

## Sean CL Deoni, PhD

### PERSONAL:

Memorial Hospital of Rhode Island  
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Web: [www.childimaginglab.org](http://www.childimaginglab.org) [www.babyimaginglab.com](http://www.babyimaginglab.com)

### EDUCATION:

1995-1999 Honours BSc. Medical Biophysics  
University of Western Ontario, London, Ontario, Canada

2000-2004 Ph.D. Medical Biophysics  
University of Western Ontario, London, Ontario, Canada  
*Thesis:* Measurement of Structure in the Deep Brain using MRI  
*Advisors:* Terry M. Peters, Brian K. Rutt

### ACADEMIC POSITIONS:

2005-2009 Postdoctoral Research Fellow  
Centre for Neuroimaging Sciences, Institute of Psychiatry, King's College London  
*Mentors:* Derek K. Jones, Steven C.R. Williams

2006-2008 Postdoctoral Research Fellow  
Oxford Centre for Functional Magnetic Resonance Imaging of the Brain, Oxford  
*Mentor:* Heidi Johansen-Berg

2009-2014 Assistant Professor of Engineering,  
School of Engineering, Brown University.

2014-2016 Director of Pediatric Radiology Research  
Children's Hospital Colorado

Associate Professor of Radiology,  
University of Colorado, Denver, School of Medicine

Adjunct Professor of Engineering,  
School of Engineering, Brown University.

2016- Director of MRI Research, Department of Pediatrics.  
Memorial Hospital of Rhode Island

Adjunct Professor of Engineering,  
School of Engineering, Brown University.

### REFEREED JOURNAL PUBLICATIONS:

1. **Deoni SC**, Rutt BK, Peters TM. (2003). Rapid Combined T1 and T2 Mapping using Gradient Recalled Echo Acquisition in the Steady State. *Magn. Reson. Med.* 49: 515-526.

2. **Deoni SC**, Peters TM, Rutt BK. (2004). Determination of Optimal Angles for Variable Nutation Spin-Lattice, T1, and Spin-Spin, T2, Relaxation Times Measurement. *Magn. Reson. Med.*, 51: 194-199.
3. **Deoni SC**, Peters TM, Rutt BK. (2004). Quantitative Diffusion Imaging with a Steady-State Free Precession Sequence. *Magn. Reson. Med.* 51: 428-433.
4. **Deoni SC**, Ward HA, Peters TM, Rutt BK. (2004). Rapid T2 Estimation using Phase-Cycled Variable Nutation Steady-State Free Precession. *Magn. Reson. Med.* 52: 435-439.
5. **Deoni SC**, Peters TM, Rutt BK. (2005). High Resolution T1 and T2 Mapping of the Brain in a Clinically Acceptable Time with DESPOT1 and DESPOT2. *Magn. Reson. Med.* 53: 237-241.
6. **Deoni SC**, Josseau MJC, Rutt BK, Peters TM. (2005). Visualization of Thalamic Nuclei on High Resolution, Multi-Averaged T1 and T2 Maps Acquired at 1.5T. *Hum. Brain Mapp.* 25: 353-359.
7. **Deoni SC**, Rutt BK, Peters TM. (2006). Synthetic T1-weighted Brain Image Generation with Incorporated Coil Intensity Correction using DESPOT1. *Magn. Reson. Imaging* 24: 1241-1248.
8. **Deoni SC**, Rutt BK, Parrent AG, Peters TM. (2007). Segmentation of Thalamic Nuclei using a Modified k-Means Clustering Algorithm and High Resolution Quantitative Magnetic Resonance Imaging at 1.5T. *Neuroimage.* 34: 117-126.
9. **Deoni SC**, Rutt BK, Jones, DK. (2007). Investigating the Effect of Exchange and Multi-Component T1 Relaxation on the Short Repetition Time Spoiled Steady-State Signal and the DESPOT1 Quantification Method. *JMRI* 25: 570-578.
10. **Deoni SC**, Catani M. (2007). Visualization of the Deep Cerebellar Nuclei using Quantitative T1 and p Magnetic Resonance Imaging. *NeuroImage.* 37:1260-1266.
11. **Deoni SC.** (2007). High Resolution T1 Mapping of the Brain at 3T with Driven Equilibrium Single Pulse Observation of T1 with High-Speed Incorporation of RF Field Inhomogeneities (DESPOT1-HIFI). *JMRI.* 26: 1106-1111 (2007).
12. **Deoni SC**, Rutt BK, Jones, DK. (2008). Investigating Exchange and Multi-Component Relaxation in Fully-Balanced Steady-State Free Precession Imaging. *Journal of Magnetic Resonance Imaging.* *JMRI.* 27: 1421-1429.
13. **Deoni SC**, Williams SCR, Jezzard P, Suckling J, Murphy DG, Jones DK. (2008). Standardized Structural Magnetic Resonance Imaging in Multicenter Studies using Quantitative T1 and T2 Imaging at 1.5T. *Neuroimage.* 40; 662-671.
14. **Deoni SC**, Rutt BK, Arun T, Pierpaoli C, Jones DK. (2008). Gleaning Multi-Component T1 and T2 Relaxation Information from Steady-State Imaging Data. *Magn. Reson. Med.* 60: 1372-1387.
15. McNab JA, Jbabdi S, **Deoni SC**, Douaud G, Behrens TE, Miller KL. (2009). High Resolution Diffusion Weighted Imaging in Fixed Human Brain Using Diffusion Weighted Steady-State Free Precession. *NeuroImage.* 46; 775-785.
16. Menke RA, Scholz J, Miller KL, **Deoni SC**, Jbabdi S, Matthews PM, Zarei M. (2009). MRI Characteristics of the Substantia Niagra in Parkinson's Disease: A Combined Quantitative T1 and DTI Study. *NeuroImage.* 47; 435-441.

17. **Deoni SC.** (2009). High Resolution T2 Mapping in the Presence of Large-Scale Bo Field Errors. *J. Magn. Reson. Imag.* 30; 411-417.
18. **Deoni SC.** (2010). Quantitative Relaxometry Of the Brain (Review). *Top. Magn. Reson. Imaging.* 21: 101-113.
19. **Deoni SC.** (2011). Magnetic Resonance Relaxation and Quantitative Measurement in the Brain. (Review). *Methods Mol. Biol.* 711: 65-108.
20. Kolind SH, **Deoni SC.** (2011). Rapid Three-Dimensional Multicomponent Relaxation Imaging of the Cervical Spinal Cord. *Magn. Reson. Med.* 65: 551-556.
21. **Deoni SC.** (2011). Correction of Main and Transmit Magnetic Field (B0 and B1) Inhomogeneity Effects in Multicomponent Driven Equilibrium Single Pulse Observation of T1 and T2. *Magn. Reson. Med.* 65: 1021-1035.
22. **Deoni SC,** Mercure E, Blasi A, Gasston D, Thomsson A, Johnson M, Williams SC, Murphy DG. (2011). Mapping Infant Brain Myelination with Magnetic Resonance Imaging. *J. Neurosci.* 31: 784-791.
23. Blasi A, Mercure E, Lloyd-Fox S, Thomson A, Brammer M, Sauter D, Deeley Q, Barker GJ, Renvall V, **Deoni SC,** Gasston D, Williams SC, Johnson MH, Simmons A, Murphy DG. (2011). Early Specialization for Voice and Emotion Processing in the Infant Brain. *Curr. Biol.* 21: 1220-1224.
24. Kitzler HH, Su J, Zeineh M, Harper-Little C, Leung A, Kremenutzky M, **Deoni SC,** Rutt BK. (2011) Deficient MWF Mapping in Multiple Sclerosis using 3D Whole-Brain Multicomponent Relaxation MRI. *NeuroImage.* 59: 2670-2677
25. Ecker C, Suckling J, **Deoni SC,** Lombardo MV, Bullmore ET, et al. (2012). Brain Anatomy and Its Relationship to Behavior in Adults with Autism Spectrum Disorder: A Multicentre Magnetic Resonance Imaging Study. *Arch. Gen. Psychiatry.* 69: 195-209.
26. Kolind S, Matthews L, Johansen-Berg H, Leite MI, Williams SCR, **Deoni SC,** Palace J. (2012) Myelin Water Imaging Reflects Clinical Variability in Multiple Sclerosis. *NeuroImage.* 60: 263-270.
27. Ecker C, Suckling **Deoni SC,** Lombardo MV, Bullmore ET, Baron-Cohen S, et. al. (2012) Brain Anatomy and Its Relationship to Behaviour in Adults with Autism Spectrum Disorder: A Multicentre Magnetic Resonance Imaging Study. *Arch. Gen. Psychiatry.* 69: 195-209
28. **Deoni SC,** Dean DC, Dirks H, Jerskey BA. (2012). Investigating White Matter Development in Infancy and Early Childhood using Myelin Water Fraction and Relaxation Time Mapping. *NeuroImage* 63:1038-1053.
29. **Deoni SC,** Matthews L, Kolind S. (2012). 1 Component? 2 Components? 3? Including a Non-Exchanging 'Free' Water Component in Multicomponent Driven Equilibrium Single Pulse Observation of T1 and T2 (mcDESPOT). *Magn. Reson. Med.* 70: 147-154.
30. Spader HS, Ellermeier A, O'Muircheartaigh J, Dean DC, Dirks H, Boxerman JL, Cosgrove GR, **Deoni SC.** (2013). Advances in Myelin Imaging with Potential Clinical Application to Pediatric Imaging. *Neurosurg. Focus.* 34: E9
31. **Deoni SC,** Dean DC, Piryatinsky I, O'Muircheartaigh J, Waskiewicz N, Lehman K, Han M, Dirks H. (2013). Breastfeeding and early white matter development: A cross sectional study. *NeuroImage.* 82: 77-86.

32. Dean DC, Dirks H, O'Muircheartaigh J, Walker L, Jerskey BA, Lehman K, Han M, Waskiewicz N, **Deoni SC**. (2013). Pediatric neuroimaging using magnetic resonance imaging during non-sedated sleep. *Pediatr. Radiol. In Press*.
33. Lai MC, Lombardo MV, Suckling J, Ruigrok AN, Chakrabarti B, Ecker C, **Deoni SC**, Craig MC, Murphy CG, Bullmore ET. (2013). Biological sex affects the neurobiology of autism. *Brain*. 136: 2799-2815.
34. Lamar M, Zhou XJ, Charlton RA, Dean D, Little D, **Deoni SC**. (2013). In Vivo Quantification of White Matter Microstructure in Aging: A Focus on Two Emerging Techniques. *Am. J. Geriatr. Psychiatry. In Press*.
35. Dean DC, O'Muircheartaigh J, Dirks H, Waskiewicz N, Lehman K, Walker L, Han M, **Deoni SC**. (2013). Modeling healthy male white matter and myelin development: 3 to 60 months of age. *NeuroImage*. 84: 742-752.
36. O'Muircheartaigh J, Dean DC, Dirks H, Waskiewicz N, Lehman K, Walker L, Han M, **Deoni SC** (2013). Interactions between white matter asymmetry and language during neurodevelopment. *J. Neurosci*. 33: 16170-16177.
37. Dean DC, Chen K, Jerskey BA, O'Muircheartaigh J. **Deoni SC**. (2013) Brain Differences in infants at differential risk for late-onset Alzheimer's Disease: A cross-sectional study. *JAMA Neurology*. 71: 11-22.
38. **Deoni SC**, Kolind SH. (2013) Investigating the Stability of mcDESPOT Myelin Water Fraction Values Derived using a Stochastic Region Contraction Approach. *Magn. Reson. Med*.
39. O'Muircheartaigh J, Dean DC, Dirks H, Waskiewicz N, Lehman K, Walker L, **Deoni SC** (2014). White Matter Development and Early Cognition in Babies and Toddlers. *Hum. Brain Mapp*. 35: 4475-4487
40. Suckling J, Henty J, Ecker C, **Deoni SC**, et al. (2014). Are Power Calculations Useful? A Multicentre Neuroimaging Study. *Hum. Brain. Mapp*. 35: 3569-3577
41. Dean DC, O'Muircheartaigh J, Dirks H, Waskiewicz N, Walker L, Doernberg E, Piryatinsky I, **Deoni SC**. (2014). Characterizing Longitudinal White Matter Development During Early Childhood. *Brain. Struct. Funct*. 220: 1921-1933
42. Ecker C, Shahidiani A, Feng Y, Daly E, Murphy C, D'Almeida V, **Deoni SC**, et al. (2014). The Effect of Age, Diagnosis, and their Interaction on Vertex-Based Measures of Cortical Thickness and Surface Area in Autism Spectrum Disorder. *J. Neural Transm*. 121: 1157-1170
43. Pouwels PJ, Vanderver A, Bernard G, Wolf NI, Dreha-Kulczewski SF, **Deoni SC**, Bertini E, et al. (2014) Hypomyelinating Leukodystrophies: Translational Research Progress and Prospects. *Ann. Neurol*. 76: 5-19
44. **Deoni SC**, Dean DC, Walker L, Dirks H, O'Muircheartaigh J. (2014) Nutritional Influences on Early White Matter Development: Response to Anderson and Burggen. *NeuroImage*. 100: 703-705
45. **Deoni SC**, Zinkstok JR, Daly E, Ecker C, Williams SCR, Murphy DG. (2014) White Matter Relaxation Time and Myelin Water Fraction Differences in Young Adults with Autism. *Psychol. Med*. 45: 795-805

46. **Deoni SC**, O'Muircheartaigh J, Elison JY, Walker L, Dorenberg E, Waskiewicz N, Piryatinsky I, Dean DC, Jumbe NL. (2014) White Matter Maturation Profiles Through Early Childhood Predict General Cognitive Ability. *Brain. Struct. Funct.*
47. Dean DC, O'Muircheartaigh J, Dirks H, Waskiewicz N, Lehman K, Piryatinsky I, Walker L, **Deoni SC**. (2015) Estimating Brain Age of Healthy Infants from Quantitative Myelin Water Fraction Maps. *Hum. Brain. Mapp.* 36: 1233-1244
48. **Deoni SC**, Dean DC, Remer J, Dirks H, O'Muircheartaigh J. (2015). Cortical Maturation and Myelination in Healthy Toddlers and Young Children. *NeuroImage.* 115: 147-161.
49. Correia S, Ahern DC, Rabinowitz AR, Farrer TJ, Smith Watts AK, Salloway S, Malloy PF, **Deoni SC**. (2015). Lowering the Floor on Trail Making Test B: Psychometric Evidence for a New Scoring Metric. *Arch. Clin. Neuropsychol.*
50. Stence NV, Mirsky DM, **Deoni SC**, Armstrong-Wells J. (2015). Paradoxical Centrally Increased Diffusivity in Perinatal Arterial Ischemic Stroke. *Pediatr. Radiol.*
51. Croteau-Chonka EC, Dean DC, Remer J, Dirks H, O'Muircheartaigh J, **Deoni SC**. (2016). Examining the Relationships between Cortical Maturation and White Matter Myelination Throughout Early Childhood. *NeuroImage.* 125: 413-421.
52. Kolind S, Seddigh A, Combes A, Russell-Schulz B, Tam R, Yogendrakumar V, **Deoni S**, Sintain NA, Traboulsee A, Williams SC, Barker GJ, Prex PA. (2015). Brain and Cord Myelin Water Imaging: A Progressive Multiple Sclerosis Biomarker. *NeuroImage Clin.* 9: 574-580.
53. Chevalier N, Kurth S, Doucette MR, Wiseheart M, **Deoni SC**, Dean DC, O'Muircheartaigh J, Blackwell KA, Munakata Y, LeBourgeois MK. (2016). Myelination is Associated with Processing Speed in Early Childhood: Preliminary Insights. *PLoS ONE.*
54. Dean DC, O'Muircheartaigh J, Dirks H, Travers BG, Adluru N, Alexander AL, **Deoni SC**. (2016). Mapping an Index of the Myelin G-Ratio in Infants using Magnetic Resonance Imaging. *NeuroImage.*
55. Kurth S, Dean DC, Achermann P, O'Muircheartaigh J, Huber R, **Deoni SC**, KeBourgeois MK. (2016). Increased Sleep Depth in Developing Neural Networks: New Insights from Sleep Restriction in Children. *Front. Hum. Neurosci.*
56. Martinex-Murcia FJ, Lai MC, Gorriz JM, Ramirez J, Young AM, **Deoni SC**, Ecker C, Lombardo MV, Baron-Cohen S, Murphy DG, Mullmore ET, Suckling J. (2016). One the Brain Structure Heterogeneity of Autism: Parsing out Acquisition Site Effects with Significance-Weighted Principal Component Analysis. *Hum. Brain. Mapp.*

***Publications as Part of the UE Autism Imaging Study (AIMS) Consortium:***

- A1. Chantiluke K, Christakou A, Murphy CM, Giampietro V, Daly EM, et al. (2014). Disorder-specific Functional Abnormalities during Temporal Discounting in Youth with Attention Deficit Hyperactivity Disorder (ADHD), Autism, and comorbid ADHD and Autism. *Psychiatry Res.* 30; 223: 113-120.
- A2. Lombardo MV, et al. (2010). Shared Neural Circuits for Mentalizing about the Self and Others. *J. Cogn. Neurosci.* 22: 1623-1635.

- A3. Lombardo MV, et al. (2010). Investigating the Predictive Value of Whole-Brain Structural MR Scans in Autism: A Pattern Classification Approach. *NeuroImage*. 49: 44-56.
- A4. Lombardo MV, et al. (2010). Atypical Neural Self-Representation in Autism. *Brain*. 133: 611-624.
- A5. Lai MC, et al. (2010). A Shift to Randomness of Brain Oscillations in People with Autism. *Biol. Psychiatry*. 68: 1092-1099.
- A6. Lombardo MV, et al. (2011). Specialization of Right Temporo-Parietal Junction for Mentalizing and Its Relation to Social Impairments in Autism. *NeuroImage*. 56: 1832-1388.
- A7. Lai MC, et al. (2011). A Behavioral Comparison of Male and Female Adults with High Functioning Autism Spectrum Conditions. *PLoS One*.
- A8. Langen M, et al. (2012). Fronto-Striatal Circuitry and Inhibitory Control in Autism: Findings from Diffusion Tensor Imaging Tractography. *Cortex*. 48: 183-193.
- A9. Sundram F, et al. (2012). White Matter Microstructural Abnormalities in the Frontal Lobe of Adults with Antisocial Personality Disorder. *Cortex*. 48: 216-229.
- A10. Christakou A, et al. (2013). Disorder-Specific Functional Abnormalities During Sustained Attention in Youth with Attention Deficit Hyperactivity Disorder (ADHD) and with Autism. *Mol. Psychiatry*. 18: 236-244.
- A11. Lai MC, et al. (2012). Individual Differences in Brain Structure Underpin Empathizing-Systemizing Cognitive Styles in Male Adults. *NeuroImage*. 61: 1347-1354
- A12. Lai MC, et al. (2012). Cognition in Males and Females with Autism: Similarities and Differences. *PLoS One*.
- A13. Ecker C, et al. (2012). Brain Surface Anatomy in Adults with Autism: The Relationship Between Surface Area, Cortical Thickness and Autistic Symptoms. *JAMA Psychiatry*. 70: 59-70.
- A14. Ecker C, et al. (2013). Intrinsic Gray-Matter Connectivity of the Brain in Adults with Autism Spectrum Disorder. *PNAS*. 110: 13222-13227
- A15. Chantiluke K. et al. (2014). Disorder-specific Functional Abnormalities during Temporal Discounting in Youth with Attention Deficit Hyperactivity Disorder (ADHD), Autism, and Comorbid ADHD and Autism. *Psychiatry Res*. 223: 113-120.
- A16. Larson FV. et al. (2015). Testing the 'Extreme Female Brain' Theory of Psychosis in Adults with Autism Spectrum Disorder with or without Comorbid Psychosis. *Arch. Clin. Neuropsychol*.

**BOOK CHAPTERS:**

2010. Quantitative Relaxometry of the Brain. In. *Topics in Magnetic Resonance Imaging*. Ed. C. Pierpaoli.
2011. Quantitative Imaging in the Brain. In. *Magnetic Resonance Neuroimaging: Methods and Protocols*. Ed. M Modo and JWM Bulte
2015. MRI Physics and Image Formation. In. *Magnetic Resonance Imaging of the Brain and Spine (5th Edition)*. Ed. SW Atlas.

2015. Modern Methods for Accurate T<sub>1</sub>, T<sub>2</sub>, and Proton Density MRI. In. Oxford Textbook of Neuroimaging. Ed. M. Filippi.

**GRANT SUPPORT:  
PENDING**

2017 - 2022 National Institutes of Health (NIDDK, USA)  
**Early Brain Development and Childhood Obesity**  
Co-PI  
Submitted June 2016

**CURRENT**

- 2016 - 2023 National Institutes of Health (NIH, USA) (\$6,162,950)  
**The Developing Brain: Influences and Outcomes (ECHO)**  
PI
- 2016 - 2018 Bill & Melinda Gates Foundation (\$1,878,000)  
**Phase 2 Proposal: Social Environment and Early Brain Development**  
PI
- 2015 - 2017 National Institutes of Health (NICHD, USA) (\$239,777)  
**R21 HD083944 Lead Exposure and Infant Brain Development**  
Co-PI
- 2015 - 2017 National Institutes of Health (NIA, USA) (\$453,637)  
**R21 AG048176 Myelin Markers and Modifiable Risks of Vascular Aging in African Americans**  
Co-I
- 2015 - 2020 National Institutes of Health (NICHD, USA) (\$3,284,051)  
**R01 HD083287: Probing the Neural Basis of Visual Working Memory in Early Development**  
Co-I
- 2012 - 2017 National Institutes of Health (NICHD, USA) (\$2,670,000)  
**R01 HD076589: Effects of Placental Transfusion on Early Brain Development**  
Co-PI
- 2014 - 2017 Bill and Melinda Gates Foundation (USA) (1,990,000)  
**OPP1120016: Pre and Post-Natal Factors Affecting Healthy Brain Development**  
PI
- 2011 - 2016 National Institutes of Health (NIA, USA)  
**K01 AG040192: Myelin and Vascular Risk on Prefrontal Structure and Function in Aging**  
Mentor

**COMPLETED**

- 2013 - 2014 Brown Institute for Brain Sciences (USA) (\$10,000)  
**Assessment of mcDESPOT Imaging of Stroke Recovery**  
Co-PI
- 2014 - 2015 Bill and Melinda Gates Foundation (USA) (\$100,000)

**OPP1119223: Nonlinear Mixed Modeling of Early Neurodevelopment**

PI

2005 - 2008 Canadian Institutes of Health Research Post-Doctoral Fellowship (\$150,000)

**Tract-Specific Measures of T<sub>1</sub> and T<sub>2</sub> in Autism**

PI

2008 - 2009 Canadian Institutes of Health Research (CAN) (\$70,000).

**Myelin Imaging with Application to Alzheimer's Dementia**

Co-I

2009 - 2011 Alzheimer's Association (USA) (\$80,000).

**Imaging Myelin Loss Associated with Alzheimer's Disease**

PI

2008 - 2013 Medical Research Council (UK) (£1,460,000).

**Imaging Myelin Development in Normal and Autistic Neurodevelopment**

PI

2012 - 2017 Wellcome Trust: Sir Henry Wellcome Postdoctoral Fellowship

**Emergence of Brain Networks and Connectivity**

Mentor

2012 - 2013 Jacobs Foundation (SWE) (\$50,000)

**Sleep and White Matter Maturation in Childhood & Early Adolescence**

PI

2012 - 2013 General Electric Medical Systems (USA) (£260,000)

**Establishing the Reproducibility of DESPOT and mcDESPOT**

PI

2012 - 2013 Bill and Melinda Gates Foundation (USA) (\$100,000)

**Effects of Placental Transfusion on Early Brain Development**

Co-PI

2009 - 2014 National Institutes of Health (NIMH, USA) (\$1,950,000)

**Investigation of Early Biomarkers of Bipolar Conversion**

Co-I

2009 - 2014 National Institutes of Health (NIMH, USA) (\$2,401,388)

**Imaging White Matter Maturation in Healthy Neurodevelopment**

PI

**INVENTIONS & INTELLECTUAL PROPERTY**

- 1) Title: A Fast Method for Combined T<sub>1</sub> and T<sub>2</sub> Mapping.  
Inventors: **Deoni SCL**, Rutt, BK. and Peters, TM.  
Status: Patent Number: US 20050256393 (Licensed by GE Healthcare)
- 2) Title: Quantitative Diffusion Imaging with an SSFP Sequence.  
Inventors: **Deoni SCL**, Peters, TM. and Rutt, BK.  
Status: Patent Pending
- 3) Title: A Fast Method For Correcting Transmit Radio-Frequency Field



- Inhomogeneities.  
 Inventors: **Deoni SCL.**  
 Status: Patent Pending
- 4) Title: A Method for Receive Field Inhomogeneity Correction  
 Inventors: **Deoni SCL**, Brady M, Noterdaeme N  
 Status: In Application.
- 5) Title: Nutritional Supplement for Promoting Myelin Development  
 Inventors: **Deoni SCL**, Schnieder N., Nestec.  
 Status: In Application

### COMMITTEE & SERVICE

Chair, Organizing Committee. International Workshop on Advanced White Matter Imaging Reykjavik, Iceland (2011)  
 Executive Committee, Brown MRI Facility (2011 - 2014)  
 ISMRM Moderator (2009 - present)  
 Brown University School of Engineering Admission Committee (2012-2014)  
 Brown University School of Engineering Common Curriculum Committee (2014)

### PROFESSION ORGANIZATIONS

Member, International Society for Magnetic Resonance in Medicine (2001 - present)  
 Member, Organization for Human Brain Mapping (2005 - present)  
 Member, Society for Neuroscience (2012 - present)  
 Treasurer, White Matter Study Group, International Society for Magnetic Resonance in Medicine (2008-2012)  
 Educational Committee, International Society for Magnetic Resonance in Medicine (2008 - present)

### REVIEW & REFEREE WORK

2004 - Present Reviewer for Magnetic Resonance in Medicine  
 2004 - Present Reviewer for Journal of Magnetic Resonance  
 2005 - Present Reviewer for Magnetic Resonance Imaging  
 2006 - Present Reviewer for Human Brain Mapping  
 2008 - Present Reviewer for NeuroImage  
 2012 - Present Reviewer for Journal of Neuroscience  
 2014 - Present Reviewer for Brain, Structure and Function  
 2014 - Present Reviewer for Nature Neuroscience  
 2014 - Present Biomedical Engineering Grant Review Panel, National Science Foundation  
 2015 - Present Ad-Hoc Reviewer, Bill & Melinda Gates Foundation

### TEACHING RECORD

#### COURSES TAUGHT:

Course Number	Course Title	Role	Years
ENGN051	Electricity & Magnetism	Co-Taught (2)	Fall 2009
ENGN003	Introduction to Engineering	Co-Taught (4)	Fall 2010
ENGN052	Electric Circuits and Signals	Co-Taught (2)	Spring 2011-2013
ENGN1930N	Introduction to Neuroimaging	Developed and Taught	Spring 2010, Fall 2012-2014

Course Number	Course Title	Role	Years
ENGN1930B	Photonics & Biophotonics	Developed and Taught	Spring 2013

**STUDENT SUPERVISION:**

Name	Project Title	Year
<b>Post-Doctoral Fellows</b>		
Jonathan O’Muircheataigh	Development of Functional Connections in Early Childhood	2012 - 2014
Jonathan Lee	Cognitive Maturation in Infants	2013 - 2015
Irene Piryatinsky	Cognitive Maturation in Infants	2010-2013
Shannon Kolind	Myelin Imaging in Multiple Sclerosis	2009-2012
<b>PhD Students</b>		
Douglas Dean	Modelling Neurodevelopment	2009 - 2014
Lindsay Walker	Neurodevelopment in Infants & Young Children	2012 - 2014
Elise Croteau-Chonka	Cortical Maturation in Early Neurodevelopment	2014 -
Asal Shahdilani	Neurodeveloping in Infants with Autism	2010 - 2014
<b>PhD Students (Co-Supervised)</b>		
Joan Coward	Cerebellar Connections in Autism	2006 - 2008
Catherine Mallik	High Resolution Quantitative Imaging in Alzheimer’s Disease	2006 - 2009
Catherine Traynor	Thalamo-Cortical Connections in Epilepsy	2006 - 2010
<b>Undergraduate Honours Thesis Students</b>		
Hayley Sparks	Neurodevelopmental Differences In Multiplex Families	2013 - 2014
Justin Remer	APOE and White Matter Development	2013 - 2014
Justin Juan	Brain Development and Sleep	2013 - 2015
Justin Semonsen	Including MT Effects in mcDESPOT	2012 - 2013
Yonha Kim	Early Development in Children with Autism	2013 - 2014
Einat Brenner	Brain Structure and the Triad of Deficits in Autism Spectrum Disorders	2013 - 2014
Michelle Han	Bilingualism and Brain Development	2011 - 2012
Francis Kim	Infant Brain Development	2010 - 2011