/WNL.0000000000201465">10.1212/WNL.0000000000201465</a> .
Am J Neuroradiol 2022	"Diffuse large B-cell Epstein-Barr virus-positive primary CNS lymphoma in non-AIDS

- patients: high diagnostic accuracy of DSC perfusion metrics". Pons-Escoda A, ... Grussu F et al. American Journal of Neuroradiology (2022), e-pub ahead of print, doi: [10.3174/ajnr.A7668](https://doi.org/10.3174/ajnr.A7668).
- Magn Reson Med 2022 "Multi-echo quantitative susceptibility mapping: how to combine echoes for accuracy and precision at 3 Tesla". Biondetti E, ..., Grussu F et al. Magnetic Resonance in Medicine (2022), 88(5): 2101-2116, doi: [10.1002/mrm.29365](https://doi.org/10.1002/mrm.29365).
- Magn Reson Med 2022 "SENSE EPI reconstruction with 2D phase error correction and channel-wise noise removal". Powell E, ..., Grussu F et al. Magnetic Resonance in Medicine (2022), 88(5): 2157-2166, doi: [10.1002/mrm.29349](https://doi.org/10.1002/mrm.29349).
- Magn Reson Med 2022 "Comparison of multicenter MRI protocols for visualizing the spinal cord gray matter". Cohen-Adad J, ..., Grussu F et al. Magnetic Resonance in Medicine (2022), 88(2): 849-859, doi: [10.1002/mrm.29249](https://doi.org/10.1002/mrm.29249).
- Eur Radiol 2022 "Voxel-level analysis of normalized DSC-PWI time-intensity curves: a potential generalizable approach and its proof of concept in discriminating glioblastoma and metastasis". Pons-Escoda A, ..., Grussu F et al. European Radiology (2022), 32: 3705-3715, doi: [10.1007/s00330-021-08498-1](https://doi.org/10.1007/s00330-021-08498-1).
- BMJ Open 2022 "Histo-MRI map study protocol: a prospective cohort study mapping MRI to histology for biomarker validation and prediction of prostate cancer". Singh S, ..., Grussu F et al. BMJ Open (2022), 12: e059847, doi: [10.1136/bmjopen-2021-059847](https://doi.org/10.1136/bmjopen-2021-059847).
- NeuroImage Clin 2022 "Spatial patterns of brain lesions assessed through covariance estimations of lesional voxels in multiple sclerosis: the SPACE-MS technique". Tur C, Grussu F et al. NeuroImage: Clinical (2022), 33: 102904, doi: [10.1016/j.nicl.2021.102904](https://doi.org/10.1016/j.nicl.2021.102904).
- Front Neurol 2021 "Assessing lumbar plexus and sciatic nerve damage in relapsing-remitting multiple sclerosis using magnetisation transfer ratio". Boonsuth R, ..., Grussu F et al. Frontiers in Neurology (2021), 12: 763143, doi: [10.3389/fneur.2021.763143](https://doi.org/10.3389/fneur.2021.763143).
- Sci Rep 2021 "Robust imaging habitat computation using voxel-wise radiomics features". Bernatowicz K, Grussu F et al. Scientific Reports (2021), 11: 20133, doi: [10.1038/s41598-021-99701-2](https://doi.org/10.1038/s41598-021-99701-2).
- Sci Data 2021 "Open-access quantitative MRI data of the spinal cord and reproducibility across participants, sites and manufacturers". Cohen-Adad J, ..., Grussu F et al. Scientific Data (2021), 8: 219, doi: [10.1038/s41597-021-00941-8](https://doi.org/10.1038/s41597-021-00941-8).
- Nat Protoc 2021 "Generic acquisition protocol for quantitative MRI of the spinal cord". Cohen-Adad J, ..., Grussu F et al. Nature Protocols (2021), 16: 4611-4632, doi: [10.1038/s41596-021-00588-0](https://doi.org/10.1038/s41596-021-00588-0).
- Brain 2021 "Brain microstructural and metabolic alterations detected in vivo at the onset of the first demyelinating event". Collorone S, ..., Grussu F et al. Brain (2021), 144: 1409-1421, doi: [10.1093/brain/awabo43](https://doi.org/10.1093/brain/awabo43).
- NeuroImage 2021 "Uncertainty modelling in deep learning for safer neuroimage enhancement: demonstration in diffusion MRI". Tanno R, ... Grussu F et al. NeuroImage (2021), 225: 117366, doi: [10.1016/j.neuroimage.2020.117366](https://doi.org/10.1016/j.neuroimage.2020.117366).
- Mult Scler 2020 "Reduced neurite density in the brain and cervical spinal cord in relapsing-remitting multiple sclerosis: A NODDI study". Collorone S, Cowley N, Grussu F et al. Multiple Sclerosis Journal (2020), 26(13): 1647-1657, doi: [10.1177/1352458519885107](https://doi.org/10.1177/1352458519885107).
- NeuroImage 2020 "Cross-scanner and cross-protocol multi-shell diffusion MRI data harmonization: Algorithms and results". Ning L, Bonet-Carne E, Grussu F et al. NeuroImage (2020), 221: 117128, doi: [10.1016/j.neuroimage.2020.117128](https://doi.org/10.1016/j.neuroimage.2020.117128).
- Mult Scler 2020 "A multi-shell multi-tissue diffusion study of brain connectivity in early multiple sclerosis". Tur C, Grussu F et al. Multiple Sclerosis Journal (2019), 26(7): 774-785, doi: [10.1177/1352458519845105](https://doi.org/10.1177/1352458519845105).

- NeuroImage 2020 "Generalised boundary shift integral for longitudinal assessment of spinal cord atrophy". Prados F, ..., Grussu F et al. NeuroImage (2020), 209: 116489, doi: [10.1016/j.neuroimage.2019.116489](https://doi.org/10.1016/j.neuroimage.2019.116489).
- Magn Reson Med 2019 "Fast bound pool fraction mapping via steady-state magnetization transfer saturation using single-shot EPI". Battiston M, ..., Grussu F et al. Magnetic Resonance in Medicine (2019), 82: 1025-1040, doi: [10.1002/mrm.27792](https://doi.org/10.1002/mrm.27792).
- NeuroImage 2019 "Cross-scanner and cross-protocol diffusion MRI data harmonisation: a benchmark database and evaluation of algorithms". Tax CMW, Grussu F et al. NeuroImage (2019), 195: 285-299, doi: [10.1016/j.neuroimage.2019.01.077](https://doi.org/10.1016/j.neuroimage.2019.01.077).
- Sci Rep 2018 "Structural cortical network reorganization associated with early conversion to multiple sclerosis". Tur C, ..., Grussu F et al. Scientific Reports (2018), 8: 10715, doi: [10.1038/s41598-018-29017-1](https://doi.org/10.1038/s41598-018-29017-1).
- Magn Reson Med 2018b "An optimized framework for quantitative magnetization transfer imaging of the cervical spinal cord in vivo". Battiston M, Grussu F et al. Magnetic Resonance in Medicine (2018) 79(5): 2576-2588, doi: [10.1002/mrm.26909](https://doi.org/10.1002/mrm.26909).
- Magn Reson Med 2018a "Fast and reproducible in vivo T1 mapping of the human cervical spinal cord". Battiston M, ..., Grussu F et al. Magnetic Resonance in Medicine (2018), 79(4): 2142-2148, doi: [10.1002/mrm.26852](https://doi.org/10.1002/mrm.26852).
- NeuroImage 2017 "Spinal cord grey matter segmentation challenge". Prados F, ..., Grussu F et al. NeuroImage (2017), 152:312-329, doi: [10.1016/j.neuroimage.2017.03.010](https://doi.org/10.1016/j.neuroimage.2017.03.010).
- PlosOne 2016 "Reduced field-of-view diffusion-weighted imaging of the lumbosacral enlargement: a pilot in vivo study of the healthy spinal cord at 3T". Yiannakas MC, Grussu F et al. PlosOne (2016), 11(10): e0164890, doi: [10.1371/journal.pone.0164890](https://doi.org/10.1371/journal.pone.0164890).

#### CONFERENCE PAPERS: FIRST AUTHORSHIP

- CDMRI 2020 "Deep learning model fitting for diffusion-relaxometry: a comparative study". Grussu F et al. Proc of 2020 MICCAI Workshop on Computational Diffusion MRI, 2021, 159-172, doi: [10.1007/978-3-030-73018-5\\_13](https://doi.org/10.1007/978-3-030-73018-5_13).

#### CONFERENCE PAPERS: CO-AUTHORSHIP

- MICCAI 2022 "Progressive subsampling for oversampled data - application to quantitative MRI". Blumberg SB, ..., Grussu F et al. Proc of Medical Image Computing and Computing Assisted Intervention (MICCAI) 2022, Lecture Notes in Computer Science, 13436: 421-431, doi: [10.1007/978-3-031-16446-0\\_40](https://doi.org/10.1007/978-3-031-16446-0_40).
- CDMRI 2019 "Acquiring and predicting multidimensional diffusion (MUDI) data: an open challenge". Pizzolato M, ..., Grussu F et al. Proc of 2019 MICCAI Workshop on Computational Diffusion MRI, 2020, 195-208, doi: [10.1007/978-3-030-52893-5\\_17](https://doi.org/10.1007/978-3-030-52893-5_17).
- CDMRI 2018 "Multi-shell diffusion MRI harmonisation and enhancement challenge (MUSHAC): progress and results". Ning L, ..., Grussu F et al. Proc of 2018 MICCAI Workshop on Computational Diffusion MRI, 2019, 217-224, doi: [10.1007/978-3-030-05831-9\\_18](https://doi.org/10.1007/978-3-030-05831-9_18).
- CDMRI 2018 "Spatial characterisation of fibre response functions for spherical deconvolution in multiple sclerosis". Tur C, Grussu F et al. Proc of 2018 MICCAI Workshop on Computational Diffusion MRI, 2019, 265-279, doi: [10.1007/978-3-030-05831-9\\_21](https://doi.org/10.1007/978-3-030-05831-9_21).
- MICCAI 2016 "Bayesian image quality transfer". Tanno R, ..., Grussu F et al. Proc of Medical Image Computing and Computing Assisted Intervention (MICCAI) 2016, Lecture Notes in Computer Science, 9901: 265-273, doi: [10.1007/978-3-319-46723-8\\_31](https://doi.org/10.1007/978-3-319-46723-8_31).

## BOOK CHAPTERS

- CRC Press 2018 Chapter 8: “*D — the diffusion of water (DTI)*”. Grussu F and Wheeler-Kingshott CAM. “*Quantitative MRI of the brain*” (2nd edition, 2018), Cercignani M, Dowell N and Tofts P editors. ISBN 978-1-138-03285-9, doi: 10.1201/b21837.

## BOOK EDITING

- CDMRI 2018 “*Computational Diffusion MRI*”. Bonet-Carne E, Grussu F, Ning L, Sepehrband F and Tax C editors. Proc. of 2018 MICCAI Workshop on “*Computational Diffusion MRI*”, Granada, Spain, 20/09/2018. ISBN: 978-3-030-05830-2, doi: 10.1007/978-3-030-05831-9.
- CDMRI 2017 “*Computational Diffusion MRI*”. Kaden E, Grussu F, Ning L, Tax C and Veraart J editors. Proc. of 2017 MICCAI Workshop on “*Computational Diffusion MRI*”, Quebec City, Canada, 10/09/2017. ISBN: 978-3-319-73839-0, doi: 10.1007/978-3-319-73839-0.

## RESEARCH FUNDING

- “la Caixa” Junior Leader Fellowship 2022 2022 Junior Leader Retaining post-doctoral fellowship, “la Caixa” Foundation, Spain. “*New-generation oncological MRI (New-OncoMRI): development, validation and application*”. Award: €294,900. Role: fellow. Duration: 30/09/2022-29/09/2025. Code: ID 100010434, fellowship number LCF/BQ/PR22/11920010.
- AECC Projects 2021 2021 AECC - Proyectos Coordinados, Asociación Española Contra el Cancer (Spanish Association Against Cancer), Spain. “*Tumoral senescence induced by anti-cancer therapies constitutes a novel prognostic biomarker and a therapeutic target*”. Award: €882,250. Role: co-investigator (Co-I; principal investigator (PI): Manuel Serrano, IRB, Barcelona). Duration: 01/09/2022-31/08/2025. Code: PRYCO211023SERR.
- Beatriu de Pinós Fellowship 2020 2020 Beatriu de Pinós post-doctoral fellowship, AGAUR, Secretary of Universities and Research (Govt of Catalonia, Spain). “*Advancing Magnetic Resonance Imaging against liver cancer*”. Award: €144,300. Role: fellow. Duration: 01/01/2022-31/12/2024, renounced on 29/09/2022 due to incompatibility with the “la Caixa” Junior Leader fellowship. Code: 2020 BP 00117.
- UCL pump-priming award 2017 Centre for Medical Image Computing Pump-priming Award at University College London (UCL). “*Enabling multi-site high precision spinal cord MRI*”. Award: GBP 23,900. Role: fellow. Duration: 01/07/2017-30/06/2018.

## PRIZES AND AWARDS

- 2021 3rd prize, 2021 International Society for Magnetic Resonance in Medicine (ISMRM) MR of Cancer Study Group, Trainee competition for abstract Grussu F et al, Proc of ISMRM 2021, p.0699.
- 2021 Magna cum Laude award, abstract (Grussu et al, p.0699, ISMRM 2021).
- 2020 Magna cum Laude award, abstract (Grussu et al, p.1035, ISMRM 2020).
- 2020 2nd prize (shared), 2020 ISMRM British and Irish Chapter “*Mansfield Research Innovation Award*” for abstract Grussu F et al, Proc of ISMRM 2020.
- 2019 1st prize in the “*Multi-dimensional Diffusion Imaging*” (MUDI) challenge at 2019 CDMRI MICCAI Workshop (Shenzhen, China, 17/10/2019) (Team: Grussu F, Blumberg SB, Ianus A, Mertzaniadou T, Alexander DC; Method: SARDU-Net).
- 2018-2020 Elected trainee representative for the White Matter Study Group of the

International Society for Magnetic Resonance in Medicine (ISMRM).

- 2018 & 2019 **“Distinguished reviewer”** Award for Magnetic Resonance in Medicine, awarded at the 2018 and 2019 ISMRM annual meetings.
- 2018 **Magna cum Laude** award, abstract (Grussu et al, p.466, ISMRM 2018).
- 2017 Poster short-listed for presentation at the 2017 ISMRM *Diffusion study group* (Grussu et al, p.3399, ISMRM 2017).
- 2017 **Magna cum Laude** award, abstract (Grussu et al, p.3399, ISMRM 2017).
- 2016 Abstract submission among best 5 in the “*Validation*” session, ISMRM workshop *Breaking the barriers of diffusion MRI*.
- 2016 Poster short-listed for presentation at the 2016 ISMRM *Diffusion study group* (Grussu et al, p.2009, ISMRM 2016).
- 2015 Young Investigators poster competition finalist (80 selected), European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) 2015.
- 2015 **Magna cum Laude** award, abstract (Grussu et al, p.0909, ISMRM 2015).
- 2015 **Magna cum Laude** award, abstract (Grussu et al, p.0154, ISMRM 2015).
- 2013 **1st prize**, Master’s degree awards, Mòguru council, Italy (1st prize).
- 2013 Poster short-listed as a finalist of the 2013 ISMRM *White Matter Study Group* poster competition.
- 2012-2015 **Grand Challenge PhD Studentship**, UCL School of Life and Medical Sciences. **Award:** 59,000 GBP. **Duration:** 09/2012-12/2015.
- 2012 **2012 Master’s degree thesis prize**, *Gruppo Nazionale di Bioingegneria* (GNB, National Bioengineering Group).
- 2009 **Award for the best student graduating in Biomedical Engineering** (BEng) in 2009, University of Cagliari, Italy.
- 2008-2011 **“Assegno di Merito” (Merit cheque)** by the Sardinian regional government for excellence in Academic Studies, obtained yearly from 2008 to 2011.

#### TRAVEL GRANTS

- 2020 UCL Dept. of neuroinflammation travel grant funding attendance at the 2020 ISMRM meeting (GBP 400) – awarded for April 2020, unused due to COVID-19.
- 2016 ISMRM Trainee Stipend for attendance at ISMRM workshop “*Breaking the barriers of Diffusion MRI* (waived registration fees)”.
- 2015, 2016 UCL School of Life and Medical Sciences Travel Grant funding the attendance at the 2015 (GBP 800) and 2016 (GBP 940) ISMRM meetings.
- 2015 ECTRIMS Travel Grant funding the attendance at the 2015 ECTRIMS meeting in Barcelona (Spain) (EUR 400).
- 2013, 2015, 2017 Guarantors of Brain Travel Grant funding the attendance at the 2013 (GBP 800), 2015 (GBP 500) and 2017 (GBP 800) ISMRM meetings.
- 2012-2015 ISMRM Trainee Stipend supporting attendance at the annual meeting (yearly).

#### INVITED ORAL COMMUNICATIONS



UCL 2022b	<i>"Data-driven, model-free, deep learning approach for quantitative MRI protocol design".</i> <b>Microstructure Imaging Meets Machine Learning</b> (MIML) workshop, University College London, London (UK), 13/05/2022.
ISMRM 2022	<i>"Modeling diffusion in cancer and body".</i> <b>Educational session: "Diffusion"</b> , 2022 annual meeting of the International Society for Magnetic Resonance in Medicine (ISMRM), London (UK), 07/05/2022.
UCL 2022a	<i>"Diffusion MRI signal cumulants and hepatocyte microstructure at fixed diffusion time: Insights from simulations, 9.4T imaging, and histology".</i> Centre for Medical Image Computing qMRI interest group, University College London, London (UK), virtual talk 24/03/2022.
UniTre 2022	<i>"Innovating Magnetic Resonance Imaging to fight diseases".</i> Università della Terza Età (UniTre), Mòguru, Italy, 12/04/2021 (talk in Sardinian language).
UCL 2021	<i>"Diffusion-relaxation microstructural MRI of the liver for application in oncology".</i> Centre for Medical Image Computing qMRI interest group, University College London, London (UK), virtual talk 22/04/2021.
BCNatal 2021	<i>"Diffusion-relaxation microstructural MRI of the liver for application in oncology: initial experience".</i> BCNatal Fetal Medicine Research Centre virtual seminar, Hospital Clinic and Sant Joan de Déu, Universitat de Barcelona, Barcelona (Spain) 18/01/2021.
BIC ISMRM 2020	<i>"SARDU-Net: a new method for model-free, data-driven experiment design in qMRI".</i> ISMRM British and Irish Chapter post-grad virtual meeting, 17/09/2020.
University of Verona 2019	<i>"Diffusion MRI data harmonisation".</i> 2019 School on Brain Connectomics, University of Verona (Italy), 24/09/2019.
UCL workshop 2019	<i>"Insight on spinal cord microstructure from time-dependent diffusion".</i> Spinal cord MRI workshop, UCL (UK), 21/01/2019.
ISMRM Italian Chapter 2018	<i>"Axonal dispersion from diffusion MRI: a new marker of microstructural damage".</i> Italian Association for Magnetic Res. in Medicine, Padua (Italy), 10/05/2018.
King's College London 2018	<i>"Microstructural imaging of the human spinal cord: insights from in vivo and ex vivo data".</i> Inst. of Psychiatry, Psychology and Neuroscience, KCL (UK) 19/03/2018.
UCL workshop 2018	<i>"Histological validation of neurite dispersion from diffusion MRI in MS".</i> Mult. sclerosis: translating eng. innovation into the clinic, UCL (UK) 31/01/2018.
Polytechnique Montreal 2017	<i>"Advanced microstructural imaging in the human spinal cord".</i> NeuroPoly Lab seminar, Montreal (Canada), 16/11/2017.
New York University 2017	<i>"Quantitative MRI of the spinal cord: challenges, feasibility and future perspectives".</i> Department of Radiology, NY City (USA), 13/10/2017.
University of Cagliari 2015	<i>"Advanced diffusion-weighted MRI of the human spinal cord: feasibility and future directions in multiple sclerosis".</i> Fac. of Engineering, Cagliari (Italy), 24/07/2015.
Spinal Cord MRI Workshop 2015	<i>"Histological validation of quantitative MRI methods".</i> 2nd Spinal Cord MRI Workshop, Toronto (Canada), 06/06/2015.

#### INVITED CONFERENCE CHAIRING

ISMRM 2022	<b>Moderator</b> of oral "power pitch" scientific section <b>"Motion correction"</b> , 10/05/2022, 2022 annual meeting of the International Society for Magnetic Resonance in Medicine (ISMRM).
ISMRM 2021	<b>Moderator</b> of oral scientific section <b>"Microstructure: Modelling Gray &amp; White Matter Diffusion"</b> , 19/05/2021, 2021 virtual annual meeting of the ISMRM.

ISMRM 2021

**Facilitator** of poster session “Diffusion Applications: Brain & Spine”, 18/05/2021, 2021 virtual annual meeting of the ISMRM.

## ORGANISATION OF SCIENTIFIC EVENTS

MIS ISMRM 2021

**Member Initiated Symposium** at ISMRM 2020: “Looking Beyond Axons: Imaging the Immune System in White Matter”, 19/05/2021. **Organisers:** Cohen-Adad J, Grussu F, Kolind S.

WMSG ISMRM 2019

**ISMRM White Matter Study Group Virtual meeting:** “Myelin Imaging in the Spinal Cord at High Field”, 27/06/2019, joint meeting with the High-field Study Group. **Organiser:** Grussu F. **Chair:** Cohen-Adad J.

MIS ISMRM 2019

**Member Initiated Symposium** at ISMRM 2019: “Completing the Circle: Moving Multi-Parametric Neuro MRI into Clinical Practice and Trials”, 15/05/2019. **Organisers:** Vrenken H, Cohen-Adad J, Grussu F.

CDMRI 2018

**MICCAI Workshop: Computational Diffusion MRI (CDMRI) 2018** (Granada, scheduled for 20/09/2018). **Organisers:** Bonet-Carne E (UCL), Grussu F (UCL), Ning L (Harvard), Sepehrband F (USC), Tax C (Cardiff University).

MUSHAC Challenge 2018

**MICCAI Challenge: Multi-shell dMRI harmonisation and enhancement** (MUSHAC, part of CDMRI 2018). **Organisers:** Bonet-Carne E (UCL), Grussu F (UCL), Ning L (Harvard), Sepehrband F (USC), Tax C (Cardiff University).

CDMRI 2017

**MICCAI Workshop: Computational Diffusion MRI (CDMRI) 2017** (Quebec City, 10/09/2017). **Organisers:** Grussu F (UCL), Kaden E (UCL), Ning L (Harvard), Tax C (Cardiff University), Veraart J (NYU).

Data Harmonisation Challenge 2017

**MICCAI Challenge: Diffusion MRI data harmonisation** (part of CDMRI 2017). **Organisers:** Grussu F (UCL), Kaden E (UCL), Ning L (Harvard), Tax C (Cardiff University), Veraart J (NYU).

Spinal Cord MRI Workshop 2016

**Workshop:** 3rd Spinal Cord MRI Workshop, Singapore, 13/05/2016. **Organisers:** Cohen-Adad J & De Leener B (Polytechnique Montreal), Grussu F & Prados F (UCL), Summers P (University of Modena).

Spinal Cord Grey Matter Segmentation Challenge 2016

**Challenge: Grey Matter Segmentation: What's there and What's next?** (part of SC MRI Workshop 2016). **Organisers:** Cohen-Adad J, Prados F, Landman B, Wheeler-Kingshott C, Summers P, Dupont S, Yiannakas M, Smith S, Gergely D, DeLeener B, Grussu F.

## SCIENTIFIC PEER REVIEWING

03/2021-09/2022

Invited Review Editor for **Brain Imaging Methods**, Frontiers in Neuroscience.

2016-present

Reviewer for Bipolar Disorders; 2019, 2020 MICCAI CDMRI workshop; Functional Neurology; Frontiers; Human Brain Mapping; Journal of Magnetic Resonance Imaging; Journal of Neuroscience Methods; Magnetic Resonance in Medicine; NeuroImage; IEEE Transactions on Medical Imaging; NMR in Biomedicine; 2019, 2021 and 2022 ISMRM annual meetings; 2021 ISMRM BIC-Iberian Chapter post-grad meeting; 2021 Iberian Chapter annual meeting.

## PROJECT SUPERVISION

PhD, VHIO and UB 2022-26

**Project co-supervision:** “Microstructural MRI of cancer informed by histology” (preliminary title). **Degree:** PhD programme in Biomedicine (research line in biomedical engineering), Universitat de Barcelona (UB; Barcelona, Spain). Project carried out at the Vall d’Hebron Institute of Oncology (VHIO), Barcelona (Spain). **Supervised in:** 2022-2026 (ongoing).

PhD, VHIO and UB 2022-25

**Project co-supervision:** “An MRI engine for tumour vascularisation mapping in



*cancer*” (preliminary title). **Degree:** PhD programme in Biomedicine (research line in biomedical engineering), Universitat de Barcelona (UB; Barcelona, Spain). Project carried out at VHIO, Barcelona (Spain). **Supervised in:** 2022-2025 (ongoing).

MEng, VHIO and  
TU Delft 2022/23

**Project co-supervision:** “Unraveling tumor microstructure with quantitative MRI”. **Degree:** Master’s in “Biomedical Engineering”, Delft University of Technology (TU Delft), (Delft, The Netherlands). Project carried out at VHIO, Barcelona (Spain). **Supervised in:** 2022/2023 (ongoing).

MRes, UCL  
2018/19

**Project co-supervision:** “Improving the differential diagnosis between Neuromyelitis Optica Spectrum Disorder and Multiple Sclerosis using MRI”. **Degree:** MRes in “Clinical Neuroscience”, Institute of Neurology, University College London (UCL, London, UK). **Supervised in:** 2018/2019.

MSc, UCL  
2018/19

**Project co-supervision:** “Evaluation of quantitative MRI indices reproducibility across scanner upgrade”. **Degree:** MSc in “Advanced neuroimaging”, Institute of Neurology, UCL (London, UK). **Supervised in:** 2018/2019

MSc, UCL  
2017/18

**Project co-supervision:** “Investigation of multi-component  $T_1$  relaxation at 3 Tesla”. **Degree:** MSc in “Advanced neuroimaging”, Institute of Neurology, UCL (London, UK). **Supervised in:** 2017/2018.

MSc, UCL  
2015/16

**Project co-supervision:** “Evaluation of strategies for co-registration between quantitative and anatomical magnetic resonance images of the human spinal cord”. **Degree:** MSc in “Advanced neuroimaging”, Institute of Neurology, UCL (London, UK). **Supervised in:** 2015/2016.

#### TEACHING EXPERIENCE

UCL Lecture

**Lecture:** “Image optimisation: SNR, CNR and sources of artifacts”. **Degree:** MSc in “Advanced neuroimaging”, Institute of Neurology, UCL (London, UK). **Conveyed:** 2019/20, 2017/18, 2016/17, 2015/16.

UCL Workshop

**Workshop:** Hands-on with a portable MRI scanner ([link](#) to device). **Degree:** MSc in “Advanced neuroimaging”, Institute of Neurology, UCL (London, UK). **Conveyed:** 2017/18, 2016/17, 2015/16.

UniPV Workshop

**Workshop:** “Model fitting for quantitative MRI”. **Degree:** MEng in “Biomedical Engineering”, University of Pavia (Pavia, Italy). **Conveyed:** 2016/17.

UCL Lecture

**Lecture:** “Magnetic resonance image formation”. **Degree:** MSc in “Advanced biomedical imaging”, Centre for Advanced Biomedical Imaging, UCL (London, UK). **Conveyed:** 2015/16.

#### OPEN SCIENCE: RELEASED REPOSITORIES

Repositories freely available through GitHub (<http://fragrussu.github.io>).

2022

**MChepato:** Code and synthetic data for [Grussu et al, MRM 2022](#) ([link](#)).

2020

**qMRI-Net:** MRI signal model fitting based on artificial intelligence ([link](#)).

2020

**SARDU-Net:** data-driven, model-free quantitative MRI protocol design ([link](#)).

2019

**MyRelax:** tools for myelin and relaxation MRI analyses ([link](#)).

2019

**MRIttools:** tools for handling and managing research MRI scans ([link](#)).

2016

**StructureTensorToolbox:** tools for analysis of 2D histological images ([link](#)).

#### PUBLIC ENGAGEMENT

- 2022 *"Demostración de análisis avanzado de imágenes por resonancia magnética y datos co-localizados de microscopía"* (*"Demonstration of advanced analysis of MR images and co-localised microscopy"*) at the Science Fair, 2022 European Researchers' Night (30/09/2022), CosmoCaixa, Barcelona (Spain).
- 2022 *"Innovating Magnetic Resonance Imaging to fight diseases"*. Università della Terza Età (UniTre), Mòguru, Italy (12/04/2021). Talk given to a general audience in Sardinian language.
- 2017 *"Why to get vaccinated and avoid misinformation: the scientific method in modern medicine"*. Event for a general audience in Italian and Sardinian, Mòguru, Italy (17/08/2017). Organisers: Grussu F, Tur C, Coccollone E, Broccia S.
- 2015 Participation at *MS Frontiers 2015* (29-30/06/2015), organised by the UK Multiple Sclerosis Society and bringing together researchers and Multiple Sclerosis patients.
- 2013 UCL stall at *Science Uncovered*, 2013 European Researcher's Night (28/09/2013), London Science Museum.

#### CONFERENCE & WORKSHOP PROCEEDINGS: FIRST AUTHORSHIP

- ISMRM 2022 *"Histological correlates of DR-HIGADOS microstructural metrics in the mouse and human liver"*. Grussu F et al. International Society for Magnetic Resonance in Medicine (ISMRM) 2022 (power-pitch presentation).
- ISMRM 2022 *"Inter-scanner reproducibility and variability assessment of advanced liver diffusion MRI metrics"*. Grussu F et al. ISMRM 2022 (d-poster presentation).
- ISMRM 2021 *"DR-HIGADOS: a new diffusion-relaxation framework for clinically feasible microstructural imaging of the liver"*. Grussu F et al. ISMRM 2021 (**oral presentation, Magna cum Laude** award).
- ISMRM 2021 *"Investigating the relationship between diffusion MRI signal cumulants and hepatocyte microstructure at fixed diffusion time"*. Grussu F et al. International Society for Magnetic Resonance in Medicine (ISMRM) 2021 (**d-poster presentation**).
- ISMRM 2020 *"SARDU-Net: a new method for model-free, data-driven experiment design in quantitative MRI"*. Grussu F et al. ISMRM 2020 (**power-pitch presentation, Magna cum Laude** award).
- ISMRM 2019 *"Clinically viable g-ratio imaging with unified readout at 3T: evaluation and comparison"*. Grussu F et al. ISMRM 2019 (e-poster presentation).
- ISMRM 2018 *"Magnitude versus complex-valued images for spinal cord diffusion MRI: which one is best?"*. Grussu F et al. ISMRM 2018 (**oral presentation, Magna cum Laude** award).
- ISMRM 2018 *"A unified signal readout improves denoising of multi-modal spinal cord MRI"*. Grussu F et al. ISMRM 2018 (poster presentation).
- ISMRM 2017 *"Origin of the time dependence of the diffusion-weighted signal in spinal cord white matter"*. Grussu F et al. ISMRM 2017 (**oral presentation**).
- ISMRM 2017 *"A unified signal readout for reproducible multimodal characterisation of brain microstructure"*. Grussu F et al. ISMRM 2017 (e-poster presentation, **Magna cum Laude** award, finalist at the Diffusion Study Group competition).
- Brain School 2017 *"Whole-brain macromolecular tissue volume mapping: A comparison of imaging readouts at 3 Tesla"*. Grussu F et al. School of Brain Cells and Circuits "Camillo Golgi". Frontiers ISBN 978-288945-584-3 (**poster presentation**).
- ISMRM Scientific Workshop 2016 *"Optimal histological quantification of neurite orientation dispersion for the validation*

*of diffusion MRI*". ISMRM Scientific workshop "Breaking the barriers of diffusion MRI" (poster presentation + Power Pitch).

- ISMRM 2016 "Axon diameter distribution influences diffusion-derived axonal density estimation in the human spinal cord: in silico and in vivo evidence". Grussu F et al. ISMRM 2016 (poster presentation, finalist at the Diffusion Study Group competition).
- ECTRIMS 2015 "Quantitative histological validation of NODDI MRI indices of neurite morphology in multiple sclerosis spinal cord". Grussu F et al. European Committee for Research and Treatment of Multiple Sclerosis (ECTRIMS) 2015 (poster presentation, short-listed for poster prize competition).
- MS Frontiers 2015 "Histological correlates of NODDI in the multiple sclerosis spinal cord". Grussu F et al. MS Frontiers 2015, annual scientific meeting of the UK Multiple Sclerosis Society (**oral and poster presentation**).
- ISMRM 2015 "Quantitative histological correlates of NODDI orientation dispersion estimates in the human spinal cord". Grussu F et al. ISMRM 2015 (**oral presentation, Magna cum Laude** award).
- ISMRM 2015 "Histological metrics confirm microstructural characteristics of NODDI indices in multiple sclerosis spinal cord". Grussu F et al. ISMRM 2015 (**oral presentation, Magna cum Laude** award).
- British Chapter of the ISMRM 2014 "Characterisation of single-shell NODDI fitting in spinal cord grey and white matter". Grussu F et al. British Chapter of the ISMRM 2014 (poster presentation).
- ISMRM 2014 "Neurite orientation dispersion and density imaging of the cervical cord in vivo". Grussu F et al. ISMRM 2014 (poster presentation).
- ISMRM 2014 "Single-shell diffusion MRI NODDI with in vivo cervical cord data". Grussu F et al. ISMRM 2014 (poster presentation).
- ISMRM Scientific Workshop 2013 "In vivo estimation of neuronal orientation dispersion and density of the human spinal cord". ISMRM Scientific workshop "Multiple sclerosis as a whole-brain disease" (**oral presentation**).
- ISMRM 2013 "Towards spinal cord microstructure mapping with the neurite orientation dispersion and density imaging". Grussu F et al. ISMRM 2013 (poster presentation, finalist at the White Matter Study Group poster competition).

#### CONFERENCE & WORKSHOP PROCEEDINGS: SENIOR AUTHORSHIP

- ISMRM Scientific Workshop 2022 "A systematic comparison of machine learning approaches for diffusion-relaxation MRI protocol enhancement in advanced solid tumours". Macarro C, ..., and Grussu F. ISMRM Workshop on Diffusion MRI From Research to Clinic 2022 (poster presentation).
- ISMRM 2019 "Sensitivity of NODDI and two-compartment SMT parameter maps in multiple sclerosis". Johnson D, ..., and Grussu F. ISMRM 2019 (e-poster presentation).

#### CONFERENCE & WORKSHOP PROCEEDINGS: CO-AUTHORSHIP

- ISMRM Scientific Workshop 2022 "Decoding liver intra-tumour heterogeneity with co-localized CT and multi-parametric MRI". Prior Palomares O, Grussu F, et al. ISMRM Workshop on Diffusion MRI From Research to Clinic 2022 (oral presentation).
- ISMRM Scientific Workshop 2022 "Disentangling intracellular and extracellular contributions to Apparent Diffusion Coefficients in bone metastases using histology". Garcia-Ruiz A, et al. ISMRM Workshop on Diffusion MRI From Research to Clinic 2022 (oral presentation).
- ISMRM 2022 "A data-driven variability assessment of brain diffusion MRI preprocessing pipelines". Veraart J et al. ISMRM 2022 (online Gather.town pitch presentation).

- ISMRM 2022 *"Reduced field-of-view multi-shell DWI of the sciatic nerve: A reproducibility assessment"*. Boonsuth R et al. ISMRM 2022 (d-poster presentation).
- ISMRM 2022 *"The effect of echo train length and TE range on multi-echo quantitative susceptibility mapping"*. Ricciardi A et al. ISMRM 2022 (d-poster presentation).
- ISMRM 2022 *"Deep-learning-informed parameter estimation improves reliability of spinal cord diffusion MRI"*. Gong T et al. ISMRM 2022 (oral presentation).
- ISMRM 2022 *"Deep learning voxelwise classification of primary central nervous system lymphoma using DSC-PWI normalized time-intensity curves"*. Garcia-Ruiz A et al. ISMRM 2022 (d-poster presentation).
- ISMRM 2021 *"Quantitative multi-modal MRI shows correlations between lesion iron deposition and neuro-axonal density in progressive multiple sclerosis"*. Collorone S et al. ISMRM 2021 (d-poster presentation).
- ISMRM 2021 *"Advanced magnetic resonance imaging to study brain tissue alterations in people infected with SARS-COV-2"*. Gandini Wheeler-Kingshott CAM et al. ISMRM 2021 (d-poster presentation).
- ISMRM 2021 *"Assessing proximal and distal peripheral nerve damage in relapsing-remitting multiple sclerosis using magnetisation transfer ratio"*. Yiannakas M et al. ISMRM 2021 (d-poster presentation).
- ISMRM 2021 *"Associations between cervical cord sodium concentration, neuronal density and macromolecular tissue volume in spinal cord injury"*. Solanky B et al. ISMRM 2021 (oral presentation).
- ISMRM 2021 *"Evaluation of quantitative MRI parameters reproducibility across a major scanner upgrade: spinal cord diffusion weighted (DW) imaging"*. Boonsuth R et al. ISMRM 2021 (d-poster presentation).
- ISMRM 2020 *"Acquiring and predicting MUlti-dimensional Diffusion (MUDI) data: an open challenge"*. Pizzolato M et al. ISMRM 2020 (oral presentation).
- ISMRM 2020 *"QuaSI-MTR (qualitative scans for imaging MTR): deep-learned MTR from routine scans using U-nets"*. Ricciardi A et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"Co-electrospun spinal cord phantom for diffusion MRI"*. Zhou F et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"A pilot in vivo investigation of peripheral nerve damage in multiple sclerosis using magnetisation transfer ratio"*. Yiannakas M et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"Reduced field-of-view multi-shell diffusion-weighted imaging of the sciatic nerve: Application to multiple sclerosis"*. Yiannakas M et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"New potential MRI markers of glial scarring and tissue damage in multiple sclerosis spinal cord pathology using diffusion MRI"*. Palombo M et al. ISMRM 2020 (power-pitch presentation).
- ISMRM 2020 *"SENSE reconstruction with simultaneous 2D phase correction and channel-wise noise removal (SPECTRE)"*. Powell E et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"Evaluation of quantitative MRI parameters reproducibility across a major scanner upgrade: the example of T<sub>1</sub>"*. Boonsuth R et al. ISMRM 2020 (d-poster presentation).
- ISMRM 2020 *"Microstructure changes in secondary progressive multiple sclerosis measured using advanced quantitative MRI of the brain and spine"*. Battiston M et al. ISMRM 2020 (d-poster presentation).

ISMRM 2020	<i>"Shape and Spatial Pattern Analysis through Covariance-based Estimations of MS lesions: the SSPACE-MS study"</i> . Tur C et al. ISMRM 2020 (d-poster presentation).
ISMRM 2020	<i>"Quantitative MRI of the spinal cord: reproducibility and normative values across 40 sites"</i> . Alonso-Ortiz E L et al. ISMRM 2020 (oral presentation).
ISMRM 2019	<i>"Cross-scanner and cross-protocol harmonisation of multi-shell diffusion MRI data: open challenge and evaluation results"</i> . Ning L et al. ISMRM 2019 (oral presentation).
ISMRM 2019	<i>"Bound Pool Fraction mapping via steady-state MT saturation using single-shot EPI"</i> . Battiston M et al. ISMRM 2019 (oral presentation).
ISMRM 2019	<i>"Myelin-sensitive indices in multiple sclerosis: the unseen qualities of qualitative clinical MRI"</i> . Ricciardi A et al. ISMRM 2019 (e-poster presentation).
ECTRIMS 2018	<i>"Neurite Orientation Dispersion and Density Imaging (NODDI) and <math>^{23}\text{Na}</math> MRI in clinically isolated syndrome"</i> . Collorone S et al. ECTRIMS 2018 (poster presentation).
ISMRM 2018	<i>"Cross-vendor and cross-protocol harmonisation of diffusion MRI data: a comparative study"</i> . Tax C et al. ISMRM 2018 (oral presentation).
ISMRM 2018	<i>"Consensus acquisition protocol for quantitative MRI of the cervical spinal cord at 3T"</i> . Alley S et al. ISMRM 2018 (oral presentation).
ISMRM 2018	<i>"Biophysically meaningful MRI features for accurate classification of multiple sclerosis phenotypes"</i> . Ricciardi A et al. ISMRM 2018 (poster presentation).
ISMRM 2018	<i>"Acceleration strategies for whole brain quantitative Magnetization Transfer Imaging"</i> . Battiston M et al. ISMRM 2018 (e-poster presentation).
ISMRM 2018	<i>"Are we seeing any better? A comprehensive comparison of myelin biomarkers in the healthy and multiple sclerosis post mortem spinal cord"</i> . Battiston M et al. ISMRM 2018 (oral presentation).
ECTRIMS 2017	<i>"Brain network organisation and cognitive performance in the clinically isolated syndromes"</i> . Ooi J et al. ECTRIMS 2017 (poster presentation).
ECTRIMS 2017	<i>"Application of Neurite Orientation Dispersion and Density Imaging (NODDI) in clinically isolated syndrome (CIS)"</i> . Collorone S et al. ECTRIMS 2017 (poster presentation).
Frontiers 2017	<i>"Investigation of cerebellar microstructure with two-compartment Spherical Mean Technique and <math>T_{1w}/T_{2w}</math> myelin weighting"</i> . Savini G et al. School of Brain Cells & Circuits "Camillo Golgi" (poster presentation; abstract published in Frontiers).
ISMRM 2017	<i>"A ranking of pipelines for optimal co-registration of anatomical and diffusion weighted images of the cervical spinal cord"</i> . Alley S et al. ISMRM 2017 (accepted for Power Pitch oral presentation).
ISMRM 2017	<i>"Diffusion anisotropy in breast cancer tissue corresponds to spatial patterns of collagen alignment from histology"</i> . Bailey C et al. ISMRM 2017 (accepted for Power Pitch oral presentation).
ISMRM 2017	<i>"Boundary shift integral to compute brain and cervical spinal cord longitudinal atrophy on the same 3D <math>T_1</math> brain images in multiple sclerosis"</i> . Prados F et al. ISMRM 2017 (accepted for oral presentation).
ISMRM 2017	<i>"Impact of acquisition strategies and spherical deconvolution algorithms on brain connectivity mapping in early multiple sclerosis"</i> . Tur C et al. ISMRM 2017 (accepted for oral presentation).
ISMRM 2017	<i>"Quantifying Reconstruction Uncertainty with Image Quality Transfer"</i> . Tanno R et al. ISMRM 2017 (accepted for poster presentation).



ISMRM 2017	<i>"Characterisation of cerebellar microstructure with Spherical Mean Technique". Savini G et al. ISMRM 2017 (accepted for oral presentation).</i>
ISMRM 2017	<i>"Optimal framework for quantitative magnetization transfer imaging of small structures". Battiston M et al. ISMRM 2017 (accepted for oral presentation).</i>
ISMRM 2017	<i>"Reproducible fast T<sub>1</sub> mapping of the human cervical spinal cord in vivo". Battiston M et al. ISMRM 2017 (accepted for poster presentation).</i>
ECTRIMS 2016	<i>"Computing spinal cord atrophy using the boundary shift integral: a more powerful outcome measure for clinical trials?". Prados F et al. ECTRIMS 2016 (poster presentation).</i>
ECTRIMS 2016	<i>"Neurite orientation dispersion and density imaging (NODDI) of the spinal cord in relapsing remitting multiple sclerosis". Tona F et al. ECTRIMS 2016 (poster presentation).</i>
ECTRIMS 2016	<i>"Neurite orientation dispersion and density imaging (NODDI) reflects early microstructural brain tissue changes in clinically isolated syndrome (CIS)". Collorone S et al. ECTRIMS 2016 (poster presentation).</i>
ECTRIMS 2016	<i>"No differences in spinal cord DTI abnormalities between neuromyelitis optica spectrum disorder and multiple sclerosis". Cortese R et al. ECTRIMS 2016 (poster presentation).</i>
ISMRM 2016	<i>"In vivo quantitative magnetisation transfer in the cervical spinal cord using reduced field-of-view imaging: a feasibility study". Battiston M et al. ISMRM 2016 (oral presentation).</i>
ISMRM 2016	<i>"Reduced field-of-view diffusion-weighted imaging of the lumbosacral enlargement: a pilot in vivo study of the healthy spinal cord using a clinical 3T MR system". Yiannakas M et al. ISMRM 2016 (e-poster presentation).</i>
ISMRM 2016	<i>"Atrophy computation in the spinal cord using the boundary shift integral". Prados F et al. ISMRM 2016 (oral presentation).</i>
AAN 2016	<i>"No Differences in spinal cord white and grey matter diffusion abnormalities between neuromyelitis optica spectrum disorder and multiple sclerosis". Cortese R et al. American Academy of Neurology (AAN) 2016 (poster presentation).</i>
AAN 2016	<i>"Neurite orientation dispersion and density imaging (NODDI) at the onset of clinically isolated syndrome (CIS): new insights in the early microstructural brain tissue changes". Collorone S et al. AAN 2016 (dual presentation).</i>
ISMRM 2015	<i>"Combined sodium-NODDI: towards quantitative in vivo intracellular and intraneurite sodium measures at 3T". Solanky B et al. ISMRM 2015 (e-poster presentation).</i>
ISMRM 2014	<i>"An investigation of brain neurite density and dispersion in multiple sclerosis using single shell diffusion imaging". Magnollay L et al. ISMRM 2014 (poster presentation).</i>
ECTRIMS 2013	<i>"Application of neurite orientation dispersion and density imaging (NODDI) to relapsing remitting multiple sclerosis (RRMS)". Magnollay L et al. ECTRIMS 2013 (poster presentation).</i>
ECTRIMS 2013	<i>"Neurite orientation dispersion and density imaging in the multiple sclerosis spinal cord". Kearney H et al. ECTRIMS 2013 (e-poster presentation).</i>
NCM 2012	<i>"Algorithms for shaping the dynamics of a bidirectional neural interface". Semprini M et al. Society for the Neural Control of Movement (NCM) 2012 (poster presentation).</i>