

# Alessandro Daducci, PhD

ASSOCIATE PROFESSOR  
Computer Science department  
University of Verona, Italy

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## Summary

- 60 journal papers (10 as first author), 50+ conference papers, 2774 citations, h-index 25.
- 7 international workshops/schools organization, many international active collaborations.
- 5 PhD students active supervision (several B.Sc. and M.Sc. students).
- € 475K research grants as main applicant.
- € 1.1M research grants as co-applicant.

## Research

### Research interests

2011 – PRESENT	Diffusion MRI: application of compressed-sensing for accelerating data acquisition, improving local reconstruction quality and global tractography.
2009 – PRESENT	Diffusion MRI in clinical neuroscience: fiber-tracking and brain connectivity analysis. Structural MRI in clinical neuroscience: quantitative T1, T2* and MTR mapping.
2006 – 2009	Structural MRI in pre-clinical neuroscience: image acquisition, image processing and data analysis.

### Research experience

NOV 2016 – DEC 2017	<b>Invited researcher at the Radiology Department, University Hospital Center (CHUV), Switzerland</b>
FEB 2016 – OCT 2016	<b>Chargé de recherche at the Radiology Department, University Hospital Center (CHUV), Switzerland</b>
FEB 2015 – JAN 2016	<b>Post-doctoral researcher at the Sherbrooke Connectivity Imaging Lab (SCIL), University of Sherbrooke, Quebec, Canada</b> MAIN PROJECTS: convex optimization modeling for microstructure imaging, microstructure informed tractography, improving tractography in superficial white matter, microstructure-driven tractography. SUPERVISOR: Prof. Maxime Descoteaux
JUL 2014 – JAN 2015	<b>Senior post-doctoral researcher at the Radiology Department, University Hospital Center (CHUV), Switzerland</b> MAIN PROJECTS: convex optimization modeling for microstructure imaging, microstructure informed tractography. SUPERVISOR: Prof. Jean-Philippe Thiran
MAY 2010 – JUN 2014	<b>Post-doctoral researcher at the Signal Processing Institute, Swiss Federal Institute of Technology (EPFL), Switzerland</b> MAIN PROJECTS: diffusion MRI acquisition and reconstruction, fiber-tracking and applications to clinical studies. SUPERVISOR: Prof. Jean-Philippe Thiran

DEC 2010 – AUG 2012	<p><b>Post-doctoral researcher at the Advanced Clinical Imaging Technology group, Swiss Federal Institute of Technology (EPFL), Switzerland</b></p> <p>MAIN PROJECTS: structural MRI, quantitative T1, T2* and MTR mapping and applications to clinical studies.</p> <p>SUPERVISOR: Dr. Gunnar Krueger</p>
APR 2009 – APR 2010	<p><b>Research fellowship from the University of Verona, Italy (≈ €18K)</b></p> <p>PROJECT: "Definition of non-invasive methodologies for iron detection in biological tissues".</p>
APR 2009 – DEC 2009	<p><b>Internship at the Signal Processing institute of the Swiss Federal Institute of Technology (EPFL), Switzerland</b></p> <p>PROJECT: "Post-stroke plasticity characterization with Diffusion Spectrum MRI".</p> <p>SUPERVISOR: Prof. Jean-Philippe Thiran</p>
AUG 2007 – APR 2009	<p><b>Research fellowship from the University of Verona, Italy (≈ €30K)</b></p> <p>PROJECT: "Morphometric, MRI and optics images co-registration".</p>
NOV 2006 – JUL 2007	<p><b>Scholarship from the University of Verona, Italy (≈ €9K)</b></p> <p>PROJECT: "Analysis of images acquired using experimental MRI contrast agents".</p>
MAY 2006 – OCT 2006	<p><b>Scholarship from the University of Verona, Italy (≈ €6K)</b></p> <p>PROJECT: "Functional neuroimaging techniques for preclinical research".</p>
MAR 2006 – APR 2006	<p><b>Internship at the MRI laboratory of the University of Verona, Italy</b></p> <p>PROJECT: "Implementation of an MRI acquisition sequence for Chemical Shift Imaging to separate fat/water signals".</p> <p>SUPERVISOR: Prof. Pasquina Marzola</p>

### Organization of workshops/conferences

JUN 2018	ORGANIZING COMMITTEE, workshop on " <a href="#">Axon diameter mapping with dMRI</a> ", that took place in Paris (France) on June 22 <sup>nd</sup> , 2018.
JUN 2018	ORGANIZING COMMITTEE, member-initiated symposium on " <a href="#">Non-invasive axon diameter mapping: So fascinating, so challenging and so many questions</a> ", that took place in Paris (France) on June 18 <sup>th</sup> , 2018 in the context of the International Society for Magnetic Resonance in Medicine (ISMRM 2018).
OCT 2017	ORGANIZING COMMITTEE, " <a href="#">Summer school on Brain Connectomics</a> ", that took place in Verona (Italy) from 9 <sup>th</sup> to 13 <sup>th</sup> October 2017.
JUN 2015	ORGANIZING COMMITTEE, " <a href="#">ISMRM 2015 Tractography Challenge</a> ", that took place in Toronto (Canada) on June 1 <sup>st</sup> , 2015 in the context of the International Society for Magnetic Resonance in Medicine (ISMRM 2015).
MAY 2014	ORGANIZING COMMITTEE, " <a href="#">Verona Diffusion Workshop</a> ", that took place in Verona (Italy) on May 16 <sup>th</sup> , 2014.
APR 2013	ORGANIZING COMMITTEE AND CHAIR, workshop on " <a href="#">high angular resolution diffusion MR imaging (HARDI) reconstruction techniques</a> ", that took place in San Francisco (USA) on April 7 <sup>th</sup> , 2013 in the context of the IEEE International Symposium on Biomedical Imaging (ISBI 2013).
JAN 2013	LOCAL ORGANIZING COMMITTEE, " <a href="#">Biomedical and Astronomical Signal Processing (BASP) frontiers</a> " workshop, that took place in Villars-sur-Ollon (Switzerland) from January 27 <sup>th</sup> to 1 <sup>st</sup> February 2013.
MAY 2012	ORGANIZING COMMITTEE AND CHAIR, workshop on " <a href="#">high angular resolution diffusion MR imaging (HARDI) reconstruction techniques</a> ", that took place in Barcelona (Spain) on May 2 <sup>nd</sup> , 2012 in the context of the IEEE International Symposium on Biomedical Imaging (ISBI 2012).

SEP 2011 | LOCAL ORGANIZING COMMITTEE, international "[Biomedical and Astronomical Signal Processing \(BASP\) frontiers](#)" workshop, that took place in Villars-sur-Ollon (Switzerland) from 4<sup>th</sup> to 9<sup>th</sup> September 2011.

## Publications

60 journal papers (10 as first author), 50+ conference papers, 2774 citations, h-index 25.  
For the full list of publications, please see: [scholar.google.com](https://scholar.google.com)

## Funding

### As principal investigator

- 2019 | BRAIN RESEARCH FOUNDATION VERONA  
"Development and validation of novel methods for the joint modeling of structural and functional brain connectivity"  
Daducci A  
≈ EUR 12 000 (over 1 year)
- 2016 | COMPUTER SCIENCE DEPARTMENT, UNIVERSITY OF VERONA  
"Towards quantitative and biologically oriented connectivity analyses with multi-contrast MRI"  
Daducci A, Thiran J-P, Inglese M  
≈ EUR 76 000 (over 2 years)
- FACULTÉ DE BIOLOGIE ET DE MÉDECINE, UNIVERSITY OF LAUSANNE  
"Development of advanced biophysical tissue-models for multi-contrast MRI for the microstructural characterization of axonal damage using a murine model of multiple sclerosis"  
Daducci A, Pot C, Kunz N  
≈ EUR 187 000 (over 2 years)
- THE ITALIAN MINISTRY OF UNIVERSITY AND RESEARCH  
Rita Levi Montalcini program for young researchers  
Daducci A  
≈ EUR 200 000 (over 3 years)

### As co-investigator

- 2019 | QUEBEC BIO-IMAGING NETWORK  
"Microstructure-informed tractography: using orientation-specific T1 maps to inform tractography in areas of crossing fibres"  
Tardif C, Descoteaux M, Pike B, Daducci A  
≈ EUR 12 000 (over 1 year)
- 2016 | AUSTRALIAN RESEARCH COUNCIL, DISCOVERY PROJECTS  
"Exploring Brain Structure: Advancing Diffusion Magnetic Resonance Imaging using Spherical Signal Processing"  
Kennedy R, Sadeghi P, Daducci A  
≈ EUR 265 000 (over 3 years)
- 2014 | SWISS NATIONAL SCIENCE FOUNDATION  
"Towards micro-structure-based tractography for quantitative brain connectivity analysis"  
Thiran JP, Daducci A  
≈ EUR 365 000 (over 3 years)
- SWISS NATIONAL SCIENCE FOUNDATION  
"Quantitative characterization of the connectome in the progression of psychosis"  
Hagmann P, Conus P, Thiran JP, Daducci A  
≈ EUR 465 000 (over 3 years)

## Education

APR 2010	<b>Ph.D. in "Multimodal imaging in biomedicine" from the University of Verona, Italy</b> THESIS: "Advanced image-processing techniques in Magnetic Resonance Imaging for the investigation of brain pathologies and tumour angiogenesis". SUPERVISORS: Prof. Pasquina Marzola & Prof. Andrea Sbarbati
APR 2006	<b>Academic master in "Biomedical data processing and remote-control in medicine" from the University of Verona, Italy</b> COURSE TOPICS: introduction to imaging modalities, image processing techniques, robotics, data mining etc.
SEP 2004	<b>M.Sc. in Computer Science with full marks (110/110 cum laude) from the University of Verona, Italy</b> THESIS: "Analysis and simulation of a genetic algorithm in the finite population case". SUPERVISOR: Dr. Roberto Posenato

## Short courses

MAY 2008	Advanced course on "Image Registration – 2D, 3D, Rigid and Deformable Scenes" from April 28th to May 16th, 2008. SPEAKER: Prof. Adrien Bartoli, LASMEA laboratory, Clermont-Ferrand, France.
APR 2007	Advanced course "ParaVision Programming Course" from April 16th to 20th, 2007 at Bruker BioSpin GmbH, Germany. COURSE TOPIC: sequence programming for MRI acquisitions.
JUL 2006	Advanced course "Magnetic Resonance for Imaging" from 5th to 7th July, 2006 at Bruker Biospin srl, Italy. COURSE TOPIC: introduction to magnetic resonance imaging and acquisition sequences.

## Skills

LANGUAGES	Italian (mother tongue) English (fluent, written and spoken) French (basic)
PROGRAMMING	C/C++, Matlab, mex, Python, OpenGL, shell scripting, html, PHP, MySQL/PostgreSQL.

## Teaching

2010 – PRESENT	ACTIVE SUPERVISION of 5 PhD students and several M.Sc. students.
2016 – PRESENT	BIOMEDICAL IMAGE PROCESSING (M.SC.), teacher. University of Verona, Italy.
2018 – PRESENT	IMAGE PROCESSING (B.SC.), teacher. University of Verona, Italy.
2009 – 2011	IMAGE PROCESSING, assistant. Swiss Federal Institute of Technology (EPFL), Switzerland.
2009	HUMAN-COMPUTER INTERACTION, teacher and collaborator. University of Verona, Italy.

## Past employment

APR 2005 – APR 2006	<b>Web developer at Sitek s.p.a., Italy</b> MAIN ACTIVITY: development of the company's web corporate portal.
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# List of publications

For a full list of publications, please see here: [scholar.google.com](https://scholar.google.com)

## Peer-Reviewed Journal Articles

- [J1] A. P. Bates, A. **Daducci**, P. Sadeghi, E. Caruyer (2020), "A 4D Basis and Sampling Scheme for the Tensor Encoded Multi-Dimensional Diffusion MRI Signal". *IEEE Signal Process Lett* 27:790–794.
- [J2] S. Coccozza, S. Schiavi, G. Pontillo, M. Battocchio, E. Riccio, S. Caccavallo, C. Russo, T. Di Risi, A. Pisani, A. **Daducci**, A. Brunetti (2020), "Microstructural damage of the cortico-striatal and thalamo-cortical fibers in Fabry disease: a diffusion MRI tractometry study". *Neuroradiology*.
- [J3] M. Deprez, A. Price, D. Christiaens, G. Lockwood Estrin, L. Cordero-Grande, J. Hutter, A. **Daducci**, D. Tournier, M. Rutherford, S. Counsell, M. Bach Cuadra, J. V. Hajnal (2020), "Higher order spherical harmonics reconstruction of fetal diffusion MRI with intensity correction". *IEEE Trans Med Imaging* 39(4):1104–1113.
- [J4] V. Nath, K. Schilling, P. Parvathaneni, A. E. Hainline, Y. Huo, J. A. Blaber, M. Rowe, P. Rodrigues, V. Prckovska, B. Aydogan, W. Sun, Y. Shi, W. Parker, A. A. O. Ismail, R. Verma, R. P. Cabeen, A. W. Toga, A. T. Newton, J. Wasserthal, P. Neher, K. H. Maier-Hein, G. Savini, F. Palesi, E. Kaden, Y. Wu, Y. Feng, J. He, M. Barakovic, D. Romascano, J. Rafael-Pinto, M. Frigo, G. Girard, A. **Daducci**, J.-P. Thiran, M. Paquette, F. M. Rheault, J. Sidhu, C. Lebel, A. Leemans, M. Descoteaux, T. Dyrby, H. Kang, B. A. Landman (2020), "Tractography Reproducibility Challenge with Empirical Data (TraCED): The 2017 ISMRM Diffusion Study Group Challenge". *J Magn Reson Imaging* 51(1):234–249.
- [J5] M. Petracca, S. Schiavi, M. Battocchio, M. M. El Mendili, L. Fleysheer, A. **Daducci**, M. Inglese (2020), "Streamline density and lesion volume reveal a postero–anterior gradient of corpus callosum damage in multiple sclerosis". *Eur J Neurol* 27(6):1076–1082.
- [J6] G. F. Piredda, T. Hilbert, E. J. Canales-Rodríguez, M. Pizzolato, C. Deuster, R. Meuli, J. Pfeuffer, A. **Daducci**, J.-P. Thiran, T. Kober (2020), "Fast and high-resolution myelin water imaging: Accelerating multi-echo GRASE with CAIPIRINHA". *Magn Reson Med* n/a(n/a).
- [J7] F. Rheault, A. De Benedictis, A. **Daducci**, C. Maffei, C. M. W. Tax, D. Romascano, E. Caverzasi, F. C. Morency, F. Corrivetti, F. Pestilli, G. Girard, G. Theaud, I. Zemmoura, J. Hau, K. Glavin, K. M. Jordan, K. Pomiecko, M. Chamberland, M. Barakovic, N. Goyette, P. Poulin, Q. Chenot, S. S. Panesar, S. Sarubbo, L. Petit, M. Descoteaux (2020), "Tractostorm: The what, why, and how of tractography dissection reproducibility". *Hum Brain Mapp* 41(7):1859–1874.
- [J8] D. Romascano, M. Barakovic, J. Patiño-Lopez, T. B. Dyrby, J.-P. Thiran, A. **Daducci** (2020), "ActiveAx<sub>ADD</sub>: towards non-parametric and orientationally invariant axon diameter distribution mapping using PGSE". *Magn Reson Med* 83(6):2322–2330.
- [J9] S. Schiavi, M. Ocampo-Pineda, M. Barakovic, L. Petit, M. Descoteaux, J.-P. Thiran, A. **Daducci** (2020), "A new method for accurate in vivo mapping of human brain connections using microstructural and anatomical information". *Sci Adv* 6(31):eaba8245.
- [J10] S. Schiavi, M. Petracca, M. Battocchio, M. M. El Mendili, S. Paduri, L. Fleysheer, M. Inglese, A. **Daducci** (2020), "Sensory-motor network topology in multiple sclerosis: Structural connectivity analysis accounting for intrinsic density discrepancy". *Hum Brain Mapp* 41(11):2951–2963.
- [J11] E. Bonet-Carne, E. Johnston, A. **Daducci**, J. Jacobs, A. Freeman, D. Atkinson, D. Hawkes, S. Punwani, D. C. Alexander, E. Panagiotaki (2019), "VERDICT-AMICO: Ultrafast fitting algorithm for non-invasive prostate microstructure characterisation". *NMR Biomed* 32(1):e4019.
- [J12] E. J. Canales Rodriguez, J. H. Legarreta-Gorroño, Y. Alemán-Gomez, M. Pizzolato, J. R. Patiño, G. O. D. Rensonnet, M. Barakovic, J. Radua, E. Pomarol-Clotet, R. Salvador, J.-P. Thiran, A. **Daducci** (2019), "Sparse Wars: A Survey and Comparative Study of Spherical Deconvolution Algorithms for Diffusion MRI". *NeuroImage* 184:140–160.
- [J13] G. M. Innocenti, T. B. Dyrby, G. Girard, E. St-Onge, J.-P. Thiran, A. **Daducci**, M. Descoteaux (2019), "Topological principles and developmental algorithms might refine diffusion tractography". *Brain Struct Funct* 224(1):1–8.
- [J14] L. J. O'Donnell, A. **Daducci**, D. Wassermann, C. Lenglet (2019), "Advances in computational and statistical diffusion MRI". *NMR Biomed* 32(4):e3805.
- [J15] K. G. Schilling, A. **Daducci**, K. Maier-Hein, C. Poupon, J.-C. Houde, V. Nath, A. W. Anderson, B. A. Landman, M. Descoteaux (2019), "Challenges in Diffusion MRI Tractography – Lessons Learned from International Benchmark Competitions". *Magnetic Resonance Imaging* 57:194–209.

- [J16] E. St-Onge, A. **Daducci**, G. Girard, M. Descoteaux (2018), "Surface-Enhanced Tractography". *NeuroImage* 169:524–39.
- [J17] K. G. Schilling, V. Nath, C. Hansen, P. Parvathaneni, J. Blaber, Y. Gao, P. Neher, D. B. Aydogan, Y. Shi, M. Ocampo-Pineda, S. Schiavi, A. **Daducci**, G. Girard, M. Barakovic, J. Rafael-Patino, D. Romascano, G. Rensonnet, M. Pizzolato, A. Bates, E. Fischi, J.-P. Thiran, E. J. Canales-Rodriguez, C. Huang, H. Zhu, L. Zhong, R. Cabeen, A. W. Toga, F. Rheault, G. Theaud, J.-C. Houde, J. Sidhu, M. Chamberland, C.-F. Westin, T. B. Dyrby, R. Verma, Y. Rathi, M. O. Irfanoglu, C. Thomas, C. Pierpaoli, M. Descoteaux, A. W. Anderson, B. A. Landman (2018), "Limits to the anatomical accuracy of diffusion tractography using modern approaches". *NeuroImage* 185(15):1–11.
- [J18] A. M. Studerus-Germann, O. P. Gautschi, P. Bontempi, J.-P. Thiran, A. **Daducci**, D. Romascano, D. Ow, G. Hildebrandt, A. Hessling, D. C. Engel (2018), "Central nervous system microbleeds in the acute phase are associated with structural integrity by DTI one year after mild traumatic brain injury: A longitudinal study". *Neurologia i Neurochirurgia Polska* 52(6):710–719.
- [J19] F. Alfaro-Almagro, M. Jenkinson, N. K. Bangerter, J. L. Andersson, L. Griffanti, G. Douaud, S. Sotiropoulos, S. Jbabdi, M. Hernandez Fernandez, E. Vallee, D. Vidaurre, M. Webster, P. D. McCarthy, C. Rorden, A. **Daducci**, D. Alexander, H. Zhang, I. Dragonu, P. Matthews, K. L. Miller, S. M. Smith (2017), "Image processing and Quality Control for the first 10,000 brain imaging datasets from UK Biobank". *NeuroImage* 166:400–24.
- [J20] G. Battistella, E. Najdenovska, P. Maeder, N. Ghazaleh, A. **Daducci**, J.-P. Thiran, S. Jacquemont, C. Tuleasca, M. Levivier, M. B. Cuadra (2017), "Robust thalamic nuclei segmentation method based on local diffusion magnetic resonance properties". *Brain Structure and Function* 222(5):2203–16.
- [J21] G. Girard, A. **Daducci**, L. Petit, J.-P. Thiran, K. Whittingstall, R. Deriche, D. Wassermann, M. Descoteaux (2017), "AxTract: Toward microstructure informed tractography". *Hum Brain Mapp* 28(11):5485–500.
- [J22] A. Griffa, B. Ricaud, K. Benzi, X. Bresson, A. **Daducci**, P. Vandergheynst, J.-P. Thiran, P. Hagmann (2017), "Transient Networks of Spatio-temporal Connectivity Map Communication Pathways in Brain Functional Systems". *NeuroImage* 155:490–502.
- [J23] K. H. Maier-Hein, P. F. Neher, J.-C. Houde, M.-A. Côté, E. Garyfallidis, J. Zhong, M. Chamberland, F.-C. Yeh, Y.-C. Lin, Q. Ji, W. E. Reddick, J. O. Glass, D. Q. Chen, Y. Feng, C. Gao, Y. Wu, J. Ma, H. Renjie, Q. Li, C.-F. Westin, S. Deslauriers-Gauthier, J. O. O. González, M. Paquette, S. St-Jean, G. Girard, F. Rheault, J. Sidhu, C. M. W. Tax, F. Guo, H. Y. Mesri, S. Dávid, M. Froeling, A. M. Heemskerk, A. Leemans, A. Boré, B. Pinsard, C. Bedetti, M. Desrosiers, S. Brambati, J. Doyon, A. Sarica, R. Vasta, A. Cerasa, A. Quattrone, J. Yeatman, A. R. Khan, W. Hodges, S. Alexander, D. Romascano, M. Barakovic, A. Auria, O. Esteban, A. Lemkaddem, J.-P. Thiran, H. E. Cetingul, B. L. Odry, B. Mailhe, M. S. Nadar, F. Pizzagalli, G. Prasad, J. E. Villalon-Reina, J. Galvis, P. M. Thompson, F. D. S. Requejo, P. L. Laguna, L. M. Lacerda, R. Barrett, F. Dell'Acqua, M. Catani, L. Petit, E. Caruyer, A. **Daducci**, T. B. Dyrby, T. Holland-Letz, C. C. Hilgetag, B. Stieltjes, M. Descoteaux (2017), "The challenge of mapping the human connectome based on diffusion tractography". *Nature Communications* 8(1):1349.
- [J24] G. Perrotta, G. Bonnier, D. Meskaldji, D. Romascano, R. Aydarkhanov, A. **Daducci**, S. Simioni, M. Cavassini, M. Metral, F. Lazeyras, R. Meuli, G. Krueger, R. Du Pasquier, C. Granziera (2017), "Rivastigmine decreases brain damage in HIV patients with mild cognitive deficits". *Annals of Clinical and Translational Neurology* 4(12):915–20.
- [J25] A. **Daducci**, A. Dal Palú, M. Descoteaux, J.-P. Thiran (2016), "Microstructure Informed Tractography: pitfalls and open challenges". *Front Neurosci* 10:247.
- [J26] O. Esteban, E. Caruyer, A. **Daducci**, M. Bach-Cuadra, M. J. Ledesma-Carbayo, A. Santos (2016), "Diffantom: whole-brain diffusion MRI phantoms derived from real datasets of the Human Connectome Project". *Front Neuroinform* 10(4).
- [J27] O. Esteban, D. Zosso, A. **Daducci**, M. Bach-Cuadra, M. J. Ledesma-Carbayo, J.-P. Thiran, A. Santos (2016), "Data on the verification and validation of segmentation and registration methods for diffusion MRI". *Data in Brief* 8:871–6.
- [J28] O. Esteban, D. Zosso, A. **Daducci**, M. Bach-Cuadra, M. J. Ledesma-Carbayo, J.-P. Thiran, A. Santos (2016), "Surface-driven registration method for the structure-informed segmentation of diffusion MR images". *NeuroImage* 7(139):450–61.
- [J29] A. M. Studerus-Germann, J.-P. Thiran, A. **Daducci**, O. P. Gautschi (2016), "Diagnostic approaches to predict persistent post traumatic symptoms after mild traumatic brain injury-a literature review". *Int J Neurosci* 126(4):289–98.
- [J30] M. Zucchelli, L. Brusini, A. Méndez, A. **Daducci**, C. Granziera, G. Menegaz (2016), "What lies beneath? Diffusion EAP-based study of brain tissue microstructure". *Med Image Anal* 32:145–56.

- [J31] A. Auria-Rasclosa, A. **Daducci**, J.-P. Thiran, Y. Wiaux (2015), "Structured sparsity for spatially coherent fibre orientation estimation in diffusion MRI". *NeuroImage* 115:245–255.
- [J32] E. J. Canales-Rodríguez, A. **Daducci**, S. N. Sotiropoulos, E. Caruyer, S. Aja-Fernández, J. Radua, Y. Iturria-Medina, L. Melie-García, Y. Alemán-Gómez, J.-P. Thiran, S. Sarró, E. Pomarol-Clotet, R. Salvador (2015), "Spherical deconvolution of multichannel diffusion MRI data with non-Gaussian noise models and total variation spatial regularization". *PLoS ONE* 10(10):e0138910.
- [J33] A. **Daducci**, E. J. Canales-Rodríguez, H. Zhang, T. B. Dyrby, D. C. Alexander, J.-P. Thiran (2015), "Accelerated Microstructure Imaging via Convex Optimization (AMICO) from diffusion MRI data". *NeuroImage* 105:32–44.
- [J34] A. **Daducci**, A. Dal Palú, A. Lemkaddem, J.-P. Thiran (2015), "COMMIT: Convex Optimization Modeling for Microstructure Informed Tractography". *IEEE Trans Med Imaging* 34(1):246–57.
- [J35] A. **Daducci**, C. Granziera, A. Donati, G. Bonnier, D. Romascano, A. Roche, M. Bach Cuadra, D. Schmitter, S. Kloeppel, R. Meuli, A. Gunten, G. Krueger (2015), "A multi-contrast MRI study of microstructural brain damage in patients with mild cognitive impairment". *NeuroImage: Clinical* 8:631–639.
- [J36] D. Romascano, D.-E. Meskaldji, G. Bonnier, S. Simioni, D. Rotzinger, Y.-C. Lin, G. Menegaz, A. Roche, M. Schluep, R. D. Pasquier, J. Richiardi, D. Van De Ville, A. **Daducci**, T. Sumpf, J. Frahm, J.-P. Thiran, G. Krueger, C. Granziera (2015), "Multicontrast connectometry: A new tool to assess cerebellum alterations in early relapsing-remitting multiple sclerosis". *Hum Brain Mapp* 36(4):1609–19.
- [J37] D. Schmitter, A. Roche, B. Maréchal, D. Ribes, A. Abdulkadir, M. Bach Cuadra, A. **Daducci**, C. Granziera, S. Klöppel, P. Maeder, R. Meuli, G. Krüger (2015), "An evaluation of volume-based morphometry for prediction of mild cognitive impairment and Alzheimer's disease". *NeuroImage: Clinical* 7:7–17.
- [J38] M. P. Cecchini, M. Parnigotto, F. Merigo, P. Marzola, A. **Daducci**, S. Tambalo, F. Boschi, L. Colombo, A. Sbarbati (2014), "3D printing of rat salivary glands: the submandibular-sublingual complex". *Anat Histol Embryol* 43(3):239–44.
- [J39] A. **Daducci**, E. J. Canales-Rodríguez, M. Descoteaux, E. Garyfallidis, Y. Gur, Y.-C. Lin, M. Mani, S. Merlet, M. Paquette, A. Ramirez-Manzanares, M. Reisert, P. R. Rodrigues, F. Sepehrband, M. Jacob, E. Caruyer, J. Choupan, R. Deriche, G. Menegaz, V. Prckovska, M. Rivera, Y. Wiaux, J.-P. Thiran (2014), "Quantitative comparison of reconstruction methods for intra-voxel fiber recovery from diffusion MRI". *IEEE Trans Med Imaging* 33(2):384–99.
- [J40] A. **Daducci**, S. Tambalo, S. Fiorini, F. Osculati, M. Teti, P. Fabene, M. Corsi, A. Bifone, A. Sbarbati, P. Marzola (2014), "Manganese-enhanced magnetic resonance imaging investigation of the Interferon- $\alpha$  model of depression in rats". *Magn Reson Imaging* 32(5):529–34.
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