

# Curriculum Vitae - Mark Chiew

Wellcome Centre for Integrative Neuroimaging  
Nuffield Department of Clinical Neurosciences  
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## Work & Education

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### Academic Positions

- 2021 - **Associate Professor**  
Nuffield Department of Clinical Neurosciences, University of Oxford
- 2018 - 21 **University Research Lecturer**  
Nuffield Department of Clinical Neurosciences, University of Oxford
- 2017 - 22 **Royal Academy of Engineering Research Fellow**  
FMRIB Centre, University of Oxford
- 2012 - 17 **Post-Doctoral Researcher**  
FMRIB Centre, University of Oxford

### Education

- 2007 - 12 **Ph.D.**, Medical Biophysics, University of Toronto  
Thesis: Development and Application of Methods for Real-Time fMRI Neurofeedback  
Supervisor: Prof. Simon J. Graham
- 2002 - 07 **B.ASc**, Engineering Physics, University of British Columbia  
Math Honours, Electrical Engineering Option

## Grants & Awards

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*Total Awarded To Date: £964,080*

### Grants

- |           |   |                 |
|-----------|---|-----------------|
| 2020 - 23 | <b>EPSRC Healthcare Technologies New Investigator Award</b><br>Robust 3D Functional Imaging of the Living, Breathing Brain<br>Principal Investigator (EP/T013133/1)                   | <b>£352,921</b> |
| 2017 - 22 | <b>Royal Academy of Engineering Research Fellowship</b><br>Characterising the Brain's Spatio-Temporal Dynamics by Integrating EEG and FMRI<br>Principal Investigator (RF201617\16\23) | <b>£499,715</b> |
| 2017 - 19 | <b>John Fell Oxford University Press Research Fund</b><br>A Novel Approach to EEG and FMRI<br>Principal Investigator  | <b>£57,800</b>  |
| 2019 - 20 | <b>WIN Seed Grant</b><br>Advanced Brain Blood Flow Measurements with 7T MRI<br>Co-Principal Investigator  | <b>£9,000</b>   |

### Awards

2019	WIN Good Citizen Award
2015 - 18	Magnetic Resonance in Medicine Distinguished Reviewer
2015	ISMRM I.I. Rabi Young Investigator Award Finalist
2014,15	University of Oxford Award for Excellence
2015	Guarantors of Brain Travel Grant
2013,14	University of Oxford Lockey Bequest Grant
2014	OHBM Trainee Abstract Award
2011,13,14	ISMRM Trainee Stipend Award
2011	Ontario Graduate Scholarship
2010	University of Toronto Medical Biophysics Excellence Award
2009,10	Jack and Rita Catherall Fund Travel Award
2009 - 10	Ydessa Hendeles Graduate Scholarship
2008 - 10	Ontario Graduate Scholarship in Science and Technology
2006	John Collison Memorial Scholarship in Mathematics
2004,05	UBC Undergraduate Scholars Program Award
2002	British Columbia Provincial Scholarship

## Invited Talks

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1. Neuroimaging with Optimized Sampling and Reconstruction, Keilholz Mind Lab, Georgia Tech and Emory University (Virtual); April 2021
2. Fast and Robust MR Imaging with Constrained Reconstruction Methods, Champalimaud Centre for the Unknown, Lisbon, Portugal; Dec 2019
3. Getting more information from fMRI with better sampling and reconstruction, KCL Centre for Neuroimaging Sciences, Neuroimaging Seminar, London, UK; Mar 2019
4. Getting more out of fMRI data using constrained reconstructions and simultaneous EEG, Center for Functional MRI, UC San Diego, USA; Oct 2018
5. Beyond Simultaneous: Integrating EEG Information for Image Reconstruction in FMRI, UCL Centre for Neuroimaging Techniques Seminar, London, UK; Dec 2017
6. Basics, Benefits, and Breakthroughs for Fast Brain Imaging, BC Children's Hospital, Vancouver, Canada; Jun 2017
7. Accelerating FMRI Data Acquisition using Hybrid Radial-Cartesian Sampling and Low-Rank Constraints, Centre for the Developing Brain Seminar Series, Kings College London, London, UK; Oct 2016
8. Using network models of brain activity to inform highly accelerated fMRI data acquisition, MR Seminar, Institute of Biomedical Engineering, ETH Zurich, Zurich, Switzerland; Feb 2016
9. The Utility of Low-Rank Models for Acquisition & Analysis of FMRI Data, Institute of Psychiatry, Psychology & Neuroscience, Kings College London, London, UK; Oct 2015
10. Accelerating FMRI Data Acquisition using Low-Rank Constraints, NeuroImaging Interest Group Rounds, Hospital for Sick Children, Toronto, Canada; Jun 2015
11. Accelerating FMRI Data Acquisition using Rank Constraints, Max Planck Institute for Biological Cybernetics, Tuebingen, Germany; Feb 2014
12. Estimation of Resting State Networks from Undersampled k-t FMRI Data using Matrix Completion, SMIAL Seminar Series, Sunnybrook Research Institute, Toronto, Canada; Jun 2013

## Publications

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## Preprints

1. Xia P, **Chiew M**, Zhou X, Thomas MA, Dydak U, Emir UE, “Density-Weighted Concentric Ring Trajectory using simultaneous multi-band acceleration: 3D Metabolite-cycled Magnetic Resonance Spectroscopy Imaging at 3 T”, bioRxiv 628594
2. Schauman SS, Okell TW, **Chiew M**, “The Set Increment with Limited Views Encoding Ratio (SILVER) Method for Optimizing Radial Sampling of Dynamic MRI”, bioRxiv 2020.06.25.171017
3. Chen X, Wu W, **Chiew M**, “Improving robustness of 3D multi-shot EPI by structured low-rank reconstruction of segmented CAIPI sampling for fMRI at 7T”, bioRxiv 2021.08.19.457024
4. Shen X, Ozen A, Susnjar A, Ilbey S, Shi R, **Chiew M**, Emir UE, “Myelin Imaging Using 3D Dual-echo Ultra-short Echo Time MRI with Rosette k-Space Pattern”, bioRxiv 2021.09.18.460869
5. Shahdloo M, Schüffelgen U, Papp D, Miller KL, **Chiew M**, “Model-based dynamic off-resonance correction for improved accelerated fMRI in awake behaving non-human primates”, bioRxiv

## Journal Articles

1. Clarke WT, **Chiew M**, “Uncertainty in denoising of MRSI using low-rank methods”, *Magnetic Resonance in Medicine* 2021 (Online, Early View)
2. Mason HT, Graedel NN, Miller KL, **Chiew M**, “Subspace-constrained approaches to low-rank fMRI acceleration”, *NeuroImage* 2021;118235
3. Hess AT, Dragonu I, **Chiew M**, “Accelerated calibrationless parallel transmit mapping using joint transmit and receive low-rank tensor completion”, *Magnetic Resonance in Medicine* 2021; 86(5):2454-2467
4. Wiltshire CEE, **Chiew M**, Chesters J, Mairead PH, Watkins KE, “Speech movement variability in people who stutter: a vocal-tract MRI study”, *Journal of Speech, Language, and Hearing Research* (Online, Early View)
5. Emir U, Sood J, **Chiew M**, Thomas MA, Lane S, “High-Resolution Metabolic Mapping of the Cerebellum Using 2D Zoom Magnetic Resonance Spectroscopic Imaging”, *Magnetic Resonance in Medicine* 2021; 85:2349– 2358.
6. Wang C, Foxley S, Ansorge O, Bangerter-Christensen S, **Chiew M**, Leonte A, Menke RAL, Mollink J, Pallegage-Gamarallage M, Turner MR, Miller KL, Tendler BC, “Methods for quantitative susceptibility and R2\* mapping in whole post-mortem brains at 7T”, *NeuroImage* 2020; 222:117216
7. Schauman SS, **Chiew M**, Okell TW, “Highly Accelerated Vessel-Selective Arterial Spin Labelling Angiography using Sparsity and Smoothness Constraints”, *Magnetic Resonance in Medicine*, 2020; 83:892-905
8. **Chiew M**, Miller KL, “Improved Statistical Efficiency of Simultaneous Multi-Slice fMRI by Reconstruction with Spatially Adaptive Temporal Smoothing”, *NeuroImage* 2019; 203:116165
9. O’Brien CF, Okell TW, **Chiew M**, Jezzard P “Volume-Localized Measurement of Oxygen Extraction Fraction in the Brain using Magnetic Resonance Imaging”, *Magnetic Resonance in Medicine* 2019; 82:1412-1423
10. Steel A, **Chiew M**, Jezzard P, Voets N, Plaha P, Thomas MA, Stagg C, Emir UE, “Metabolite-cycled density-weighted concentric rings k-space trajectory (DW-CRT) enables 1H magnetic resonance spectroscopic imaging at 3-Tesla”, *Scientific Reports* 2018; 8:7792
11. **Chiew M**, Graedel NN, Miller KL, “Recovering task fMRI signals from highly under-sampled data with low-rank and temporal subspace constraints”, *NeuroImage* 2018; 174:97-110
12. **Chiew M**, Jiang W, Burns B, Larson P, Steel A, Jezzard P, Thomas MA, Emir UE, “Density-Weighted Concentric Rings K-Space Trajectory for 1H Magnetic Resonance Spectroscopic Imaging at 7 Tesla”, *NMR in Biomedicine* 2018; 31(1):e3838
13. Weizman L, Miller KL, Eldar YC, **Chiew M**, “PEAR: PEriodic And fixed Rank separation for fast fMRI”, *Medical Physics* 2017; 44(12):6166-6182
14. Emir UE, Burns B, **Chiew M**, Jezzard P, Thomas MA, “Non-Water-Suppressed Short-Echo-Time Magnetic Resonance Spectroscopic Imaging using a Concentric Ring k-space Trajectory”, *NMR in Biomedicine* 2017; 30(7)
15. Graedel NN, McNab JA, **Chiew M**, Miller KL, “Motion correction for functional MRI with three-dimensional hybrid radial-Cartesian EPI”, *Magnetic Resonance in Medicine* 2017; 78(2):527-540
16. **Chiew M**, Graedel NN, McNab JA, Smith SM, Miller KL, “Accelerating fMRI using Fixed-Rank Approximations and Radial-Cartesian Sampling”, *Magnetic Resonance in Medicine* 2016; 76(6):1825-1836

17. **Chiew M**, Smith SM, Koopmans PJ, Graedel NN, Blumensath T, Miller KL “k-t FASTER: Acceleration of Functional MRI Data Acquisition using Low Rank Constraints”, *Magnetic Resonance in Medicine* 2015; 74(2):353-364
18. Olsen RK, **Chiew M**, Buchsbaum BR, Ryan JD “The relationship between delay period eye movements and visuospatial memory”, *Journal of Vision* 2014; 14(1):1-11
19. **Chiew M**, Graham SJ “Constrained Source Space Imaging: Application to fast, region-based functional MRI”, *Magnetic Resonance in Medicine* 2013; 70(4):1058-1069
20. Rotenberg DJ, **Chiew M**, Ranieri S, Tam F, Chopra R, Graham SJ “Real-Time Correction By Optical Tracking with Integrated Geometric Distortion Correction for Reducing Motion Artifacts in fMRI”, *Magnetic Resonance in Medicine* 2013; 69(3):734-748
21. **Chiew M**, LaConte SM, Graham SJ “Investigation of fMRI Neurofeedback of Differential Primary Motor Cortex Activity using Kinesthetic Motor Imagery”, *NeuroImage* 2012; 61(1):21-31
22. **Chiew M**, Graham SJ “BOLD contrast and noise characteristics of densely sampled multi-echo fMRI data”, *IEEE Transactions on Medical Imaging* 2011; 30(9):1691-1703
23. Yancey SE, Rotenberg DJ, Tam F, **Chiew M**, Ranieri S, Biswas L, Anderson KJ, Baker SN, Wright GA, Graham SJ “Spin-history Artifact during Functional MRI: Potential for Adaptive Correction”, *Medical Physics* 2011; 38(8):4634-4646
24. Kuo AYC, **Chiew M**, Tam F, Cunningham CH, Graham SJ “Multiecho coarse voxel acquisition for neurofeedback fMRI”, *Magnetic Resonance in Medicine* 2011; 65(3):715-724

## Conference Abstracts

1. Shahdloo M, Papp D, Schuffelgen U, Miller KL, Rushworth M, **Chiew M** “Highly accelerated fMRI of awake behaving non-human primates via model-based dynamic off-resonance correction”, 2021 ISMRM Virtual Meeting
2. **Chiew M** “Variable Density Phase Encoding for High Resolution Single-Shot EPI”, 2021 ISMRM Virtual Meeting
3. Chen X, Wu W, **Chiew M** “Respiratory fluctuations in 3D fMRI from inter-shot phase variations can be reduced by low-rank reconstruction of segmented CAIPI sampling”, 2021 ISMRM Virtual Meeting
4. Clarke WT, **Chiew M** “Characterising the variance and reproducibility of low rank denoising methods for spectroscopic data”, 2021 ISMRM Virtual Meeting
5. Schauman SS, Okell TW, **Chiew M** “Optimizing the fixed angular increment between k-space spokes can lead to improved SNR in radial imaging”, 2021 ISMRM Virtual Meeting
6. Wood TC, Ljungberg E, **Chiew M** “ZTE Infilling From Auto-calibration Neighbourhood Elements”, 2021 ISMRM Virtual Meeting
7. Farley N, Sood J, Susjnar A, Lane S, **Chiew M**, Thomas MA, Emir UE “Towards a Probabilistic Neurochemical atlas via parcellated approach using ZOOM MRSI”, 2021 ISMRM Virtual Meeting
8. Xia P, Zhou X, **Chiew M**, Thomas MA, Dydak U, Emir UE, “Density-Weighted Concentric Ring Trajectory Using Simultaneous Multi-Slice Acceleration: 3D Magnetic Resonance Imaging at 3T”, 2020 Joint AAPM | COMP Virtual Meeting
9. Almomen F, Xia P, Zhou X, **Chiew M**, Steel A, Thomas MA, Dydak U, Emir UE “Simultaneous mapping of T2\* and major neurotransmitters using MRSI at 3T”, 2020 OHBM Virtual Meeting
10. Clarke W, **Chiew M** “Comparison of low-rank denoising methods for accelerating the acquisition of 31P-MRSI”, 2020 ISMRM Virtual Meeting
11. Chen X, Wu W, **Chiew M** “Reduced Inter-shot Physiological Variability in 3D Multi-Shot fMRI using Structured Low-Rank Matrix Completion”, 2020 ISMRM Virtual Meeting
12. O’Brien C, Okell TW, **Chiew M**, Jezzard P “Remote Reconstructed Cerebral T2 Maps through Venous Blood Measurement in the Sagittal Sinus using SL-TRUST”, 2020 ISMRM Virtual Meeting
13. Schauman SS, Woods JC, **Chiew M**, Okell TW “Highly accelerated time-encoded dynamic ASL angiography”, 2020 ISMRM Virtual Meeting
14. Schauman SS, Okell TW, **Chiew M** “Radial sampling interactions in multi-dimensional sparse encoding problems using a joint decoding-reconstruction framework”, 2020 ISMRM Virtual Meeting
15. Schauman SS, Okell TW, **Chiew M** “High resolution 4D vessel selective angiography in under 5 minutes using a

- constrained reconstruction”, 2020 ISMRM Virtual Meeting
16. Schauman SS, Okell TW, **Chiew M** “Precision reconstruction for vessel-encoded ASL angiography”, 2019 British Chapter ISMRM Meeting, Sheffield, UK
  17. Holmgren J, Prisco L, **Chiew M**, Jbabdi S, Allen M, Sleigh J, Tracey I, Warnaby CE “Auditory and pain processing is severely disrupted at slow wave activity saturation under general anaesthesia”, 2019 Spring British Journal of Anaesthesia Forum Meeting, London, UK
  18. Hess AT, Jaeschke S, **Chiew M** “Click and run respiratory resolved, ECG and navigator free cardiac B0 and relative B1 calibration at 7T”, 2019 ISMRM Workshop on Ultrahigh Field Magnetic Resonance, Dubrovnik, Croatia
  19. Hess AT, Tanner J, Dragonu I, **Chiew M** “Accelerated 3D relative transmit mapping using structured low-rank matrix completion – evaluated in the body and brain”, 2019 ISMRM Workshop on Ultrahigh Field Magnetic Resonance, Dubrovnik, Croatia
  20. Graedel NN, Miller KL, **Chiew M** “Ultra-high spatial resolution TURBINE fMRI at 7T”, 2019 ISMRM Annual Meeting, Montreal, Canada
  21. Mason HT, Miller KL, Graedel NN, **Chiew M** “Improving k-t PERRI: a low-rank data-driven fMRI k-t acceleration method”, 2019 ISMRM Annual Meeting, Montreal, Canada
  22. Okell TW, **Chiew M** “High Resolution Perfusion Imaging using Golden Angle Radial Arterial Spin Labelling”, 2019 ISMRM Annual Meeting, Montreal, Canada
  23. Schauman SS, **Chiew M**, Okell TW “4D Vessel-Encoded pCASL Angiography in a Five-Minute Scan”, 2019 University of Michigan International Workshop on Arterial Spin Labeling MRI, Ann Arbor, USA
  24. Woods JG, Schauman SS, **Chiew M**, Chappell MA, Okell TW “Optimization of time-encoded pseudo-continuous ASL angiography with a variable flip-angle scheme”, 2019 ISMRM Annual Meeting, Montreal, Canada
  25. Schauman SS, **Chiew M**, Okell TW “Highly Accelerated Dynamic 2D and 3D Vessel-Encoded Arterial Spin Labelling Angiography”, 2019 ISMRM Annual Meeting, Montreal, Canada
  26. Emir UE, Xia P, Dydak U, Zhou X, Thomas MA, **Chiew M**, Guo R, Li Y, Zhao Y, Liang ZP “Non-Water suppressed High-Resolution 1H-MRSI of the Brain Using Short-TE SPICE with semi-LASER Concentric Ring Trajectory Acquisition”, 2019 ISMRM Annual Meeting, Montreal, Canada
  27. Shen X, Xia P, Dehghani M, Near J, Zhou X, **Chiew M**, Dydak U, Emir UE “Simultaneous Measurement of functional MRI and MRS by Fast Non-water Suppressed MR Spectroscopy Imaging”, 2019 ISMRM Annual Meeting, Montreal, Canada
  28. Xia P, Shen X, Zhou X, **Chiew M**, Thomas MA, Dydak U, Emir UE “Density-Weighted Concentric Ring Trajectory using simultaneous multi-slice (SMS) acceleration: 3D Metabolite-cycled Magnetic Resonance Spectroscopy Imaging at 3 T”, 2019 ISMRM Annual Meeting, Montreal, Canada
  29. Emir UE, Xia P, Zhou X, **Chiew M**, Thomas MA, Dydak U “Density-weighted concentric ring trajectory using simultaneous multi-slice (SMS) acceleration: 3D metabolite-cycled magnetic resonance spectroscopic imaging at 3 T”, MRS Workshop 2018, Utrecht, Netherlands
  30. Wiltshire C, Chesters J, **Chiew M**, Watkins KE “Assessing speech movements in people who stutter using real-time MRI of the vocal tract”, 2018 SNL Annual Meeting, Quebec City, Canada
  31. Mason H, Miller KL, **Chiew M** “Acceleration of Golden Angle-Sampled FMRI Data with Data-Driven Priors and Low-Rank Constraints”, 2018 OHBM Annual Meeting, Singapore
  32. Steel A, James G, **Chiew M**, Thomas MA, Emir UE, Stagg CJ “Regional GABA Concentrations Assessed by Magnetic Resonance Spectroscopic Imaging Predict Different Aspects of Motor Performance”, 2018 OHBM Annual Meeting, Singapore
  33. **Chiew M**, Holmgren J, Fido D, Warnaby CE, Vannesjo SJ “Measuring MRI Gradient Trajectory Dynamics using Simultaneous EEG-fMRI”, 2018 ISMRM Annual Meeting, Paris, France
  34. Schauman SS, **Chiew M**, Okell TW “Accelerated Acquisition of Vessel-Encoded Arterial Spin Labelling Angiograms with Compressed Sensing”, 2018 ISMRM Annual Meeting, Paris, France
  35. **Chiew M**, Okell TW “Improved Golden Ratio Radial Arterial Spin Labelling Angiography Reconstruction using k-t Sparsity Constraints”, 2018 ISMRM Annual Meeting, Paris, France
  36. Emir UE, Xia P, Zhou X, **Chiew M**, Steel A, Thomas MA, Dydak U “Non-Water Suppressed GABA Editing Magnetic Resonance Spectroscopic Imaging using Density Weighted Concentric Rings Trajectory”, 2018 ISMRM

Annual Meeting, Paris, France

37. Steel A, **Chiew M**, Jezzard P, Voets N, Plaha P, Thomas MA, Stagg CJ, Emir UE “Metabolite cycled density-weighted concentric rings k-space trajectory (DW-CRT) enables 1H magnetic resonance spectroscopic imaging at 3 Tesla in a clinically feasible timeframe”, 2018 ISMRM Annual Meeting, Paris, France
38. Weizman L, Miller KL, Eldar YC, **Chiew M** “PEAR: Periodic and Aperiodic Signal Separation for Fast FMRI”, 2017 IEEE-EMBC Annual International Conference, Jeju, Korea
39. Mason H, Miller KL, **Chiew M** “Acceleration of FMRI data with priors and low-rank constraints”, 2017 OHBM Annual Meeting, Vancouver, Canada
40. Graedel NN, **Chiew M**, Miller KL “Exploring motion navigator choices in the TURBINE motion correction scheme for fMRI”, 2017 OHBM Annual Meeting, Vancouver, Canada
41. **Chiew M**, Holmgren J, Fido D, Warnaby CE, Miller KL “EEG-Informed Reconstruction of Accelerated FMRI Data Acquisition”, 2017 OHBM Annual Meeting, Vancouver, Canada
42. **Chiew M**, Miller KL “Improving simultaneous multi-slice and 3D-EPI FMRI using rank-constrained reconstruction”, 2017 OHBM Annual Meeting, Vancouver, Canada
43. **Chiew M**, Graedel NN, Holmgren J, Fido D, Warnaby CE, Miller KL “Accelerated rank-constrained FMRI data reconstruction informed by external temporal measures” , 2017 ISMRM Annual Meeting, Honolulu, USA
44. **Chiew M**, Holmgren J, Graedel NN, Fido D, Warnaby CE, Miller KL “Correction of Gradient Artefacts in Simultaneous EEG-FMRI from Rotating Gradient Trajectories”, 2017 ISMRM Annual Meeting, Honolulu, USA
45. **Chiew M**, Jiang W, Larson P, Burns B, Jezzard P, Thomas MA, Emir UE “Density Weighted Concentric Rings K-Space Trajectory for 1H MRSI with gradient offset independent adiabatic pulses at 7T”, 2017 ISMRM Annual Meeting, Honolulu, USA
46. Emir UE, Burns B, **Chiew M**, Jezzard P, Thomas MA “Metabolite-Cycling Short-Echo Time Magnetic Resonance Spectroscopic Imaging using a Concentric Ring k-space Trajectory”, 2017 ISMRM Annual Meeting, Honolulu, USA
47. **Chiew M**, Holmgren J, Fido D, Warnaby CE, Miller KL “Recovering Brain Network Structure from Highly Under-Sampled FMRI using Electrophysiological Constraints”, BASP Frontiers Workshop 2017, Villars-sur-Ollon, Switzerland
48. Weizman L, Miller KL, Eldar YC, **Chiew M** “Acceleration of functional MRI data acquisition by separation of background and dynamic components” , 2016 ESMRMB Annual Meeting, Vienna, Austria
49. Guan C, **Chiew M** “Comparison of strict sparsity and low-rank constraints for accelerated FMRI data reconstruction”, 2016 ISMRM Annual Meeting, Singapore, Singapore
50. Graedel NN, **Chiew M**, Miller KL “Motion correction for functional MRI with hybrid radial-Cartesian 3D EPI”, 2016 ISMRM Annual Meeting, Singapore, Singapore
51. **Chiew M**, Graedel NN, Miller KL “Promoting incoherence of radial x-f point spread functions using randomly perturbed golden angles”, 2016 ISMRM Annual Meeting, Singapore, Singapore
52. **Chiew M**, Miller KL, “Revisiting adaptive regularization for self-calibrated, dynamic parallel imaging reconstruction”, 2016 ISMRM Annual Meeting, Singapore, Singapore
53. Guan C, **Chiew M** “Comparison of strict sparsity and low-rank constraints for accelerated FMRI data reconstruction”, 2016 ISMRM Workshop on Data Sampling & Image Reconstruction, Sedona, Arizona, USA
54. **Chiew M**, Graedel NN, Smith SM, Miller KL “Sub-second Whole Brain FMRI using a Hybrid Radial-Cartesian Acquisition and Low-Rank Reconstruction”, 2015 OHBM Annual Meeting, Honolulu, Hawaii, USA
55. **Chiew M**, Graedel NN, Smith SM, Miller KL “Acceleration of task-based FMRI using k-t FASTER”, 2015 ISMRM Annual Meeting, Toronto, Ontario, Canada
56. **Chiew M**, Graedel NN, McNab JA, Smith SM, Miller KL “3D Hybrid Radial-Cartesian Sampling for Improved Resting State FMRI using k-t FASTER”, 2015 ISMRM Annual Meeting, Toronto, Ontario, Canada
57. **Chiew M**, Smith SM, Koopmans PJ, Graedel NN, Blumensath T, Miller KL “k-t FASTER: Acceleration of FMRI Data Acquisition using Low Rank Constraints”, Young Investigator Award Presentation, 2015 International Society for Magnetic Resonance in Medicine, Toronto, Ontario, Canada
58. Graedel NN, **Chiew M**, McNab JA, Miller KL “FMRI using a 3D radial-Cartesian trajectory: spatio-temporal tunability and artefact correction”, 2015 ISMRM Annual Meeting, Toronto, Ontario, Canada

59. **Chiew M**, Smith SM, Graedel NN, Blumensath T, Miller KL “Accelerating Resting State fMRI Acquisition using k-t FASTER: In Vivo Validation” , 2014 OHBM Annual Meeting, Hamburg, Germany
60. Graedel NN, **Chiew M**, Clare S, Miller KL “Complex interactions of physiological noise and acceleration on tSNR in 3D EPI”, 2014 ISMRM Annual Meeting, Milan, Italy
61. **Chiew M**, Smith SM, Blumensath T, Miller KL “Joint multi-coil and low-rank constraints for accelerating fMRI data acquisition using k-t FASTER”, 2014 ISMRM Annual Meeting, Milan, Italy
62. **Chiew M**, Smith SM, Graedel NN, Blumensath T, Miller KL “Application of k-t FASTER for rank-constrained acceleration of in vivo fMRI data”, 2014 ISMRM Annual Meeting, Milan, Italy
63. **Chiew M**, Smith SM, Koopmans PJ, Graedel NN, Blumensath T, Miller KL “Low-Rank Acceleration of Resting fMRI Data Acquisition using k-t FASTER”, 2014 2nd Whistler Scientific Workshop on Brain Functional Organization, Connectivity and Behaviour, Whistler, Canada
64. Mansur A, **Chiew M**, Tam F, Schweizer T.A, Graham SJ “Analysis of fMRI Neurofeedback of the Primary Motor Cortex as a Function of Time During Kinesthetic Motor Imagery”, 2013 Canadian Stroke Congress, Montreal, Canada
65. **Chiew M**, Smith SM, Koopmans PJ, Blumensath T, Miller KL “Acceleration of Resting State fMRI Data Acquisition using Matrix Completion”, 2013 OHBM Annual Meeting, Seattle, Washington, USA
66. Mansur A, **Chiew M**, Tam F, Schweizer TA, Graham SJ “General linear model regression analysis of fMRI neurofeedback of the primary motor cortex using kinesthetic motor imagery”, 2013 OHBM Annual Meeting, Seattle, Washington, USA
67. **Chiew M**, Smith SM, Koopmans PJ, Blumensath T, Miller KL “k-t FASTER: A New Method for the Acceleration of Resting State fMRI Data Acquisition”, 2013 ISMRM Annual Meeting, Salt Lake City, USA
68. **Chiew M**, Miller KL, Koopmans PJ, Tunnicliffe EM, Smith SM, Blumensath T “Iterative Hard Thresholding and Matrix Shrinkage (IHT+MS) for Low-Rank Recovery of k-t Undersampled MRI Data”, 2013 ISMRM Annual Meeting, Salt Lake City, USA
69. **Chiew M**, Graham SJ “Direct SENSE imaging for fast, multi-echo fMRI over a restricted field of view”, 2012 ISMRM Annual Meeting, Melbourne, Australia
70. **Chiew M**, LaConte SM, Graham SJ “fMRI Neurofeedback of Kinesthetic Motor Imagery”, 2012 ISMRM Annual Meeting, Melbourne, Australia
71. **Chiew M**, Graham SJ “Physiological noise correlations in multi-echo fMRI data”, 2011 James Lepock Memorial Student Symposium, University of Toronto, Toronto, Canada
72. Rotenberg D, **Chiew M**, Ranieri S, Tam F, Graham SJ “Real-time Motion Correction by Optical Tracking for Reducing Spin-History Artifacts in fMRI”, 2011 OHBM Annual Meeting, Quebec City, Canada
73. **Chiew M**, LaConte SM, Graham SJ “Performance related brain differences in real-time fMRI neurofeedback of imagined hand motor activity”, 2011 ISMRM Annual Meeting, Montreal, Canada
74. **Chiew M**, Graham SJ “Effect of physiological noise on densely sampled multi-echo fMRI data”, 2011 ISMRM Annual Meeting, Montreal, Canada
75. **Chiew M**, LaConte SM, Graham SJ “Self-Regulation of Imagined Hand Motor Activity using Real-Time fMRI Neurofeedback”, 2010 OHBM Annual Meeting, Barcelona, Spain
76. **Chiew M**, Graham SJ “A novel multi-echo fMRI weighting strategy using principal component analysis for BOLD contrast sensitivity enhancement”, 2010 ISMRM Annual Meeting, Stockholm, Sweden
77. **Chiew M**, Kuo AY, Graham SJ “Modulating Brain Activity via Multi-Echo fMRI Neurofeedback”, 2009 ISMRM Annual Meeting, Honolulu, USA
78. **Chiew M**, Kuo AY, Graham SJ “Modulating Brain Activity via Multi-Echo fMRI Neurofeedback”, 2008 Imaging Network Ontario Symposium, Toronto, Canada

## Non Peer-Reviewed Publications

1. Magnetic Resonance in Medicine Highlights Magazine, Volume 6 (2021) - Editor
2. Magnetic Resonance in Medicine Highlights Magazine, Volume 5 (2020) - Editor
3. Q&A with Lia Hocke, Yunjie Tong, and Blaise Frederick", Magnetic Resonance in Medicine Highlights (2016)

December 16), <http://www.ismrm.org/qa-with-lia-hocke-yunjie-tong-and-blaise-de-frederick/>

4. Q&A with Klaus Scheffler and Philipp Ehses", Magnetic Resonance in Medicine Highlights (2016 July 21), <http://www.ismrm.org/qa-with-klaus-scheffler-and-philipp-ehses>

## Patents and Intellectual Property

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1. **Chiew M**, Emir UE "Simultaneous Multi-Slice MRSI using Density Weighted Concentric Ring Acquisition", US Patent Application (pending)
2. **Chiew M**, Miller KL, Smith SM, Blumensath T "Acceleration of Low-Rank MRI Data Acquisition", US Patent (Application 61/808696, Abandoned)

## Teaching and Supervision

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### Teaching & Invited Lectures

2021	Teaching Lecture, "Low Rank and Structured Low Rank Reconstruction Approaches", Image Reconstruction Weekend Educational Course, ISMRM 2021 Virtual Meeting
2014 - 19	Lecturer, EPSRC-MRC Centre for Doctoral Training in Biomedical Imaging University of Oxford
2013 - 19	Co-Organiser, Head Tutor and Lecturer, FMRIB Graduate Program - MRI Physics Department of Clinical Neurosciences, University of Oxford
2014 - 19	Faculty Lecturer, Physics Lectures FSL Course
2017	Teaching Lecture, "Measuring Connectivity with RS-FMRI", Connectivity: Structure & Function Weekend Educational Course, ISMRM 2017, Honolulu, Hawaii
2013	Teaching Lecture, "MRI Basics and Diffusion Imaging" Hospital for Sick Children, University of Toronto
2013	Teaching Lecture, "Compressed Sensing", Teaching Session on Highly Accelerated FMRI ESMRMB 2013 Congress, Toulouse, France
2012 - 13	Tutor and Lecturer, FMRIB Graduate Program Department of Clinical Neurosciences, University of Oxford
2011	Teaching Lecture, "Fast Functional MRI", Annual MRI Retreat Sunnybrook Research Institute, University of Toronto
2010 - 11	Teaching Assistant, PHY231, Physics for the Life Sciences Department of Physics, University of Toronto
2010	Lab Demonstrator, PHY324 H1S, Practical Physics II Department of Physics, University of Toronto
2010	Invited Lecture, "Conversation with a Scientist", Summer Research Rounds Rotman Research Institute, University of Toronto

### Post-Doctoral Supervision

2021 -	Charles Millard, University of Oxford (starting October 2021)
2020 -	Mo Shahdloo, University of Oxford
2015 - 16	Lior Weizman, Visiting Fellow, Technion - Israel Institute of Technology (co-supervisor)

### Student Supervision



- 2019 - Xi Chen, DPhil Student, University of Oxford
- 2017 - S. Sophie Schauman, DPhil Student, University of Oxford
- 2016 - Harry Mason, DPhil Student, University of Oxford
- 2013 - 16 Nadine N. Graedel, DPhil Student, University of Oxford
- 2014 - 16 Charles Guan, Electrical Engineering, Stanford University (Undergraduate Thesis supervisor)

## Supervisory Committees

- 2019 - Pingyu Xia, PhD Committee, Purdue University

## Examinations

- 2021 Mar Conor Keogh, University of Oxford, DPhil Transfer of Status Assessor
- 2021 Jan Ying-Qiu Zheng, University of Oxford, DPhil Transfer of Status Assessor
- 2020 Dec Ryan Timms, University of Oxford, DPhil Confirmation of Status Assessor
- 2020 Dec Charles Millard, University of Oxford, DPhil Confirmation of Status Assessor
- 2020 Nov Thijs De Buck, University of Oxford, DPhil Transfer of Status Assessor
- 2020 Oct Evan Roberts, University of Oxford, DPhil Transfer of Status Assessor
- 2019 Dec Ryan Timms, University of Oxford, DPhil Transfer of Status Assessor
- 2019 Nov Evan Edmond, University of Oxford, DPhil Transfer of Status Assessor
- 2019 Oct Charles Millard, University of Oxford, DPhil Transfer of Status Assessor
- 2019 Jul Feng Qi, University of Oxford, DPhil Viva Voce Examination
- 2018 Dec Sven Jaeschke, University of Oxford, DPhil Confirmation of Status Assessor
- 2017 Nov Jack Allen, University of Oxford, DPhil Confirmation of Status Assessor
- 2017 Nov Joseph Woods, University of Oxford, DPhil Confirmation of Status Assessor
- 2017 Aug Caitlin O'Brien, University of Oxford, DPhil Transfer of Status Assessor
- 2016 Aug Jack Allen, University of Oxford, DPhil Transfer of Status Assessor
- 2015 Jan Wenchuan Wu, University of Oxford, DPhil Transfer of Status Assessor

## Professional Activities

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### Ad Hoc Reviewer

BMC Medical Imaging  
 Brain and Behavior  
 Brain Informatics  
 Frontiers in Neuroscience  
 Human Brain Mapping  
 IEEE Transactions on Medical Imaging  
 Journal of Cognitive Neuroscience  
 Journal of Magnetic Resonance Imaging  
 Journal of Medical Imaging  
 Magnetic Resonance in Medicine  
 Medical Image Analysis  
 Neural Computation

Neurocomputing  
NeuroImage  
Philosophical Transactions of the Royal Society B  
PLoS ONE  
ISMRM Annual Meeting Abstract Reviewer  
OHBM Annual Meeting Abstract Reviewer

## Service

2021 - Co-chair, ISMRM 2022 Image Acquisition Educational Table  
2020 - 23 Member, ISMRM Annual Meeting Program Committee  
2020 - Chair, WIN Working Group on Ethnic and Racial Diversity  
2020 - Member, WIN EDI Committee  
2019 - Editor, Magnetic Resonance in Medicine Highlights Magazine  
2017 - 20 WIN Methods Seminar Co-Organiser  
2013 - 18 MRI Scheduling Co-ordinator, FMRIB Physics Group, University of Oxford  
2010 - 11 Co-coordinator, Rotman Rounds, Rotman Research Institute

## Professional Affiliations

Royal Academy of Engineering, Research Fellow  
International Society for Magnetic Resonance in Medicine, Full Member  
Organization for Human Brain Mapping, Past Member  
European Society for Magnetic Resonance in Medicine and Biology, Past Member