

Curriculum Vitae

Douglas Owen Cheyne, PhD

Senior Scientist
Program in Neurosciences and Mental Health
Hospital for Sick Children Research Institute
Toronto, Canada

Professor
Department of Medical Imaging
University of Toronto

Contact information:

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Theresa Dudley
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Email: theresa.dudley@sickkids.ca

Education

1988	PhD	Simon Fraser University
1984	MA	Simon Fraser University
1981	BSc	University of Waterloo

Post-doctoral Training

1991 - 1993	Postdoctoral Research Fellow, CTF Systems Inc., Vancouver, B.C.
1988 - 1990	Postdoctoral Research Fellow, Neurological University Clinic, Vienna, Austria

Academic Awards:

1991 – 1993	NSERC Industrial Research Fellowship
1988 – 1990	NSERC Postdoctoral Fellowship

Academic and Professional Appointments

2018 -	Honorary Professor, Department of Cognitive Science, Macquarie University, Sydney, Australia
2015 -	Professor, Department of Medical Imaging, Faculty of Medicine, University of Toronto, Canada
2015 -	Professor (cross-appointed), Department of Speech-Language Pathology, University of Toronto, Canada
2015 -	Professor (cross-appointed), Institute of Biomedical Engineering, University of Toronto, Canada
2011 -	Associate Scientific Staff, Division of Neurology The Hospital for Sick Children, Toronto, Canada
2009 -	Adjunct Professor, Centre for Vision Research, York University, Toronto, Canada
2002 -	Member, Institute of Medical Science, University of Toronto, Canada
2001 -	Senior Scientist, Hospital for Sick Children Research Institute, Toronto, Canada
2008 - 2015	Associate Professor (cross-appointed), Institute for Biomaterials and Biomedical Engineering, University of Toronto, Canada
2001 - 2015	Associate Professor, Department of Medical Imaging, Faculty of Medicine, University of Toronto, Canada
2002 - 2008	Associate Professor (cross-appointed), Department of Psychology, University of Toronto, Canada
1995 - 2001	Adjunct Professor, School of Kinesiology, Simon Fraser University
1994 – 2001	Research Scientist, CTF Systems Inc. Port Coquitlam, BC
1991 - 1994	Adjunct Professor, Psychology Department, Simon Fraser University
1990 - 1991	Visiting Professor, Department of Psychology, Simon Fraser University

Academic Activities

Editorial Boards and Memberships

- Associate Editor, *Frontiers in Human Neuroscience* (2019 -)
- Review Editor, *Frontiers in Brain Imaging Methods* (2013 -)
- Editorial Board, *NeuroImage* (2009 - 2012)
- Review Editor, *Frontiers in Human Neuroscience* (2010 -2019)
- Board Member, International Advisory Board for Biomagnetism (2006 -)
- Director, Canada Magnetoencephalography Consortium (2011 - 2012)
- Advisory Committee, Program in Neurosciences and Mental Health, SickKids Research Institute, 2006 - 2010
- Member, International Society for the Advancement of Clinical MEG (2007 -)
- Member, Society for the Neural Control of Movement (2006 -)
- Member, Cognitive Neuroscience Society (2004 -)
- Member, Organization for Human Brain Mapping (2001 -)
- Member, Society for Neuroscience (1995 -)

Conference Organization

- Scientific Program Committee, 22nd International Conference of Biomagnetism, Birmingham, UK, August, 2022
- Scientific Program Committee, 21st International Conference of Biomagnetism, Philadelphia, PA, USA, August, 2018
- Scientific Committee, 12th International Conference on Cognitive Neuroscience (ICON XII), Brisbane, Australia, July, 2014
- Scientific Program Committee, 19th International Conference of Biomagnetism, Halifax, Canada, August, 2014
- Scientific Program Committee, 18th International Conference of Biomagnetism, Paris, France, August, 2012
- Organizer, Symposium on MEG. MITACS-Fields Conference on Medical Imaging, Toronto, Canada, June, 2011
- Scientific Program Committee, 16th International Conference of Biomagnetism, Sapporo, Japan, August, 2008
- Conference Co-Chair, 15th International Conference of Biomagnetism, Vancouver, Canada, August, 2006
- Scientific Program Committee Chair, 15th International Conference of Biomagnetism, Vancouver, Canada, August, 2006

Scientific Review

- Canadian Institutes of Health Research (CIHR) – Medical Physics and Imaging (MPI) Review Committee (Sept 2019 -)
- Canadian Institutes of Health Research (CIHR) – Doctoral Research Awards, 2016, 2017, 2018
- National Institutes of Mental Health (NIMH) – Special Panel: Brain Initiative in Human Brain Imaging, June 2015
- Natural Sciences and Engineering Research Council (NSERC) – Discovery Grants External reviews
- Canadian Institutes of Health Research (CIHR) – Canadian Research Chairs
- Canadian Institutes of Health Research (CIHR) – Neurosciences A (NSA) Review Committee, Spring 2009
- National Institutes of Health (NIH) – Study Panel on Electromagnetic Devices, 2007
- National Science Foundation (NSF) – CRCNS Grant Review Panel, 2009, 2010
- National Institutes of Health (NIH) – Study Panel on Electromagnetic Devices, 2009
- National Science Foundation (NSF) – Research Grants, 2009, 2010
- Wellcome Foundation – Research Grants
- Human Frontier Sciences Program – Research Grants and Short and Long Term Fellowships

Student and Staff Supervision:**Research Associates and Laboratory Staff**

Cecilia Jobst, MSc	SickKids, Research Project Manager	Supervisor	2011 –
Anisha Viswanathan, MSc	SickKids, Clinical Research Project Coordinator	Co-supervisor	2021 – 2022
Stefan Bostan, BSc	Trinity College (Medicine), Summer Research Student	Supervisor	2012 – 2018
Marc Lalancette, MSc	SickKids, MEG Lab Manager	Co-supervisor	2008 – 2016
Rita Al-Loos	Ryerson University, Research Student	Supervisor	2015 – 2020
Kelly Rombough	SickKids, Clinical Research Project Assistant	Supervisor	Fall 2017
Soonji Kwon, BSc	SickKids, Research Assistant	Supervisor	2015 – 2016
Vladimir Grouza, BSc	SickKids, Research Technologist	Supervisor	2015 - 2015
Pierre Boucher, MSc	SickKids, Research Technologist	Supervisor	2014 – 2015
Zhengkai Chen, MSc	SickKids, Research Technician	Supervisor	2011 – 2013
Silvia Isabella, MSc	SickKids, Research Assistant	Supervisor	2012 – 2013
Matt McDonald, BSc	SickKids, Research Technician	Co-supervisor	2008 – 2011
Maher Quraan, PhD	SickKids, Research Associate	Supervisor	2007 – 2009
Sonya Bells, MSc	SickKids, Research Technician	Supervisor	2006 – 2008
Andreea Bostan, BSc	SickKids, Research Technician	Supervisor	2005 – 2007
Anthony Herdman, PhD	SickKids, Research Associate	Supervisor	Summer 2005
William Gaetz, PhD	SickKids, Research Associate	Supervisor	2003 – 2006

Post-doctoral fellows

Silvia Isabella, PhD	SickKids, Post-doctoral fellow	Supervisor	2020 –
Fatemeh Mollaei, PhD	SickKids, Post-doctoral fellow	Supervisor	2019 – 2021
Sabah Master, PhD	SickKids, Post-doctoral fellow	Supervisor	2013 – 2017
Natasha Alves-Kotzev, PhD	SickKids, Post-doctoral fellow	Supervisor	2010 – 2013
Paul Ferrari, PhD	SickKids, Post-doctoral fellow	Supervisor	2008 – 2011
Fil Cortese, PhD	SickKids, Post-doctoral fellow	Co-supervisor	2007 – 2010
Colleen Dockstader, PhD	SickKids, Post-doctoral fellow	Co-supervisor	2003 – 2009
Michael Jurkiewicz PhD	SickKids, Post-doctoral fellow	Supervisor	2005 – 2006
William Gaetz, PhD	SickKids, Post-doctoral fellow	Supervisor	2001 – 2003

Graduate Students

Prisca Hsu	University of Toronto, IMS MSc	Co-Supervisor	2021 –
Susana Wu	University of Toronto, IMS, MSc	Committee member	2021 –
Fhran Alanazi	University of Toronto, Physiology, PhD	Committee member	2021 –
Jessica Schultz	University of Toronto, IBBME MSc	Supervisor	2020 –
Simon Dobri	University of Toronto, Medical Biophysics PhD	Committee member	2017 –
Irene Harmsen	University of Toronto, MD-PhD Program	Committee member	2017 – 2021
Julianne Baarbé	University of Toronto, IMS PhD	Committee member	2015 – 2021
Shaquile Nijjer	University of Toronto, IBBME MSc	Supervisor	2019 – 2020
Silvia Isabella	University of Toronto, IMS PhD (IBBME-collab).	Supervisor	2013 – 2020
Samantha D'Souza	University of Toronto, Rehabilitation Sciences MSc	Co-supervisor	2013 – 2016

André Chevrier	University of Toronto, IMS PhD	Supervisor	2010 – 2016
Anna Mersov	University of Toronto, S-LP MSc	Co-supervisor	2013 – 2015
Richard Wennberg	University of Toronto, PhD	Supervisor	2006 – 2014
Shahab Jamali	University of Toronto, IMS, PhD	Committee member	2008 – 2013
Calvin Lau	University of Toronto, IBBME M.Sc.	Committee member	2012 – 2013
Daniel Wong	University of Toronto, IBBME PhD	Committee member	2009 – 2012
Kim Saliba	University of Toronto / OISE, PhD	Co-supervisor	2008 – 2012
Yuwen Hung	University of Toronto, Psychology, PhD	Committee member	2008 – 2011
Christina Popovich	University of Toronto, IMS, M.Sc.	Co-supervisor	2007 – 2010
Sheena Luu	University of Toronto, IBBME PhD	Committee member	2008 – 2009
Deryk Beal	University of Toronto, S-LP, PhD	Committee member	2007 – 2010
Timothy Bardouille	University of Toronto, IMS PhD	Committee member	2005 – 2010
Vyacheslav Murzin	Florida Atlantic University, CCS, PhD	Committee member	2005 – 2010
Paul Ferrari	Florida Atlantic University, CCS, PhD	Committee member	2005 – 2008
Daniel Wong	University of Toronto, IBBME M.Sc.	Committee member	2006 – 2008
Cathy Nangini	University of Toronto, Med Biophysics, PhD	Committee member	2004 – 2007
Chris Heyn	University of Toronto, IMS, PhD	Committee member	completed 2006
Michael Gaetz	Simon Fraser , Kinesiology, PhD	Committee member	completed 2000
Kelly Jantzen	Simon Fraser , Kinesiology, Ph.D.	Committee member	completed 1999
Ronald Gordon	Simon Fraser , Psychology, PhD	Committee member	completed 1997
Trac Hoang	Simon Fraser, Eng. Science, MA	Committee member	completed 1997
Edward Rzempoluck	Simon Fraser, Psychology, MA	Committee member	completed 1993

Undergraduate Co-op, Summer Students and Internships

Garima Sharma	Neurosciences, U Toronto	Volunteer	Fall 2021
Anton Hung	Neurosciences, Western University	Supervisor	Summer 2021
Merron Woodbury	Neurosciences, McGill University	Supervisor	Summer 2019
Tina Jiao	Kinesiology, U. Waterloo, Co-op Student	Supervisor	Summer 2019
Samantha Goncalves	Human Biology, U Toronto	Supervisor	Fall 2018
Sara Taghizadeh	Biomedical Engineering, U Toronto	Supervisor	Summer 2018
Merron Woodbury	Neurosciences, McGill University	Supervisor	Summer 2018
Carolina Barrera	MITACS Globalink Summer Scholar	Supervisor	Summer 2017
Tatjana Kay, BSc	U Toronto, volunteer	Supervisor	Summer 2016
Ahmad Mousa	CREMS Scholar, U Toronto	Supervisor	2016 - 2018
Valerie (Yi) Pu, BSc	Macquarie University, visiting PhD student	Co-supervisor	Summer 2016
Candice Meng	Medical Engineering, Toronto, Research Student	Supervisor	Winter 2016
Soonji Kwon, BSc	University of Toronto, IBBME-USRP Studentship	Supervisor	Summer 2015
Stefan Bostan	U Toronto NSERC USRA Studentship	Supervisor	Summer 2015
Ze-chuan He	Engineering, U. Waterloo, Co-op Student	Supervisor	Summer 2012
Ze-chuan He	Engineering, U. Waterloo, Co-op Student	Supervisor	Summer 2011
Natascha van Lieshout	Engineering, U. Waterloo, Co-op Student	Supervisor	Spring 2011
Philip McCarthy	Engineering, U. Waterloo, Co-op Student	Supervisor	Fall 2010

Chris Colvin	University of Toronto, IBBME Internship	Supervisor	Summer 2010
Natascha van Lieshout	Engineering, U. Waterloo, Co-op Student	Supervisor	Summer 2010
Pierre Varache	Biomed. Eng, U. Mediterranee (France), Internship	Supervisor	Summer 2009
Brad Moores	Computer Engineering, U. Waterloo, Co-op Student	Supervisor	2006, 2007
Patrick McVeigh	Physics, U. Waterloo, Co-op Student	Supervisor	2005 – 2006
Andreea Bostan	Neurosciences, U. of Toronto, Summer student	Supervisor	2005 - 2006
Timothy Orr	Systems Engineering, U. Waterloo, Co-op Student	Supervisor	Fall 2004/2005
Volker Ressel	Neurology, Tuebingen, visiting PhD student	Supervisor	Fall 2004
Theresa Cooke	Max Plank Inst. Tuebingen (Germany) Lab Rotation	Supervisor	Summer 2003
Rebekah Nelson	Biology, McGill University, Summer Stud.	Supervisor	Summer 2003
Benjamin Klösel	Medicine, Karls-Eberhardt U. (Germany) Lab Rotation	Supervisor	Summer 2003
Kashyap Patel	Engineering, U. Waterloo, Co-op Student	Supervisor	Summer 2003
Kaushik Seethapathy	Engineering, U. Waterloo, Co-op Student	Supervisor	Winter 2003

Examination committees:

Jennifer Marshall	Pharmaceutical Sciences, U Toronto	PhD	Chair	Jan 11, 2021
Datta Goolaub	Dept Medical Biophysics, U Toronto	PhD	Chair	Jan 29, 2021
Miao Cao	Dept Medicine, U. of Melbourne	PhD	External Examiner	Jan 10, 2021
Elvis Wianda	Dept Medical Biophysics, U Toronto	PhD	External Examiner	July 2, 2019
Benjamin Elgie	Dept Neuroscience, McGill University	PhD	External Examiner	July 26, 2018
Ayda Ghahremani	Institute of Medical Sciences, U Toronto	PhD	External Examiner	March 12, 2018
Chris Roy	Dept Medical Biophysics, U Toronto	PhD	Chair	August 29, 2017
Diellor Basha	Institute of Medical Sciences, U Toronto	MASc	External Examiner	Dec 26, 2016
Tim Zeyl	IBBME, U Toronto	PhD	Internal Examiner	Dec 2015
Eric Tsang	Institute of Medical Sciences, U Toronto	PhD	Internal Examiner	April 2012
Lily Riggs	Psychology, U Toronto	PhD	Chair	April 2012
Andrew Myrden	IBBME, U Toronto	MASc	External Examiner	Aug 2011
Adam Teitelbaum	Institute of Medical Sciences, U Toronto	MSc	Internal Examiner	Aug 2010
Kajeandra Ravichandiran	Institute of Medical Sciences, U Toronto	MSc	Chair	June 2009
Kelly Tai	IBBME, U Toronto	MASc	Internal Examiner	Sept 2008

Teaching – Lectures at U. Toronto

Clinical Engineering Instrumentation (BME – 1439) – Feb 7, 2007
 Clinical Engineering Instrumentation (BME – 1439) – Feb 8, 2008
 Clinical Engineering Instrumentation (BME – 1439) – Mar 4, 2009
 Clinical Engineering Instrumentation (BME – 1439) – Mar 10, 2010
 Clinical Engineering Instrumentation (BME – 1439) – Mar 9, 2011
 Clinical Engineering Instrumentation (BME – 1439) – Mar 14, 2012
 Clinical Engineering Instrumentation (BME – 1439) – Mar 20, 2013
 Clinical Engineering Instrumentation (BME – 1439) – Mar 12, 2014
 Clinical Engineering Instrumentation (BME – 1439) – April 1, 2015
 Clinical Engineering Instrumentation (BME – 1439) – Mar 2, 2016

Funding

Current Funding:

- Johnson B., **Cheyne D.**, Van Lieshout P., Ballard K., Proctor M., Harrison E., Civier O., Mollaei F., Wilson P., Anastasopoulou I. Waterloo Foundation UK) Motor Impairments Grants: “*Neural origins of a developmental motor disorder: A neuroimaging study of children with Childhood Apraxia of Speech (Developmental Verbal Dyspraxia)*”, \$111,275, 2022 – 2023.
- Cheyne, D., Dlamini N.**, Kassner A., Westmacott, R. CIHR Project Grant (PJT 173532): “*Investigating the neural basis of motor and cognitive disabilities following childhood stroke*”, \$749,700, 2020 – 2025.
- Cheyne D.** NSERC Discovery Grant (RGPIN-2019-05702): “*Understanding the neural basis of motor development in early childhood*”, \$198,000 2019 – 2025.
- Cheyne D.**, Borschel G., Chau T, Donner E., Van Lieshout P. CIHR Project Grant (PJT – 155988): “*Non-invasive imaging of sensorimotor plasticity following cranial nerve repair*” \$673,200, 2018 – 2024.

Previous Funding (1996 - 2019):

- Johnson B., **Cheyne D.**, Van Lieshout P. Australian Research Council - Discovery Grant: “*Speech production in the developing brain*”, AUS\$338,000, 2017 – 2019.
- Cheyne D.** NSERC Discovery Grant: “*Think fast! The role of automaticity in the cognitive control of action*”, \$145,000, 2014 – 2019.
- Cheyne D.**, Lerch J., Otsubo H., Widjaja, E. Wennberg R. Ontario Brain Institute: “*Combining MEG and MRI to Improve Localization of Epileptic Brain Activity*”, \$166,500. 2013 – 2018.
- Cheyne D.**, deVeber, G. CIHR Operating Grant: “*Neural Correlates of Movement Disorders Resulting From Childhood Stroke*”, \$324,854, 2014 – 2017.
- Cheyne D.**, Master S. Hospital for Sick Children, Centre for Brain and Mental Health, Small Grants Program: Measuring the Stimulated Brain: Determining the Specificity of High Definition Electrical Brain Stimulation using Simultaneous MEG \$43,440. 2013 – 2014.
- Cheyne D.** Fehlings D. Ontario Brain Institute: Magnetoencephalography (MEG) Measures of Sensorimotor Plasticity in Hemiplegic CP during Constraint Induced Movement Therapy (CIMT) \$190,000. 2013 – 2015.
- Cheyne D.** NSERC Discovery Grant Neuroimaging of controlled and automatic processes in human motor control, \$180,335, 2009-2014
- Crawford JD., **Cheyne D.** CIHR Operating Grant, Mechanisms for eye-hand coordination in the human \$750,850, 2009-2014.
- Cheyne D.**, van Lieshout P., Chau T., Donner E., Pang EW., Steele C. NSERC-CIHR Collaborative Health Research Program Development of an MEG-compatible Articulography System for the Assessment of Brain Function and Oromotor Dynamics. \$411,184. 2010 – 2014.
- Cheyne D.** Lerch J., Otsubo H., Wennberg R. Ontario Brain Institute: New Approaches to Intractable Epilepsy – The Epilepsy Discovery Project: Combining MEG and MRI to improve localization of epileptic brain activity. \$65,480. 2012 – 2013.
- Pang E.W. **Cheyne, D.**, Roberts W. De Nil L., CIHR Operating Grant: “*Dissociating cognitive and motor aspects of language production in children using magnetoencephalography*”, \$776,210, 2008 – 2013
- Snead, OC., Campbell, M., **Cheyne, D.**, Dennis, M., Josselyn, S., Salter, M., Sled, J., Tannock, R., Taylor, M., Westall, C. Canadian Foundation for Innovation (CFI) – New Initiatives Fund “*Centre for the Investigation of Neuroplasticity and Developmental Disorders (CINDD)*”, \$7,400,293, 2006 – 2009.
- Wong A., Taylor MJ., **Cheyne, D.** Canadian Foundation for Innovation (CFI) – Leaders Opportunity Fund : “*An investigation of the neural mechanisms underlying amblyopia (lazy eye)*”, \$1,015,750, 2007-2010.

- Cheyne, D.** CIHR Operating Grant: “*Neuromagnetic Imaging Methods for Realistic Models of Brain Activity*”, \$229,864 2006 – 2009
- Cheyne, D.** NSERC Operating Grant, “*MEG Studies of Sensorimotor Rhythms in Humans*”, \$95,000, 2004 – 2009
- Schroff M., Taylor M., DeVeber G., **Cheyne D.** University of Toronto Dept. of Medical Imaging Seed Grant “*Neuroimaging and plasticity in the immature brain*”. \$105,000, 2005-2008.
- Sutcliffe T., Fehlings D., Schroff M. Logan W., **Cheyne D.** Physician’s Services Incorporated Foundation Grant “*Constraint Therapy in Children with Hemiplegia: Evaluating the longevity of motor improvement.*”, \$16,000, 2005 – 2006
- Robaey, P. Schachar, R. Barr, C. Perusse D., Simard, L. **Cheyne, D:** CIHR – New Emerging Team (NET) Grant, “*Inattention, impulsiveness, and restlessness in childhood: heritability, genetics, neuropsychology and psychophysiology (KIDNET)*”, \$1,249,585, 2002 – 2007
- Cheyne, D.** CIHR Operating Grant: “*Development of Neuromagnetic Imaging Methods for Measuring Oscillatory Brain Activity*”, \$276,054, 2003 – 2006
- Tannock R., Dockstader C. **Cheyne D.** Hospital for Sick Children – Psychiatry Endowment Fund Research Grant. “*Cerebellar and prefrontal cortical modulation of time perception in adolescents with attention-deficit / hyperactivity disorder.*” \$22,492, 2004-2005.
- Cheyne D.** NSERC Operating Grant “*Mapping the Human Sensorimotor Cortex using Spatially Filtered Magnetoencephalography.*” \$40,000, 2002 – 2004
- Roberts LE., Trainor L., **Cheyne D.**, Nahmias C. and Weinberg H., CIHR (MRC) – Research Grant “*Plasticity of sensory systems investigated by functional brain imaging in humans.*” \$315,000, 2000 – 2003
- Cheyne D.**, Kelso JAS., Deecke L., Takeda T. and Varela F. Human Frontier Science Program – Research Grant “*Brain dynamics of complex behaviour revealed by functional neuromagnetic imaging.*”, US \$600,000, 1997 – 2000
- Cheyne D.** and Varela F. MRC (Canada) – CNRS(France) International Scientific Exchange Award, “*MEG Studies of motor preparation and performance in humans.*” \$5,400, April – June, 2000
- Roberts LE., **Cheyne D.**, Nahmias C. and Weinberg H., MRC – Research Grant, “*Organization and plasticity of somatosensory cortex investigated by integrated functional imaging in humans.*”, \$207,000, 1997 – 2000

Invited Lectures

1. Imaging the neural control of movement and speech in early development. *MEG workshop*, Kanazawa University, Kanazawa, Japan, April, 2019
2. Developmental changes in movement related brain activity during early childhood. *MEG Workshop, Academia Sinica*, Taipei, Taiwan, October, 2016
3. Imaging the neural control of movement and speech in early development. University of Texas at Austin, Austin, TX, USA, April, 2016.
4. Novel approaches to the study of speech and facial motor control using MEG. Invited lecture. *Inaugural MEG Workshop*, Beijing Language and Culture University, Beijing, China, August 2015
5. MEG measures of sensorimotor plasticity in hemiplegic cerebral palsy following constraint-induced movement therapy. Invited lecture. *Annual CP-NET Workshop*, Toronto, Canada, March 2015
6. Think fast! The role of automaticity in the cognitive control of action. Dept. of Cognitive Sciences, Macquarie University, Sydney, Australia, July, 2014.
7. MEG studies of motor function across the lifespan. Invited speaker / faculty member. *6th MEG Autumn School*. University of Tübingen, Tübingen, Germany, October, 2013.
8. Introduction to beamformer analysis and the Brainwave toolbox. Invited speaker. *Quebec Brain Imaging Network (QBIN) Workshop*. University of Montreal, Montreal, Canada, April, 2013.
9. Development of a MEG compatible system for the measurement of speech kinematics. The MASK project. Keynote speaker, *6th International Conference on Speech Motor Control*, Groningen, The Netherlands, June, 2011.
10. Using MEG to study the cortical control of movement: Methodological advances and challenges for the study of early motor development. Keynote speaker, *ARC Centre for Cognition and its Disorders: Inaugural Workshop*. Macquarie Center for Cognitive Sciences, Sydney, Australia, January, 2011.
11. Magnetoencephalography (MEG) and its application to the study of movement-related brain activity. *Centre for Vision Research*, York University, Toronto, Canada, October, 2009.
12. Using MEG to study the cortical dynamics of human motor control. Invited Speaker. *Israel Human Brain Mapping Conference*, Bar-Ilan University, Tel Aviv, Israel, September, 2009.
13. Roundtable on training and standardization of clinical MEG protocols. *2nd Biannual Meeting of the International Society for the Advancement of Clinical MEG (ISACM)*. Athens, Greece, September, 2009.
14. Application of beamformers in clinical and cognitive neuroimaging *Workshop on inverse problems in brain imagery and multimodal data fusion*. Centre de Recherche en Mathématiques (CRM) de l'Université de Montréal, Montreal, Canada, August, 2009.
15. Recent advances in MEG analysis methods for the study of human motor control. *MEG in Marseille: Inaugural Symposium*. Université de la Méditerranée, Marseille, France, October, 2008
16. High-frequency gamma oscillations in motor cortex. *3rd Int. 4D Users Group Meeting*, Barcelona, Spain, July, 2008
17. Magnetoencephalography: Principles, techniques and clinical applications: *Clinical Neuroscience Grand Rounds*, Alberta Children's Hospital, Calgary, Canada, March, 2008
18. MEG studies of voluntary motor control. *Rotman Rounds* Rotman Research Institute, Baycrest Centre for Geriatric Care, Toronto, Canada, May, 2007
19. Applications of beamforming methods in basic and clinical MEG research. Massachusetts General Hospital, Boston, USA, April, 2007

20. Recent advances in MEG analysis methods for the study of human motor function. *CERNEC Lecture*, University of Montreal, Montreal, Canada, Dec, 2006
21. Spatial filtering approaches to neuromagnetic source reconstruction. Santa Fe Source Reconstruction Symposium, Bishop's Lodge, Santa Fe, NM, USA, June, 2005
22. Spatial filtering approaches to neuromagnetic source reconstruction: Theory and applications. Killam Lecture, Montreal Neurological Institute, Montreal, Canada, April 2005.
23. Dipole modeling versus event-related SAM: Effects of correlated brain activity. Symposium on Spatial filtering in *Biomagnetism 14th International Conference on Biomagnetism*. Boston, USA, 2004
24. MEG studies of ADHD. *NIH workshop on cerebellar-striatal-prefrontal dysfunction in ADHD*, NYU Child Study Center, New York City, USA; July, 2003.
25. MEG Studies of sensorimotor function. *CNRS Summer School: Principes de la MEG/EEG*, Paris, France, June 2001.
26. Neuromagnetic studies of human brain function and motor control. *Bioelectromagnetismo y Salud Publica: Efectos, Prevención, Diagnóstico y Tratamiento*. Alcalá de Henares, Spain, October, 1997.
27. Somatotopic organization of human somatosensory cortex: A comparison of EEG, MEG and fMRI methods. *Third Pan-Pacific Conference on Brain Topography*, Urayasu, Japan, April, 1997.
28. Magnetoencephalographic (MEG) studies of human brain function. *Annual Canadian Undergraduate Physics Conference*, University of Guelph, Guelph, Ontario, November, 1996.
29. Applications of magnetoencephalography to the study of motor function in humans. *Symposium on Biomagnetism, Annual meeting of the IEEE Engineering in Medicine and Biology Society (Japanese Chapter)* Tokyo, Japan., 1994

Publications

h-index = 45 (Google Scholar)

ORCID ID: 0000-0002-2663-498X

Peer-reviewed Journal Articles

2022 / in preparation

108. Anastasopoulou I., Van Lieshout P, **Cheyne D.** Johnson BW.,(2021) Speech kinematics and coordination measured with a MEG-compatible speech tracking system. *Frontiers in Neuroscience in preparation.*
107. Baarbé J, Brown MJN, Lizarraga KJ, Saha U, Drummond N, Tran S, Saravanamuttu J, Cheyne D, Hutchison WD, Chen R. (2021) Modulations of inferior frontoparietal theta and beta oscillations prior to lower limb motor blocks in Parkinson's disease and effects of dopaminergic medications. *In preparation for Movement Disorders.*

2021

106. Isabella S., Cheyne JA., **Cheyne D.** (2021) Unconscious learning of automatic inhibition is accompanied by frontal theta and sensorimotor interactions. *Frontiers in Human Neuroscience 15:* 786035.
105. Jobst C., D'Souza SA., Causton N., Master S., Switzer L., **Cheyne D.**, Fehlings D. (2021) Investigating somatosensory plasticity in hemiplegic cerebral palsy following constraint induced movement therapy. *Pediatric Neurology 126:* 80-88.
104. De Nil, L., Isabella S., Jobst C., **Cheyne D.** (2021). Complexity-dependent modulations of beta oscillations for speech and nonspeech movements. *Journal of Speech, Language and Hearing Research, Vol.64:2248-2260*
103. Mollaei F., Mersov A., Woodbury M., Jobst C., **Cheyne D.** De Nil, L. (2021). White matter microstructural differences underlying beta oscillations during speech in adults who stutter. *Brain and Language 215,* 104921.

2020

102. Pu Y., Cornwell BR., **Cheyne D.**, Johnson BW. (2020) Gender differences in navigation performance are associated with differential theta and high-gamma activities in the hippocampus and parahippocampus. *Behavioural Brain Research 391:* 112664.
101. Pu Y., **Cheyne D.**, Sun Y., Johnson BW. (2020) Theta oscillations support the interface between language and memory. *NeuroImage 215:* 116782.
100. Bells S., Isabella S., Brien D., Munoz D., Mabbott D., **Cheyne D.** (2020) Neural dynamics underlying saccade preparation and execution and their relation to reaction time and direction errors. *Human Brain Mapping 41:*1934-1949.
99. Johnson B., Jobst C., Al-Loos R., He W., **Cheyne D.** (2020) Individual differences in motor development during early childhood: A magnetoencephalography study. *Developmental Science 23:*e12935.

2019

98. Blohm G., Alikhanian H., Gaetz, W., Goltz H., DeSouza J., **Cheyne D.**, and Crawford JD. (2019) Neuromagnetic signatures of the spatiotemporal transformation for manual pointing, *NeuroImage 197:*306-319.
97. Chevrier A., Bhajiwala M., Lipszyc J., **Cheyne D.**, Graham S., Schachar R. (2019) Disrupted reinforcement learning during post-error slowing in ADHD. *PLoS One 14(2):* e0206780.

96. Catapano J., Fung S.M., Halliday W., Jobst C., **Cheyne D.**, Ho E.S., Zuker R., Borschel G.H., Ali A. (2019) Treatment of neurotrophic keratopathy with minimally invasive corneal neurotization: long-term clinical outcomes and evidence of corneal reinnervation. British Journal of Ophthalmology 103:1724-1731
95. Isabella S., Urbain C., Cheyne JA., **Cheyne D.** (2019) Pupillary responses and reaction times index different cognitive processes in a combined Go/Switch incidental learning task. Neuropsychologia 127:48-56.

2018

94. Jobst S., Ferrari P., Isabella S., **Cheyne D.** (2018) BrainWave: A MATLAB toolbox for beamformer source analysis of MEG data. Frontiers in Neuroscience 12: 587.
93. Pu Y., Cornwell BR., **Cheyne D.**, Johnson BW. (2018) High-gamma activity in the human hippocampus during inter-trial rest periods of a virtual navigation task. NeuroImage 178: 92-103.
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198. Blohm G., Alikhanian H., Gaetz, W., Goltz H., DeSouza J., **Cheyne, D.**, and Crawford JD. (2016) MEG shows a progressive sensory-to-motor transformation for reaching in cortical space and time. Annual Meeting of the Society for Neuroscience, San Diego, USA.
197. Ferrari P., **Cheyne D.**, McManis M., Lee M., Perkins F., Clarke D. (2016). Utility of beamformer analysis in clinical MEG. American Epilepsy Society Annual Meeting, Houston, TX, USA.
196. Isabella S., Urbain C., Cheyne JA., **Cheyne D.** (2016). Cortical oscillations accompanying cognitive control in a response switching task using incidental learning. 20th Int. Conference on Biomagnetism, Seoul, Korea.
195. Mersov A., **Cheyne D.**, Jobst, C., deNil, L. (2016) Characterizing neural speech preparation of fluent and stuttered utterances in adults who stutter. Int. Clinical Phonetics and Linguistics Association Conference, June, 2016
194. Isabella S., Urbain C., Cheyne JA., **Cheyne D.** (2016). Implicit learning facilitates cognitive control in a response switching task. Annual meeting of the Canadian Association for Neuroscience, Toronto, ON, Canada.
193. Jobst C., He W., Tang H, Johnson B. and **Cheyne D.** (2016) MEG measures in preschool age children reveal developmental changes in primary motor cortex . Annual meeting of the Cognitive Neuroscience Society, New York, NY, USA.
192. Isabella S., Urbain C., Cheyne JA., **Cheyne D.** (2016). Implicit learning facilitates cognitive control in a response switching task. Annual meeting of the Cognitive Neuroscience Society, New York, NY, USA.

2015

191. D'Souza S., Master S., Jobst C., Switzer L., **Cheyne D.**, Fehlings D. (2015) Investigating Sensory Plasticity in Hemiplegic Cerebral Palsy following Modified Constraint- Induced Movement Therapy (mCIMT) 69th Annual Meeting of the American Academy for Cerebral Palsy and Developmental Medicine. Austin, TX, USA.

190. Jobst N. Alves N., Swan M., Haykal S., Zuker R., van Lieshout, P. Borschel G., **Cheyne, D.** (2015) Imaging a smile: A novel approach to measuring brain activity accompanying facial expressions. Annual Meeting of the Organization for Human Brain Mapping, Honolulu, HI, USA.
189. Master S., D'Souza S., Jobst C., Bostan S., Switzer L., Fehlings D., **Cheyne D.** (2015) MEG reveals normalization of somatosensory cortex following constraint therapy in hemiplegic CP. Annual Meeting of the Organization for Human Brain Mapping, Honolulu, HI, USA.
188. Isabella S., Ferrari P., Jobst, C., Cheyne JA., **Cheyne D.** (2015) Complementary roles of cortical oscillations in automatic and controlled processing. Annual Meeting of the Organization for Human Brain Mapping, Honolulu, HI, USA.
187. D'Souza S., Master S., Jobst C., Switzer L., Cheyne D, Fehlings D. (2015) Exploring sensorimotor plasticity in hemiplegic cerebral palsy following constraint-induced movement therapy. Canadian Paediatric Society Annual Meeting, June, Toronto Canada
186. Borschel GH., Catapano J., Scholl D, Zuker RM., Haykal S., Ho ES., Jobst C., **Cheyne DO.** Sensory re-innervation for hemifacial anesthesia using contralateral nerve transfers via side-to-end cross-face sural nerve grafts: A new approach to a difficult problem. 94th Annual meeting of the American Association of Plastic Surgeons, April, Scottsdale, AZ, USA

2014

185. Bostan S., Jobst C., Goltz H., Wong A., **Cheyne D.** (2014) An MEG study of visually-induced gamma oscillations and saccadic eye-movements using an MEG compatible high-speed eye-tracking system 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.
184. Ferrari P., Cressman E., Benites D., **Cheyne D.**, Crawford JD. (2014) Occipital beta-band oscillations reflect target location at movement onset during a delayed pointing task. 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.
183. Master S. Domi T., Jobst C., **Cheyne D.**, deVeber G. (2014) Cortical oscillatory changes associated with hand recovery following childhood stroke. 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.
182. **Cheyne D.** Ferrari P. (2014) How stable are gamma oscillations over time? Searching for a gamma "fingerprint" in the brain. 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.
181. Isabella S., **Cheyne D.** (2014) Cortical oscillations in inhibitory control: evidence for a differential role of gamma and theta band activity in performance monitoring. 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.
180. Isabella S., **Cheyne D.** (2014) Cortical oscillations in inhibitory control: evidence for a differential role of gamma and theta band activity in performance monitoring. Annual meeting of the Can. Soc. For Brain and Behavior and Cognitive Science, Toronto, ON, Canada.
179. **Cheyne D.**, Jobst C., Tesan G., Crain S., Johnson B. (2014) Bridging the gap in the neuroimaging of early motor development: Evidence from MEG studies in preschool age children . 19th Int. Conference on Biomagnetism, Halifax, NS, Canada.

2013

178. Lau C., Alves-Kotzev N., Chau T., **Cheyne D.** van Lieshout P. (2013) Magneto-articulography for the Assessment of Speech Kinematics (MASK): An MEG-compatible motion-tracking device for measuring brain activity during speech tasks 7th Annual meeting of the Canadian Association for Neuroscience, Toronto, Canada.
177. Isabella S., Ferrari P., Jobst C., Cheyne JA., **Cheyne D.** (2013) Cortical oscillations accompanying inhibitory control: Is response withholding different from response switching? 7th Annual meeting of the Canadian Association for Neuroscience, Toronto, Canada.

2012

176. Isabella S., Ferrari P., Jobst, C., Cheyne JA., **Cheyne D.** (2012) Cortical oscillations accompanying inhibitory control: Is response withholding different from response switching? 18th Int. Conference on Biomagnetism, Paris, France.
175. Ferrari P., **Cheyne D.** (2012) Cross-modal gating of sensorimotor networks revealed by Magnetoencephalography. 18th Int. Conference on Biomagnetism, Paris, France.
174. Alves N., Hotze F., Van Lieshout, P. Chau T., **Cheyne, D.** (2012) An MEG compatible system for the measurement of orofacial kinematics: The MASK system. 18th Int. Conference on Biomagnetism, Paris, France.
173. Jobst, C., Chen, Z., Van Lieshout, N., Ferrari P., **Cheyne D.** (2012) BrainWave: A Matlab toolbox for beamformer source analysis of MEG data. 18th Int. Conference on Biomagnetism, Paris, France.
172. Kadis D., Goshulak D., Pukonen M., Kroll R., De Nil L., Namasivayam A., Lerch P., **Cheyne D.**, Pang L. (2012) Neuromagnetic correlates of cortical thickness changes in children receiving therapy for motor speech disorders. 18th Int. Conference on Biomagnetism, Paris, France.
171. Otsubo H., Mohammed I., **Cheyne D.** (2012) Source localization using event related beamformer of magnetoencephalography for interictal spikes in pediatric neocortical epilepsy. IEEE Conference on Complex Medical Engineering Kobe, Japan.
170. **Cheyne D.**, Ferrari P., Cheyne JA. (2012) Cortical oscillations differentiate automatic and controlled processes in a speeded response switching task. 22nd Annual Meeting of the Society for the Neural Control of Movement, Venice, Italy.

2011

169. Alves N., Van Lieshout, P., **Cheyne, D.** (2011) Tracking oromotor dynamics using whole-cortex magnetoencephalogram sensors. The Hospital for Sick Children Research Institute Annual Scientific Retreat. Toronto, Canada.
168. Chevrier A, **Cheyne D.** Schachar R. (2011) fMRI of errors points to whole-brain parallel associative framework: the holobrain hypothesis. York International Vision Conference: Plastic Vision, York University, Toronto, Canada.
167. Greenberg A, Wang S., Chan J., Ferrari P, **Cheyne D.**, DeSouza J. (2011) Evoked response may differentiate the preparatory signals associated with pro-and anti-saccades: an MEG study York International Vision Conference: Plastic Vision, York University, Toronto, Canada.
166. Wang S., Ferrari P., Lalancette M., Simine E., Bellis S., **Cheyne D.** Fallah M., Tsotsos J., DeSouza J. (2011) Visually evoked responses after motion stimulus onset imply a velocity-dependent cortical representation in MT+: an MEG study. York International Vision Conference: Plastic Vision, York University, Toronto, Canada.
165. Ferrari P., **Cheyne D.** (2011) Cross-modal gating of sensorimotor networks revealed by Magnetoencephalography. York International Vision Conference: Plastic Vision, York University, Toronto, Canada.
164. **Cheyne, D.** Alves N., Ferrari P., Van Lieshout, P. (2011) Development of a MEG compatible system for the measurement of speech kinematics. The MASK project. 6th International Conference on Speech Motor Control, Groningen, The Netherlands.
163. **Cheyne D.**, Lennert T., Joliceour P. Martinez-Trujillo, (2011) Modulation of MEG evoked responses by target probability in early extrastriate visual and parietal cortices. Annual meeting of Neuroscience, Washington DC., USA.
162. Alikhanian H., Blohm G., Gaetz W., Goltz H., DeSouza J., **Cheyne D.**, Crawford JD. (2011) Localization of active brain areas using MEG during a reaching task Annual meeting of Neuroscience, Washington DC., USA.
161. Alves N., Van Lieshout, P., **Cheyne, D.** (2011) Tracking oromotor dynamics using whole-cortex magnetoencephalogram sensors. 34th Canadian Medical and Biological Engineering Society Conference. Toronto, Canada.
160. **Cheyne D.** Lerch J., Ferrari P., Mohamed I., Otsubo H. (2011) Modeling spatially extended cortical activity in MEG. Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada..

159. **Cheyne D.**, van Lieshout, N. (2011) Brainwave: A beamformer toolbox for MEG. Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada.
158. Pang EW., Memarian N., Ferrari P., MacDonald M., **Cheyne D.** (2011) Neural correlates of simple oromotor control underlying expressive language. Annual International Conference on Cognitive Neuroscience (ICON), Mallorca, Spain.
157. Lalancette M., Quraan M., **Cheyne D.** (2011) Evaluation of multiple sphere head models for MEG source localization Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada..
156. Ferrari P., **Cheyne D.** (2011) Spatiotemporal decomposition of neuromagnetic source images: A tool for the analysis of large-scale brain networks. Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada..
155. Fortier-Gauthier U., Grimault S., **Cheyne D.**, Jolicoeur P. (2011) cortical representation of tactile short-term memory revealed by load manipulation. Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada..
154. Wang S., Ferrari P., Lalancette M., Simine E., Bells S., **Cheyne D.** Fallah M., Tsotsos J., DeSouza J. (2011) Task related frontoparietal oscillatory activity underlying the visual perception of velocity change. Annual Meeting of the Organization for Human Brain Mapping, Quebec City, QC, Canada..
153. Fortier-Gauthier U., Grimault S., **Cheyne D.**, Jolicoeur P., (2011) Activations corticales soutenues lors de la période de rétention d'une tâche de mémoire à court terme tactile : étude en magnétoencéphalographie. 79th Congres of Association canadienne-française pour l'avancement des sciences (ACFAS) Sherbrooke, QC, Canada

2010

152. DeSouza, JFX, Wang SH., Simine E., Ferrari P., Lalancette M., Bells S., **Cheyne D.**, Fallah M., Tsotsos JK. Frontal cortex regions activated during detection of a subtle speed change: A MEG study. 20th Annual Rotman Conference: The frontal lobes, Toronto, Canada.,
151. Ferrari P. **Cheyne D.** MacDonald M., De Nil L., Roberts W. and Pang EW. (2010). Mapping the neurodynamics of speech production with MEG beamforming. Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
150. **Cheyne D.** Cheyne JA., Ferrari P. and Bells, S. (2010). Neural activity accompanying movement selection and response errors in a speeded motor response task. Annual Meeting of the Organization for Human Brain Mapping, Barcelona, Spain.
149. Grimault S., Brisson B., Fortier-Gautier U., **Cheyne D.** Jolicoeur P. (2010) Neuroanatomical dissociation between N2PC and SPCN: Evidence from Magnetoencephalography. Annual Meeting of the Cognitive Neuroscience Society, Montreal, QC, Canada
148. **Cheyne D.** Lerch J., Mohamed I., Ferrari P., Lalancette M., Pang EW., Otsubo H. (2010) Realistic models of spatially extended cortical activity in MEG. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
147. Wennberg R., **Cheyne D.** (2010) Effects of spike averaging and filtering on MEG dipole mapping of independent spike foci in temporal lobe epilepsy. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
146. Dockstader C., Tannock R., Davis KD., & McGrath P., **Cheyne D.** (2010) Sex-related differences in adaptation to aversive somatosensory stimulation in adolescents. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
145. Ferrari P., **Cheyne D.** Jantzen KJ., Kelso JAS., Fuchs A. (2010) Sensorimotor and auditory cortical activity during passive listening to rhythmic tone sequences. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
144. Ferrari P., Lalancette M., **Cheyne D.** (2010) Spatiotemporal decomposition of four-dimensional MEG beamformer source reconstructions. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
143. Mohamed I., Otsubo H., Ferrari P., Ochi A., Snead OC., **Cheyne D.** (2010) Neuromagnetic crossed cerebellar activation during seizures arising from the motor cortex. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.

142. Mohamed I., Otsubo H., Ferrari P., Snead OC., **Cheyne D.** (2010) Neuromagnetic imaging of ictal onset and propagation in pediatric focal epilepsy. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
141. Dockstader C., Tannock R., Davis KD., & McGrath P., **Cheyne D.** (2010) Sex differences in the adolescent somatosensory cortex to repeated electrical stimulation. 17th International Conference on Biomagnetism, Dubrovnik, Croatia.
140. Popovitch C, Dockstader C., **Cheyne D.**, Tannock R. (2010) Sex differences in the effects of attention on the neural response to non-painful sensory stimuli. Annual Meeting of the Canadian Pain Society (CPS), Calgary, AB, Canada.
139. Dockstader C., Tannock R., **Cheyne D.**, Davis KD., & McGrath P. (2010) Sex-related differences in the adolescent somatosensory cortex to repeated electrical events. Annual Meeting of the Canadian Pain Society, Calgary, AB, Canada.

2009

138. **Cheyne D.**, Lennert T., Cipriani R., Jolicoeur P. and Martinez-Trujillo, JC. (2009) Feature-based attention modulates MEG evoked responses in human visual cortex during target selection.. Annual meeting of Neuroscience, Chicago, IL, USA.
137. Goltz H., Cortese F., Hirji Z., **Cheyne D.**, Wong A. (2009) Neural correlates of local and global pattern perception in human amblyopia investigated with MEG. Annual meeting of Neuroscience, Chicago, IL, USA.
136. Cressman E., Ren L., Blohm G., **Cheyne D.** and Crawford JD.. (2009) Neural activation underlying saccades to visual and proprioceptive targets: an MEG study. 19th Annual Meeting of the Society for the Neural Control of Movement. Waikoloa, Hawaii, USA
135. Ferrari P., **Cheyne D.**, Jantzen KJ., Kelso, JAS. and Fuchs A. (2009) Dynamic cortical oscillations during rhythmic movements and auditory stimulation. 19th Annual Meeting of the Society for the Neural Control of Movement. Waikoloa, Hawaii, USA
134. **Cheyne D.**, Cheyne JA., Bells S., Carriere JAS., and Smilek D. (2009) Neuromagnetic imaging of cortical dynamics associated with response switching and response errors in a speeded motor task. 19th Annual Meeting of the Society for the Neural Control of Movement. Waikoloa, Hawaii, USA
133. Virji-Babul N., Moiseev A., **Cheyne D.** and Ribary U. (2009) Adults with Down syndrome show a right hemisphere dominance during right-handed voluntary movements. 15^h Annual Meeting of the Organization for Human Brain Mapping, San Francisco, USA.
132. Virji-Babul N., Moiseev A., Cheung T. Weeks D., **Cheyne D.** (2009) Understanding actions in others: the role of the mirror neuron system in Down syndrome. 42nd Annual Gatlinburg Conference, New Orleans, USA.
131. Robitaille N., Grimault S., Todd J., Marois R., **Cheyne D.**, Jolicoeur P. (2009) Multiple physiological markers of visual short-term memory: convergence and divergence. 9th Annual Meeting of the Vision Sciences Society, Naples FL, USA.
130. Blohm G., Gaetz, W., Goltz H., DeSouza J., Bells S., **Cheyne, D.**, and Crawford JD. (2009) Cortical oscillations in human posterior parietal cortex during visually-guided reach planning. 9th Annual Meeting of the Vision Sciences Society, Naples FL, USA.

2008

129. Martinez-Trujillo, JC., Lennert T., Cipriano R., Jolicoeur P. and **Cheyne D.** (2008) Mechanisms of target selection in the human brain. Annual meeting of Neuroscience, Washington DC., USA.
128. Ren L., Cressman E., Blohm G., **Cheyne D.** and Crawford JD. (2008) Cortical activation during visual memory-guided and hand-guided saccades: an MEG study. Annual meeting of Neuroscience, Washington DC., USA.
127. **Cheyne D.**, Bells S., Ferrari P., Gaetz W., Bostan AC. (2008) Self-paced movements induce high-frequency gamma oscillations in primary motor cortex. 16th International Conference on Biomagnetism, Sapporo, Japan.

126. **Cheyne D.**, Bayle D., Hung Y. and Taylor MJ. (2008) Neural sources associated with early processing of facial emotions. 16th International Conference on Biomagnetism, Sapporo, Japan.
125. Hung Y., Mills T., Bayle D., **Cheyne D.**, Smith ML and Taylor M. (2008) Functional laterality and limbic-frontal network during emotional face processing: Spatiotemporal analysis of event-related MEG. 16th International Conference on Biomagnetism, Sapporo, Japan.
124. Wennberg R., and **Cheyne D.** (2008) MEG source modeling of independent spike foci in temporal lobe epilepsy: comparison with simultaneous scalp-intracranial EEG. 16th International Conference on Biomagnetism, Sapporo, Japan.
123. Quraan M. and **Cheyne D.**, (2008) Correcting for source correlation in beamformer localization. 16th International Conference on Biomagnetism, Sapporo, Japan.
122. Dockstader C.L., Gaetz W., **Cheyne D.**, Wang F., Castellanos X. and Tannock R. (2008) MEG event-related desynchronization and synchronization deficits during basic somatosensory processing in individuals with ADHD. Sapporo, Japan.
121. Cortese F., Goltz H., Hirji Z., **Cheyne D.**, Wong A. (2008) Brain mechanisms of vision in human amblyopia: A Magnetoencephalography (MEG) study. 14th Annual Meeting of the Organization for Human Brain Mapping, Melbourne, Australia.
120. Virji-Babul N., Moiseev A., Cheung T. Weeks D., **Cheyne D.** (2008) Neural mechanisms underlying action execution and action observation. 14th Annual Meeting of the Organization for Human Brain Mapping, Melbourne, Australia.

2007

119. Beal DS., Cheyne D., DeNil LF. (2007) A magnetoencephalography study of auditory processing in adults who stutter. American Speech and Hearing Association. Annual Convention, Boston, MA, USA.
118. Gaetz W., Widjaja E., Bells S., Rockel C., Drake J., Otsubo H., Cheyne D., Pang EW., Mabbott D. (2007) Presurgical mapping of pediatric motor function and structure using Magnetoencephalography (MEG) and Diffusion Tensor Imaging (DTI). 1st Annual Meeting of the International Society for Advancement of Clinical Magnetoencephalography (ISACM), Matsushima, Japan.
117. Sutcliffe TL., Gaetz W., Logan W., **Cheyne D.**, Fehlings D. L.. (2007) Developmental disregard predicts improvement after constraint-induced movement therapy in hemiplegic children. Meeting of the Society for Developmental and Behavioral Pediatrics. Providence, RI, USA.
116. Virji-Babul N., Cheung T., **Cheyne D.**, Weeks D. (2007) Neural processing during observation and execution of reach and grasp movements in adults with Down Syndrome. Annual meeting of Neuroscience, San Diego, USA.
115. Blohm G., Gaetz W., Goltz H., DeSouza J., Bells S., **Cheyne D.** and Crawford JD. (2007) Functional dynamics of brain activity underlying the visuomotor transformation for pointing: an MEG study. Annual meeting of Neuroscience, San Diego, USA.
114. **Cheyne D.**, Bells S., Gaetz W., and Pang E. (2007) Neuromagnetic recordings reveal high-frequency (70 – 80 Hz) gamma oscillations in primary motor cortex during voluntary movement in humans. 13th Annual Meeting of the Organization for Human Brain Mapping, Chicago, USA. 113.
113. Gaetz W., Rutka J., Benifla M., Strantzas S., Sharma R., Chu W., Holowka S., Otsubo H. and **Cheyne D.** (2007) Preoperative localization of primary motor cortex in children using spatially filtered magnetoencephalography. 13th Annual Meeting of the Organization for Human Brain Mapping, Chicago, USA.

2006

112. **Cheyne D.**, Bostan A., Gaetz W and Pang E. (2006) Neuromagnetic mapping of sensory and motor cortex using event-related beamforming: Implications for pediatric imaging. 17th Meeting of the International Society for Brain Electromagnetic Topography (ISBET), Chieti, Italy.
111. McVeigh P., Bostan A. and **Cheyne D.** (2006) Study of conducting volume boundary influence on source localization using a realistic phantom. 15th International Conference on Biomagnetism, Vancouver, Canada.
110. Bostan A., Pang E., Gaetz W., Chu W. and **Cheyne D.** (2006) Localization of sensory and motor activity in subjects with orthodontic braces: Implications for pre-surgical functional mapping in pediatric populations. 15th International Conference on Biomagnetism, Vancouver, Canada.
109. Jurkiewicz M.t., Gaetz W., Bostan A. and **Cheyne D.** (2006) Is post-movement beta rebound generated in motor or somatosensory cortex? 15th International Conference on Biomagnetism, Vancouver, Canada.
108. Mohamed I., Gaetz W., Otsubo H. and **Cheyne D.** (2006) Localization of interictal spikes using an event-related beamformer. 15th International Conference on Biomagnetism, Vancouver, Canada.
107. Gaetz W., Pang E.W., Rutka J., Benifla M., Strantzas S., Sharma R., Chu W., Holowka S., Otsubo H. and **Cheyne D.** (2005) Pre-operative mapping of primary motor cortex in children using spatially filtered magnetoencephalography. 15th International Conference on Biomagnetism, Vancouver, Canada.
106. Johnson B.W., Muthukumaraswamy S., Gaetz W. and **Cheyne D.** (2006) Neuromagnetic and neuroelectric oscillatory responses to acoustic stimulation with broadband noise. 15th International Conference on Biomagnetism, Vancouver, Canada.
105. Ferrari P., Bostan A., Jantzen K.J., Kelso J.A.S., Cheyne D., and Fuchs A. (2006) Magnetoencephalographic evidence of cortical networks underlying coordinated movements: Spatiotemporal dynamics of induced and event related brain responses revealed by beamforming. 15th International Conference on Biomagnetism, Vancouver, Canada.
104. Dockstader C.L., Gaetz W., **Cheyne D.** and Tannock R. (2006) Beta rebound in the human somatosensory cortex can be influenced by higher cognitive processes. 15th International Conference on Biomagnetism, Vancouver, Canada.
103. Dominguez LG., Gaetz W., **Cheyne D.**, Wennberg R. and Velazquez JLP. (2006) Brain coordination dynamics of the processing of self-referential stimuli. 12th Annual Meeting of the Organization for Human Brain Mapping, Florence, Italy.
102. Ferrari P., **Cheyne D.** and Fuchs A. (2006) Beamforming applied to evoked and induced neural activity during coordinated movements: Determining functional cortical networks. Annual meeting of the Cognitive Neuroscience Society, San Francisco, USA.
101. **Cheyne D.** Herdman T., Gaetz W., Ressel V. and Pang L. (2006) Spatiotemporal dynamics of neuromagnetic responses related to language production. Annual meeting of the Cognitive Neuroscience Society, San Francisco, USA.
100. Bayless S., **Cheyne D.** and Taylor M.J. (2006) Neuroimaging executive function development using MEG: an adult pilot study of a modified card-sorting task. Annual meeting of the Cognitive Neuroscience Society, San Francisco, USA.

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99. **Cheyne D.**, Gaetz W., Pang E.W., Drake J., Strantzas S., Benifla M., Holowka S., Hunjan A., Otsubo H. (2005) A new method for pre-operative mapping of the primary motor cortex in humans using spatially filtered Magnetoencephalography. Annual meeting of Neuroscience, Washington, D.C.
98. Sutcliffe T. L., Logan W., Gaetz W., **Cheyne D.**, Shroff M., Fehlings D. L.. (2005) Altered cortical activation following constraint-induced therapy in a child with hemiplegic cerebral palsy. Neurology 64: A341.

97. Gaetz W., Sutcliffe T. L., Logan W., Shroff M., Fehlings D. L., **Cheyne D.**, (2005) MEG and fMRI localized changes in cortical organization following constraint-induced therapy: A case study involving hemiplegic cerebral palsy. (2005). 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
96. **Cheyne D.**, Itier R., Hamilton A. and Taylor MJ., (2005) Localization of cortical activity during face perception using event-related synthetic aperture magnetometry 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
95. Mohamed I., Gaetz W., Logan W., Otsubo H., Hunjan A., Donner E., **Cheyne D.** and Pang E. (2005) Neuromagnetic imaging of cortical neural oscillations in children during auditory word recognition task. 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
94. Pang EW., Gaetz WC., Drake JM., Strantzas SC., Holowka S., Junjan A., Otsubo H. and **Cheyne DO.** (2005) Direct correspondence between pre-operative MEG mapping of hand motor area and activation of same area with intra-operative cortical stimulation: A case report. 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
93. Dockstader C.L., Gaetz W., Tannock R. and **Cheyne D.** (2005) Effects of stimulus predictability on neural activation of the human somatosensory cortex. 11th Annual Meeting of the Organization for Human Brain Mapping, Toronto, Canada.
92. Gaetz W., Sutcliffe T. L., Logan W., Shroff M., Fehlings D. L., **Cheyne D.**, (2005) MEG and fMRI Measurement of Sensorimotor Cortical Function Following Constraint-Induced Therapy in a Child with Hemiplegic Cerebral Palsy Annual meeting of the American Society of Neuroradiology, Toronto, Canada.
91. Dockstader C., Gaetz W., Tannock R. and **Cheyne D.** (2005) Omitted oscillations in human somatosensory cortex and stimulus predictability. Annual meeting of the Society for Cognitive Neuroscience, April 2005

2004

90. Johnson B.W., Muthukumaraswamy S., Huatus MJ., Gaetz W. and **Cheyne D.** (2004) Neuromagnetic responses associated with perceptual segregation of pitch. Neurology and Clinical Neurophysiology 33:1-4.
89. Muthukumaraswamy S., Johnson B.W., Gaetz W. and **Cheyne D.** (2004) Modulation of neuromagnetic oscillatory activity during the observation of oro-facial movements. Neurology and Clinical Neurophysiology 2:1-4.
88. Simine E., Gaetz, W., **Cheyne D.**, Tsotsos J.K., Martinez-Trujillo J.C. (2004) Transient changes in the direction of moving stimuli activates human MT/V5+ and inferior parietal lobe. Annual meeting of Neuroscience, San Diego, USA.
87. Gaetz W, Robaey, P. Bakhtazad L., Schachar R. and **Cheyne, D.** (2004) Localization of movement-related brain activity in adults and children using MEG. 26th International Symposium of the Centre for Research in the Neurological Sciences (CRSN). Montreal, Canada.
86. **Cheyne, D.**, Bakhtazad L., and Gaetz W. (2004) Effects of correlated brain activity on performance of minimum-variance beamformer and equivalent current dipole localization methods. 14th International Conference on Biomagnetism. Boston, USA.
85. **Cheyne D.**, Martinez-Trujillo J.C., Simine E., Gaetz, W., Tsotsos J.K. (2004) Activation of MT/V5 and inferior parietal cortex during the detection of changes in the direction of coherent motion stimuli. 14th International Conference on Biomagnetism. Boston, USA.
84. Johnson B.W., Muthukumaraswami, S., Hautus M.J., Gaetz W.C. and **Cheyne D.** (2004) Neuromagnetic responses associated with perceptual segregation of pitch 14th International Conference on Biomagnetism. Boston, USA.
83. Muthukumaraswamy S., Johnson B.W., Gaetz W. and **Cheyne D.** (2004) Modulation of neuromagnetic oscillatory activity during the observation of oro-facial movements. 14th International Conference on Biomagnetism. Boston, USA.

82. Gaetz W. Pang E W., Otsubo H. Logan W.J., Elliott I., Weiss S.K., Rutka J.T., Snead III O.C., and **Cheyne, D.** (2004) Localization of sensorimotor cortex in an epilepsy patient using tactile stimulation. 14th International Conference on Biomagnetism. Boston, USA.
81. Gaetz W. Singh, K. and **Cheyne, D.** (2004) Tactile stimulation induces somatotopically organized oscillations in SI and MI. 14th International Conference on Biomagnetism. Boston, USA.
80. Bakhtazad L., Gaetz W. and **Cheyne, D.** (2004) High resolution neuromagnetic imaging using minimum-variance beamforming reveals multiple generators of movement-evoked fields. 14th International Conference on Biomagnetism. Boston, USA.
79. Pang L., Bakhtazad L., Gaetz W. and **Cheyne, D.** (2004) Dipole source modeling of the AEF in pediatric environments: Effects of head size, SNR, and sensor coverage. 14th International Conference on Biomagnetism. Boston, USA.
78. Dockstader C., Gaetz W. and **Cheyne D.** (2004) Neuromagnetic localization of cerebellar vermis activity following median nerve stimulation. 14th International Conference on Biomagnetism. Boston, USA.
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