# J Donald Tournier

List of Publications by Year
in descending order



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|---|---|---|---|
| 101 papers | 18,229 citations | 71102 41 h-index | 37204 96 g-index |
| 113 all docs | 113 docs citations | 113 times ranked | 10492 citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | An MR fingerprinting approach for quantitative inhomogeneous magnetization transfer imaging. Magnetic Resonance in Medicine, 2022, 87, 220-235. | 3.0 | 7 |
| 2 | Predicting age and clinical risk from the neonatal connectome. NeuroImage, 2022, 257, 119319. | 4.2 | 11 |
| 3 | The Developing Human Connectome Project Neonatal Data Release. Frontiers in Neuroscience, 2022, 16, . | 2.8 | 42 |
| 4 | The developing brain structural and functional connectome fingerprint. Developmental Cognitive Neuroscience, 2022, 55, 101117. | 4.0 | 5 |
| 5 | Scattered slice SHARD reconstruction for motion correction in multi-shell diffusion MRI. NeuroImage, 2021, 225, 117437. | 4.2 | 44 |
| 6 | Diffusion magnetic resonance imaging assessment of regional white matter maturation in preterm neonates. Neuroradiology, 2021, 63, 573-583. | 2.2 | 10 |
| 7 | Development of human white matter pathways in utero over the second and third trimester. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 7.1 | 55 |
| 8 | Multi-Channel 4D Parametrized Atlas of Macro- and Microstructural Neonatal Brain Development. Frontiers in Neuroscience, 2021, 15, 661704. | 2.8 | 8 |
| 9 | Brain network hubs and cognitive performance of survivors of childhood infratentorial tumors. Radiotherapy and Oncology, 2021, 161, 118-125. | 0.6 | 5 |
| 10 | dStripe: Slice artefact correction in diffusion MRI via constrained neural network. Medical Image Analysis, 2021, 74, 102255. | 11.6 | 3 |
| 11 | Preterm birth alters the development of cortical microstructure and morphology at term-equivalent age. NeuroImage, 2021, 243, 118488. | 4.2 | 40 |
| 12 | Higher Order Spherical Harmonics Reconstruction of Fetal Diffusion MRI With Intensity Correction. IEEE Transactions on Medical Imaging, 2020, 39, 1104-1113. | 8.9 | 20 |
| 13 | On the need for bundle-specific microstructure kernels in diffusion MRI. NeuroImage, 2020, 208, 116460. | 4.2 | 9 |
| 14 | Reduced structural connectivity in cortico-striatal-thalamic network in neonates with congenital heart disease. NeuroImage: Clinical, 2020, 28, 102423. | 2.7 | 14 |
| 15 | Fetal whole heart blood flow imaging using 4D cine MRI. Nature Communications, 2020, 11, 4992. | 12.8 | 26 |
| 16 | Cross-scanner and cross-protocol multi-shell diffusion MRI data harmonization: Algorithms and results. NeuroImage, 2020, 221, 117128. | 4.2 | 54 |
| 17 | A dataâ€driven approach to optimising the encoding for multiâ€shell diffusion MRI with application to neonatal imaging. NMR in Biomedicine, 2020, 33, e4348. | 2.8 | 18 |
| 18 | Assessment of radial glia in the frontal lobe of fetuses with Down syndrome. Acta Neuropathologica Communications, 2020, 8, 141. | 5.2 | 17 |

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|---|---|---|---|
| 19 | Heterogeneity in Brain Microstructural Development Following Preterm Birth. Cerebral Cortex, 2020, 30, 4800-4810. | 2.9 | 54 |
| 20 | Multi-channel Registration for Diffusion MRI: Longitudinal Analysis for the Neonatal Brain. Lecture Notes in Computer Science, 2020, , 111-121. | 1.3 | 3 |
| 21 | Modeling Fiber Orientations Using Diffusion MRI. Advances in Magnetic Resonance Technology and Applications, 2020, 1, 509-532. | 0.1 | 0 |
| 22 | Automated processing pipeline for neonatal diffusion MRI in the developing Human Connectome Project. NeuroImage, 2019, 185, 750-763. | 4.2 | 127 |
| 23 | Modelling white matter with spherical deconvolution: How and why?. NMR in Biomedicine, 2019, 32, e3945. | 2.8 | 127 |
| 24 | MRtrix3: A fast, flexible and open software framework for medical image processing and visualisation. NeuroImage, 2019, 202, 116137. | 4.2 | 1,555 |
| 25 | Inherent and unpredictable bias in multi-component DESPOT myelin water fraction estimation. NeuroImage, 2019, 195, 78-88. | 4.2 | 45 |
| 26 | Motor Abilities in Adolescents Born Preterm Are Associated With Microstructure of the Corpus Callosum. Frontiers in Neurology, 2019, 10, 367. | 2.4 | 7 |
| 27 | Diffusion MRI in the brain â€“ Theory and concepts. Progress in Nuclear Magnetic Resonance Spectroscopy, 2019, 112-113, 1-16. | 7.5 | 51 |
| 28 | Fixel-based analysis of the preterm brain: Disentangling bundle-specific white matter microstructural and macrostructural changes in relation to clinical risk factors. NeuroImage: Clinical, 2019, 23, 101820. | 2.7 | 27 |
| 29 | A longitudinal fixel-based analysis of white matter alterations in patients with Parkinson's disease. NeuroImage: Clinical, 2019, 24, 102098. | 2.7 | 35 |
| 30 | Learning Compact <inline-formula> <tex-math notation="LaTeX">${q}$ </tex-math> </inline-formula>-Space Representations for Multi-Shell Diffusion-Weighted MRI. IEEE Transactions on Medical Imaging, 2019, 38, 834-843. | 8.9 | 19 |
| 31 | A framework for multi-component analysis of diffusion MRI data over the neonatal period. NeuroImage, 2019, 186, 321-337. | 4.2 | 47 |
| 32 | Reply: Cortical tau pathology: a major player in fibre-specific white matter reductions in Alzheimer's disease?. Brain, 2018, 141, e45-e45. | 7.6 | 4 |
| 33 | The developing human connectome project: A minimal processing pipeline for neonatal cortical surface reconstruction. NeuroImage, 2018, 173, 88-112. | 4.2 | 315 |
| 34 | Fibre-specific white matter reductions in Alzheimerâ€™s disease and mild cognitive impairment. Brain, 2018, 141, 888-902. | 7.6 | 226 |
| 35 | Voxel-wise comparisons of cellular microstructure and diffusion-MRI in mouse hippocampus using 3D Bridging of Optically-clear histology with Neuroimaging Data (3D-BOND). Scientific Reports, 2018, 8, 4011. | 3.3 | 47 |
| 36 | Timeâ€efficient and flexible design of optimized multishell HARDI diffusion. Magnetic Resonance in Medicine, 2018, 79, 1276-1292. | 3.0 | 72 |

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|---|---|---|---|
| 37 | The role of wholeâ€brain diffusion MRI as a tool for studying human in vivo cortical segregation based on a measure of neurite density. Magnetic Resonance in Medicine, 2018, 79, 2738-2744. | 3.0 | 33 |
| 38 | Slice-level diffusion encoding for motion and distortion correction. Medical Image Analysis, 2018, 48, 214-229. | 11.6 | 22 |
| 39 | Developing a Framework for Studying Brain Networks in Neonatal Hypoxic-Ischemic Encephalopathy. Communications in Computer and Information Science, 2018, , 203-216. | 0.5 | 1 |
| 40 | Early development of structural networks and the impact of prematurity on brain connectivity. NeuroImage, 2017, 149, 379-392. | 4.2 | 187 |
| 41 | Language ability in preterm children is associated with arcuate fasciculi microstructure at term. Human Brain Mapping, 2017, 38, 3836-3847. | 3.6 | 40 |
| 42 | Tractâ€specific atrophy in focal epilepsy: Disease, genetics, or seizures?. Annals of Neurology, 2017, 81, 240-250. | 5.3 | 34 |
| 43 | Contralateral cortico-ponto-cerebellar pathways reconstruction in humans in vivo: implications for reciprocal cerebro-cerebellar structural connectivity in motor and non-motor areas. Scientific Reports, 2017, 7, 12841. | 3.3 | 152 |
| 44 | Cerebello-cerebral connectivity in the developing brain. Brain Structure and Function, 2017, 222, 1625-1634. | 2.3 | 22 |
| 45 | Investigating white matter fibre density and morphology using fixel-based analysis. NeuroImage, 2017, 144, 58-73. | 4.2 | 437 |
| 46 | Periventricular Nodular Heterotopia: Detection of Abnormal Microanatomic Fiber Structures with Whole-Brain Diffusion MR Imaging Tractography. Radiology, 2016, 281, 896-906. | 7.3 | 23 |
| 47 | Predicting hand function after hemidisconnection. Brain, 2016, 139, 2456-2468. | 7.6 | 34 |
| 48 | Introduction to Diffusion Tensor Imaging. , 2016, , 7-19. | | 9 |
| 49 | High Angular Resolution Diffusion Imaging. , 2016, , 383-406. | | 5 |
| 50 | Reconstructing contralateral fiber tracts: methodological aspect of cerebello-thalamo-cortical pathway reconstruction. Functional Neurology, 2016, 31, 229-238. | 1.3 | 11 |
| 51 | Quantification of voxel-wise total fibre density: Investigating the problems associated with track-count mapping. NeuroImage, 2015, 117, 284-293. | 4.2 | 44 |
| 52 | Advanced Fiber Tracking in Early Acquired Brain Injury Causing Cerebral Palsy. American Journal of Neuroradiology, 2015, 36, 181-187. | 2.4 | 17 |
| 53 | Contralateral cerebello-thalamo-cortical pathways with prominent involvement of associative areas in humans in vivo. Brain Structure and Function, 2015, 220, 3369-3384. | 2.3 | 154 |
| 54 | The effects of SIFT on the reproducibility and biological accuracy of the structural connectome. NeuroImage, 2015, 104, 253-265. | 4.2 | 213 |

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|---|---|---|---|
| 55 | Fourier Tract Sampling (FouTS): A framework for improved inference of white matter tracts from diffusion MRI by explicitly modelling tract volume. NeuroImage, 2015, 120, 412-427. | 4.2 | 6 |
| 56 | Connectivity-based fixel enhancement: Whole-brain statistical analysis of diffusion MRI measures in the presence of crossing fibres. NeuroImage, 2015, 117, 40-55. | 4.2 | 276 |
| 57 | SIFT2: Enabling dense quantitative assessment of brain white matter connectivity using streamlines tractography. NeuroImage, 2015, 119, 338-351. | 4.2 | 506 |
| 58 | Fiber Tracking with DWI. , 2015, , 265-269. | | 0 |
| 59 | A variable flip angle-based method for reducing blurring in 3D GRASE ASL. Physics in Medicine and Biology, 2014, 59, 5559-5573. | 3.0 | 17 |
| 60 | Multi-tissue constrained spherical deconvolution for improved analysis of multi-shell diffusion MRI data. NeuroImage, 2014, 103, 411-426. | 4.2 | 1,063 |
| 61 | Mapping somatosensory connectivity in adult mice using diffusion MRI tractography and super-resolution track density imaging. NeuroImage, 2014, 102, 381-392. | 4.2 | 15 |
| 62 | Alterations in the optic radiations of very preterm childrenâ€"Perinatal predictors and relationships with visual outcomes. NeuroImage: Clinical, 2014, 4, 145-153. | 2.7 | 35 |
| 63 | Quantification of track-weighted imaging (TWI): Characterisation of within-subject reproducibility and between-subject variability. NeuroImage, 2014, 87, 18-31. | 4.2 | 36 |
| 64 | Identification and interpretation of microstructural abnormalities in motor pathways in adolescents born preterm. NeuroImage, 2014, 87, 209-219. | 4.2 | 92 |
| 65 | Investigating the prevalence of complex fiber configurations in white matter tissue with diffusion magnetic resonance imaging. Human Brain Mapping, 2013, 34, 2747-2766. | 3.6 | 887 |
| 66 | Track-weighted functional connectivity (TW-FC): A tool for characterizing the structuralâ€"functional connections in the brain. NeuroImage, 2013, 70, 199-210. | 4.2 | 40 |
| 67 | Beyond the lesion: neuroimaging foundations for post-stroke recovery. Future Neurology, 2013, 8, 507-527. | 0.5 | 29 |
| 68 | Pediatric traumatic brain injury: Language outcomes and their relationship to the arcuate fasciculus. Brain and Language, 2013, 127, 388-398. | 1.6 | 25 |
| 69 | SIFT: Spherical-deconvolution informed filtering of tractograms. NeuroImage, 2013, 67, 298-312. | 4.2 | 573 |
| 70 | Super-resolution track-density imaging of thalamic substructures: Comparison with high-resolution anatomical magnetic resonance imaging at 7.0T. Human Brain Mapping, 2013, 34, 2538-2548. | 3.6 | 61 |
| 71 | White matter fiber tractography: why we need to move beyond DTI. Journal of Neurosurgery, 2013, 118, 1367-1377. | 1.6 | 386 |
| 72 | Determination of the appropriate b value and number of gradient directions for highâ€angularâ€resolution diffusionâ€weighted imaging. NMR in Biomedicine, 2013, 26, 1775-1786. | 2.8 | 346 |

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|---|---|---|---|
| 73 | Corticobulbar tract changes as predictors of dysarthria in childhood brain injury. Neurology, 2013, 80, 926-932. | 1.1 | 32 |
| 74 | Interhemispheric temporal lobe connectivity predicts language impairment in adolescents born preterm. Brain, 2012, 135, 3781-3798. | 7.6 | 100 |
| 75 | Super-resolution track-density imaging studies of mouse brain: Comparison to histology. NeuroImage, 2012, 59, 286-296. | 4.2 | 105 |
| 76 | A generalised framework for super-resolution track-weighted imaging. NeuroImage, 2012, 59, 2494-2503. | 4.2 | 77 |
| 77 | Apparent Fibre Density: A novel measure for the analysis of diffusion-weighted magnetic resonance images. NeuroImage, 2012, 59, 3976-3994. | 4.2 | 491 |
| 78 | Anatomically-constrained tractography: Improved diffusion MRI streamlines tractography through effective use of anatomical information. NeuroImage, 2012, 62, 1924-1938. | 4.2 | 897 |
| 79 | Reorientation of fiber orientation distributions using apodized point spread functions. Magnetic Resonance in Medicine, 2012, 67, 844-855. | 3.0 | 103 |
| 80 | Speech and Oromotor Outcome in Adolescents Born Preterm: Relationship to Motor Tract Integrity. Journal of Pediatrics, 2012, 160, 402-408.e1. | 1.8 | 35 |
| 81 | MRtrix: Diffusion tractography in crossing fiber regions. International Journal of Imaging Systems and Technology, 2012, 22, 53-66. | 4.1 | 1,191 |
| 82 | A kâ€space sharing 3D GRASE pseudocontinuous ASL method for wholeâ€brain restingâ€state functional connectivity. International Journal of Imaging Systems and Technology, 2012, 22, 37-43. | 4.1 | 25 |
| 83 | Symmetric diffeomorphic registration of fibre orientation distributions. NeuroImage, 2011, 56, 1171-1180. | 4.2 | 229 |
| 84 | Track density imaging (TDI): Validation of super resolution property. NeuroImage, 2011, 56, 1259-1266. | 4.2 | 92 |
| 85 | Diffusion tensor imaging and beyond. Magnetic Resonance in Medicine, 2011, 65, 1532-1556. | 3.0 | 771 |
| 86 | Probabilistic fiber tracking using the residual bootstrap with constrained spherical deconvolution. Human Brain Mapping, 2011, 32, 461-479. | 3.6 | 335 |
| 87 | INCITE: A randomised trial comparing constraint induced movement therapy and bimanual training in children with congenital hemiplegia. BMC Neurology, 2010, 10, 4. | 1.8 | 73 |
| 88 | New anatomic MRI techniques. Epilepsia, 2010, 51, 80-82. | 5.1 | 4 |
| 89 | The effect of finite diffusion gradient pulse duration on fibre orientation estimation in diffusion MRI. NeuroImage, 2010, 51, 743-751. | 4.2 | 22 |
| 90 | Track-density imaging (TDI): Super-resolution white matter imaging using whole-brain track-density mapping. NeuroImage, 2010, 53, 1233-1243. | 4.2 | 361 |

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|---|---|---|---|
| 91 | The Biophysics of Crossing Fibers. , 2010, , 465-482. | | 13 |
| 92 | A software tool to generate simulated white matter structures for the assessment of fibre-tracking algorithms. NeuroImage, 2009, 47, 1288-1300. | 4.2 | 75 |
| 93 | Evaluation of the accuracy and angular resolution of q-ball imaging. NeuroImage, 2008, 42, 262-271. | 4.2 | 41 |
| 94 | Resolving crossing fibres using constrained spherical deconvolution: Validation using diffusion-weighted imaging phantom data. NeuroImage, 2008, 42, 617-625. | 4.2 | 524 |
| 95 | Estimation of uncertainty in constrained spherical deconvolution fiber orientations. , 2008, , . | | 5 |
| 96 | Robust determination of the fibre orientation distribution in diffusion MRI: Non-negativity constrained super-resolved spherical deconvolution. NeuroImage, 2007, 35, 1459-1472. | 4.2 | 1,860 |
| 97 | Cortical abnormalities and language function in young patients with basal ganglia stroke. NeuroImage, 2007, 36, 431-440. | 4.2 | 21 |
| 98 | Quantification of the shape of fiber tracts. Magnetic Resonance in Medicine, 2006, 55, 894-903. | 3.0 | 82 |
| 99 | Direct estimation of the fiber orientation density function from diffusion-weighted MRI data using spherical deconvolution. NeuroImage, 2004, 23, 1176-1185. | 4.2 | 1,466 |
| 100 | Diffusion-weighted magnetic resonance imaging fibre tracking using a front evolution algorithm. NeuroImage, 2003, 20, 276-288. | 4.2 | 64 |
| 101 | Limitations and requirements of diffusion tensor fiber tracking: An assessment using simulations. Magnetic Resonance in Medicine, 2002, 47, 701-708. | 3.0 | 103 |