Julia Huck, BSc, MSc, PhD

Postdoctoral Associate

Calgary, Alberta, Canada

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POSTDOCTORAL TRAINING

University of Calgary
Postdoctoral Associate
Calgary, Alberta, Canada
September 2025 - today

Université de Sherbrooke
Postdoctoral Research Fellow
Sherbrooke, Quebec, Canada
March 2023 - July 2025

EDUCATION

Concordia University
Doctor of Philosophy in Physics
Montreal, Quebec, Canada
March 2016 - December 2022

Friedrich-Alexander University
Master of Science in Medical Engineering
Erlangen-Nürnberg, Germany
April 2012 - January 2015

Hochschule Koblenz – RheinAhrCampus
Bachelor of Science in Medical Engineering and Sports Medical Engineering
Remagen, Germany
October 2008 - February 2012

ACADEMIC AWARDS, PRIZES & SCHOLARSHIPS

2023	**The Fonds de recherche du Québec Nature et technologies (FRQNT)** Postdoctoral (B3X) Research Scholarships	$90,000
2023	**Le Centre de recherche du Centre hospitalier universitaire de Sherbrooke** Bourses de recherche postdoctorale – Automne 2022 *Declined after 3 months due to receiving FRQNT*	$45,000
2022	**Québec Bio-imaging Network (QBIN)** Congress allowance - Joint Annual Meeting ISMRM-ESMRMB and the ISMRT 31st Annual Meeting in London, England, UK	$500
2022	**Concordia University** Congress allowance - Graduate Student Association Meeting in London, England, UK	$285
2022	**International Society for Magnetic Resonance in Medicinen (ISMRM)** Trainee (Educational) Stipend	US $475
2021	**The Fonds de recherche du Québec - Nature et technologies (FRQNT)** Offre versement supplémentaire Covid finissant H21	$7,000
2021	**The Fonds de recherche du Québec - Nature et technologies (FRQNT)** Doctoral (B2X) Research Scholarships	$21,000

2019	**Concordia University** Concordia University School of Graduate Studies Staff Scholarship	$1,000
2019	**Concordia University** Concordia University Faculty of Arts and Science student conference travel Award	$375
2019	**International Society for Magnetic Resonance in Medicinen (ISMRM)** Trainee (Educational) Stipend	US $475
2018	**Québec Bio-imaging Network (QBIN)** Réseaux de recherche thématiques, Scholarship	$7,000
2018	**Québec Bio-imaging Network (QBIN)** Training course abroad, Scholarship	$4,000
2018	**Concordia University** Concordia University School of Graduate Studies Staff Scholarship	$880
2018	**International Society for Magnetic Resonance in Medicinen (ISMRM)** Trainee (Educational) Stipend	US $525
2018	**PERFORM Centre** Conference Best Student Oral Presentation Réseau de Recherche en Santé cardiométabolique, diabète et obésité (CMDO) Award	$680
2017	**University of Western Ontario** High & Ultra High MR Scholarship Training Program at The Centre for Functional & Metabolic Mapping	
2016	**Concordia University** Concordia University Faculty Graduate Doctoral Fellowship FAS	$32,400

PUBLICATIONS

Google Scholar: https://scholar.google.com/citations?user=7CXEubUAAAAJ&hl=en&oi=sra
Research Gate: https://www.researchgate.net/profile/Julia-Huck

Summary of Publications	Total	First Author	Co-Author
Published, in press, accepted Peer Reviewed Journal articles	10	3	7
Published, in press, accepted peer reviewed abstracts	20	9	11

PUBLICATIONS (Peer Reviewed)

2025 ARTICLE
Huck J, Vanderweyen D, Rundek T, Elkind MSV, Gutierrez J, Descoteaux M, Whittingstall K
ACCURACY OF AUTOMATIC DETECTION AND DIAMETER ESTIMATION OF THE CEREBRAL ARTERIES INSIDE THE CIRCLE OF WILLIS IN HEALTHY INDIVIDUALS FROM THE NOMAS COHORT
Journal of Cerebral Blood Flow and Metabolism 45(9): 1774-1784
https://doi.org/10.1177/0271678X251338972

2025 ARTICLE
Intzandt B, Sanami S, **Huck J**, Bherer L, Gauthier CJ
SEX MATTERS: THE EFFECT OF PHYSICAL ACTIVITY ON BRAIN PERFUSION
The Journals of Gerontology: Series A, 80(11): glaf154
https://doi.org/10.1093/gerona/glaf154

2025
Sanami S, Intzandt B, **Huck J**, Villeneuve S, Iturria-Medina Y, Prevent-AD research group, Gauthier CJ
ARTICLE
LONGITUDINAL RELATIONSHIPS BETWEEN CEREBROSPINAL FLUID BIOMARKERS, CEREBRAL BLOOD FLOW, AND GREY MATTER VOLUME IN INDIVIDUALS WITH A FAMILIAL HISTORY OF ALZHEIMER'S DISEASE
Neurobiology of Aging, 152: 43-53
https://doi.org/10.1016/j.neurobiolaging.2025.04.011

2024
Zhou J, Wearn A, **Huck J**, Hughes C, Baracchini G, Tremblay-Mercier J, Poirier J, Villeneuve S, Tardif CL, Chakravarty MM, Daugherty AM, Gauthier CJ, Turner GR, Spreng RN, PREVENT-AD Research Group
ARTICLE
IRON DEPOSITION AND DISTRIBUTION ACROSS THE HIPPOCAMPUS IS ASSOCIATED WITH PATTERN SEPARATION AND PATTERN COMPLETION IN OLDER ADULTS AT RISK FOR ALZHEIMER'S DISEASE
The Journal of Neuroscience, 44(19): e1973232024
https://doi.org/10.1523/JNEUROSCI.1973-23.2024

2023
Huck J, Jäger A-T, Schneider U, Grahl S, Fan AP, Tardif CL, Villringer A, Bazin P-L, Steele CJ, Gauthier CJ
ARTICLE
MODELING VENOUS BIAS IN RESTING STATE FUNCTIONAL MRI METRICS
Human Brain Mapping, 44(14): 4938-4955
https://doi.org/10.1002/hbm.26431

2022
Intzandt B, Sanami S, **Huck J**, Hoge RD, PREVENT-AD Research Group, Villeneuve S, Bherer L, Gauthier CJ
ARTICLE
SEX-SPECIFIC RELATIONSHIPS BETWEEN OBESITY, PHYSICAL ACTIVITY, AND GRAY AND WHITE MATTER VOLUME IN COGNITIVELY UNIMPAIRED OLDER ADULTS
GeroScience, 45: 1869–1888
https://doi.org/10.1007/s11357-023-00734-4

2021
Intzandt B, Vrinceanu T, **Huck J**, Vincent T, Montero-Odasso M, Gauthier CJ, Bherer L
ARTICLE
COMPARING THE EFFECT OF COGNITIVE VS. EXERCISE TRAINING ON BRAIN MRI OUTCOMES IN HEALTHY OLDER ADULTS: A SYSTEMATIC REVIEW
Neuroscience and Biobehavioral Reviews, 128: 511-33
https://doi.org/10.1016/j.neubiorev.2021.07.003

2021
Jäger A-T, Huntenburg JM, Tremblay SA, Schneider U, Grahl S, **Huck J**, Tardif CL, Villringer A, Gauthier CJ, Bazin P-L, Steele CJ
ARTICLE
MOTOR SEQUENCES; SEPARATING THE SEQUENCE FROM THE MOTOR. A LONGITUDINAL RSFMRI STUDY
Brain Structure and Function, 227: 793–807
https://doi.org/10.1007/s00429-021-02412-7

2021
Tremblay SA, Jäger A-T, **Huck J**, Giacosa C, Beram S, Schneider U, Grahl S, Villringer A, Tardif CL, Bazin PL, Steele CJ, Gauthier CJ
ARTICLE
WHITE MATTER MICROSTRUCTURAL CHANGES IN SHORT-TERM LEARNING OF A CONTINUOUS VISUOMOTOR SEQUENCE
Brain Structure and Function, 226: 1677–1698
https://doi.org/10.1007/s00429-021-02267-y

2019
Huck J, Wanner Y, Fan AP, Schmidt A-T, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin P-L, Gauthier CJ
ARTICLE
HIGH RESOLUTION ATLAS OF THE VENOUS BRAIN VASCULATURE FROM 7 T QUANTITATIVE SUSCEPTIBILITY MAPS
Brain Structure and Function 224: 2467– 2485,
https://doi.org/10.1007/s00429-019-01919-4

Under Review

ARTICLE	Doyon V, Janelle F, Sean M, Vanderweyen D, Côté S, **Huck J**, Tétreault P, Lepage J-F, Gutierrez J, Bocti C, Fulop T, Pichet-Binette A, Whittingstall K NARROWING OF MEDIAL TEMPORAL LOBE ARTERIES IS ASSOCIATED WITH TAU PATHOLOGY AND COGNITIVE DECLINE *submission date: 14.11.2025*
ARTICLE	Sean M, Côté S, **Huck J**, Coulombe-Lévêque A, Léonard G, Whittingstall K, Tétreault P HIGHER GREY MATTER DENSITY IN THE MEDIAL TEMPORAL LOBE AND FRONTAL LOBE IN CHRONIC LOW BACK PATIENTS: A LONGITUDINAL STUDY *submission date: 12.08.2025, Revision Requested: 03.11.2025*
ARTICLE	Jhelum P, Jäger A-T, **Huck J**, Tardif C, Villringer A, Gauthier CJ, Bazin PL, Steele CJ GREY MATTER STRUCTURAL PLASTICITY ENCODING SEQUENCE-SPECIFIC MOTOR LEARNING *submission date: 12.07.2025, Revision Requested: 25.08.2025*
ARTICLE	Marchildon C, Arguin M, Doyon M, Côté S, Michaud A, **Huck J**, Gingras V, Perron P, Hivert M-F , Bouchard L*, Whittingstall K* PRE-ADOLESCENTS EXPOSED IN UTERO TO MATERNAL HYPERGLYCEMIA HAVE LARGER HYPOTHALAMUS *submission date: 26.06.2025, Revision Requested: 23.08.2025*

In Preparation

ARTICLE	**Huck J**, Rundek T, Elkind MSV, Gutierrez J, Descoteaux M, Whittingstall K WOMEN EXHIBIT LOWER SUBCORTICAL BRAIN VOLUMES THAN MEN IN THE PRESENCE OF INTRACRANIAL STENOSIS AFTER ADJUSTMENT FOR AGE AND INTRACRANIAL VOLUME
ARTICLE	**Huck J***, Côté S*, Vanderweyen D*, Fathy F*, Rheault F, Beaudoin A-M, Whittingstall K WHITE MATTER HYPERINTENSITIES PREFERENTIALLY ACCUMULATE WITHIN THE BORDER ZONE REGIONS OF THE BRAIN AND INCREASE TO ACCUMULATE OUTSIDE THE BORDER ZONES WITH AGE
ARTICLE	Nguyen CN, **Huck J***, Côté S, Rundek T, Elkind MSV, Gutierrez J, Tétreault P, Whittingstall K AUTOMATIC DETECTION OF MILD INTRACRANIAL ARTERIAL STENOSIS: AN APPROACH BASED ON THE 3D SURFACE
ARTICLE	Singh S, Barreto B, Liu M, Oelsner E, **Huck J**, Navas-Acien A, Elkind MSV, Rundek T, Whittingstall K, Gutierrez J ASSOCIATIONS BETWEEN SMOKING HISTORY AND STRUCTURAL BRAIN CHANGES: THE NORTHERN MANHATTAN STUDY
ARTICLE	Zhou J, Wearn A, Hughes C, **Huck J**, Baracchini G, Sylvain E, Tremblay-Mercier J, Poirier J, Breitner J, Villeneuve S, Chakravarty M, Tardif CL, Gauthier CJ, Daugherty AM, Turner GR, Spreng RN, PREVENT-AD Research Group LONGITUDINAL IRON ACCUMULATION IN THE HEAD OF CAUDATE IS RELATED TO FRONTOPARIETAL CONTROL NETWORK CONNECTIVITY AND EXECUTIVE FUNCTION DECLINE IN OLDER ADULTHOOD
ARTICLE	Zhou J, Wearn A, Hughes C, **Huck J**, Baracchini G, Sylvain E, Tremblay-Mercier J, Poirier J, Breitner J, Villeneuve S, Chakravarty M, Tardif CL, Gauthier CJ, Daugherty A, Turner GR, Spreng NR, PREVENT-AD Research Group HIPPOCAMPAL IRON ACCUMULATION INTERACTS WITH TAU AND APOE GENOTYPE TO PREDICT DECLINES IN EPISODIC MEMORY IN OLDER ADULTS AT ELEVATED RISK FOR ALZHEIMER'S DISEASE

SCHOLARLY PRESENTATIONS

Oral Presentations

November 2023 UTRECHT NETHERLANDS	**Huck J**, Spreng N, Intzandt B, Sanami S, PREVENT-AD Research Group, Villeneuve S, Chakravarty M, Bazin P-L, and Gauthier CJ VASCULAR AND METABOLIC CHANGES IN INDIVIDUALS WITH AND WITHOUT THE APOE E4 ALLELE *5th Imaging Cerebral Physiology (ICP) Network Symposium*

November 2022
MONTREAL
CANADA

Huck J, Spreng N, Intzandt B, Sanami S, PREVENT-AD Research Group, Villeneuve S, Chakravarty M, Bazin P-L, and Gauthier CJ
VASCULAR AND METABOLIC CHANGES IN INDIVIDUALS WITH AND WITHOUT THE APOE E4 ALLELE
Cognitive Neuroscience Unit retreat, Montreal Neurological Institute

June 2022
MONTREAL
CANADA

Huck J, Jäger AT, Schneider U, Grahl S, Fan AP, Tardif CL, Villringer A, Bazin PL, Steele CJ, Gauthier CJ
MODELLING VENOUS BIAS IN RESTING STATE FUNCTIONAL MRI METRICS
Quebec BioImaging Network Annual Conferencee

September 2019
BALTIMORE
USA

Huck J, Jäger AT, Fan AP, Grahl S, Schneider U, Villringer A, Tardif CL, Steele CJ, Bazin PL, Gauthier CJ
INFLUENCE OF THE VASCULATURE ON RESTING STATE MEASURES OF CENTRALITY
4th Imaging Cerebral Physiology (ICP) Network Symposium

Published Peer Reviewed Abstracts

July 2025
TORONTO, ON
CANADA

Zhou J, Wearn A, Hughes C, **Huck J**, Baracchini G, Sylvain E, Tremblay-Mercier J, Poirier J, Breitner J, Villeneuve S, Chakravarty M, Tardif CL, Gauthier CJ, Daugherty AM, Turner GR, Spreng RN, PREVENT-AD Research Group
LONGITUDINAL HIPPOCAMPAL IRON ACCUMULATION PREDICTS EPISODIC MEMORY IN PRESYMPTOMATIC ALZHEIMER'S DISEASE WITH ADDITIONAL INFLUENCES OF TAU AND APOE GENEOTYPE
Alzheimer's Association International Conference (AAIC)

April 2025
SAN DIEGO, CA
USA

Huck J, Vanderweyen D, Rundek T, Elkind MSV, Gutierrez J, Descoteaux M, Whittingstall K
ASSESSING THE PRECISION OF AUTOMATED DETECTION AND DIAMETER ESTIMATION OF CEREBRAL ARTERIES IN THE CIRCLE OF WILLIS AMONG HEALTHY NOMAS COHORT PARTICIPANTS
American Academy of Neurology (AAN

April 2025
SAN DIEGO, CA
USA

Nguyen CN, **Huck J**, Gutierrez J., Whittingstall K
AUTOMATIC MILD INTRACRANIAL STENOSIS DETECTION IN THE CIRCLE OF WILLIS FROM TIME-OF-FLIGHT MRA
American Academy of Neurology (AAN

April 2025
SAN DIEGO, CA
USA

Langlois M, **Huck J**, Cote S, Vanderweyen D, Marchildon C, Arguin M, Doyon M, Michaud A, Gingras V, Perron P, Hivert MF, Bouchard L, Whittingstall K
THE ORIGINS OF POSTERIOR COMMUNICATING ARTERY VARIATIONS IN THE CIRCLE OF WILLIS
American Academy of Neurology (AAN

May 2024
BASEL
SWITZERLAND

Vanderweyen D*, **Huck J***, Côté S*, Fathy K*, Remahi S, Rheault F, Beaudoin A-M, Whittingstall K
SPATIAL PREDILECTION OF CEREBRAL SMALL VESSEL DISEASE WITHIN BORDER ZONE REGIONS OF THE BRAIN
10th European Stroke Organisation Conference

* These authors contributed equally to this work

November 2024
UTRECHT
NETHERLANDS

Huck J, Vanderweyen D, Dumais F, Rundek T, Elkind MSV, Gutierrez J, Descoteaux M, Whittingstall K
ACCURACY OF AUTOMATIC DETECTION OF THE CEREBRAL ARTERIES INSIDE THE CIRCLE OF WILLIS AND ITS APPLICATION
5th Imaging Cerebral Physiology (ICP) Network Symposium

July 2023
MONTREAL, QC
CANADA

Jhelum P, Jäger ATP, **Huck J**, Villringer A, Tardif CL, Gauthier CJ, Bazin P-L, Steele CJ
GREY MATTER STRUCTURAL PLASTICITY ENCODING SEQUENCE-SPECIFIC MOTOR LEARNING
29th Annual Meeting of the Organization for Human Brain Mapping (OHBM)

July 2022
SAN DIEGO, CA
USA

Intzandt B, Sanami S, **Huck J**, Hoge RD, Gauthier CJ, Bherer L, PREVENT-AD Research Group
SEX DIFFERENCES IN THE RELATIONSHIPS AMONG GREY MATTER VOLUME
Physical Activity And Obesity In Aging: 2001. Published in Medicine & Science in Sports & Exercise, 54(9S):596-596. DOI:10.1249/01.mss.0000882540.43037.03

May 2022
LONDON
UK

Huck J, Spreng N, Intzandt B, Villeneuve S, Chakravarty M, Bazin PL, and Gauthier CJ
COMPARISON OF VEIN DIAMETER AND SUSCEPTIBILITY VALUES IN INDIVIDUALS WITH AND WITHOUT APOE ⊠4 ALLELE
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

May 2022
LONDON
UK

Intzandt B, Sanami S, **Huck J**, Hoge RD, PREVENT-AD Research Group, Bherer L and Gauthier CJ
SEX-SPECIFIC DIFFERENCES IN THE RELATIONSHIPS BETWEEN OBESITY, CEREBRAL PERFUSION AND GREY MATTER VOLUME
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

May 2022
LONDON
UK

Sanami S, Intzandt B, **Huck J**, PREVENT-AD Research Group, Gauthier CJ
SEX DIFFERENCES IN CBF CHANGES AS A BIOMARKER OF PRECLINICAL MCI
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

May 2022
LONDON
UK

Tremblay SA, Spreng N, Pirhadi A, **Huck J**, Tardif CL, Villeneuve S, Chakravarty M, Leppert IR, Carbonell F, Iturria-Medina Y, Steele CJ, and Gauthier CJ
MULTIVARIATE QUANTIFICATION OF BRAIN DIFFERENCES IN INDIVIDUALS WITH FAMILY HISTORY OF ALZHEIMER'S DISEASE AND APOE4 GENETIC RISK
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

May 2021
VIRTUAL

Intzandt B, Sanami S, **Huck J**, Hoge RD, Bherer L, Gauthier CJ
CARDIOVASCULAR FITNESS DOES NOT INFLUENCE RELATIONSHIPS BETWEEN CORTICAL THICKNESS AND OBESITY IN AGING
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

May 2021
VIRTUAL

Sanami S, Intzandt B, Razavipour F, **Huck J**, Hoge RD, Bherer L, Gauthier CJ
CEREBROVASCULAR REACTIVITY AND CEREBRAL BLOOD FLOW ACROSS LIFESPAN IN FEMALES
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

June 2020
VIRTUAL

Huck J, Jäger AT, Fan AP, Grahl S, Schneider U, Villringer A, Tardif CL, Bazin PL., Gauthier CJ, Steele CJ
MEASURING THE BIAS OF DRAINING VEINS AND THE VASCULATURE ON RESTING STATE MEASURES OF CENTRALITY
Organization for Human Brain Mapping (OHBM)

June 2020
VIRTUAL

Bazin PL, Huntenburg J, **Huck J**, Kerkela L, Do HD, Glatard T, Steele CJ
NIGHRES: A PYTHON TOOLBOX FOR HIGH-RESOLUTION NEUROIMAGING
Organization for Human Brain Mapping (OHBM)

May 2019
MONTREAL, QC
CANADA

Huck J, Steele CJ, Jäger AT, Fan AP, Grahl S, Schneider U, Villringer A, Tardif CL, Bazin PL, Gauthier CJ
THE INFLUENCE OF DRAINING VEINS ON APPARENT GREY MATTER VOLUME CHANGES CAUSED BY HYPERCAPNIA
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

June 2018
PARIS
FRANCE

Huck J, Wanner Y, Fan AP, Schmidt AT, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin PL, Gauthier CJ
HIGH RESOLUTION ATLASING OF THE VENOUS BRAIN VASCULATURE FROM 7T QUANTITATIVE SUSCEPTIBILITY
International Society for Magnetic Resonance in Medicine Annual Meeting (ISMRM)

Unpublished Abstracts

June 2025
SHERBROOKE, QC
CANADA

Nguyen CN, **Huck J**, Côté S, Tétreault P, Whittingstall K
DÉTECTION AUTOMATIQUE DES STÉNOSES INTRACRÂNIENNES LÉGÈRES DANS LE POLYGONE DE WILLIS À PARTIR DE L'IRM PAR TEMPS DE VOL (TOF-MRA)
Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2025

June 2025 | Langlois M, **Huck J**, Côté S, Vanderweyen D, Marchildon C, Arguin M, Doyon M, Michaud A, Gingras V, Perron P, Hivert MF, Bouchard L, Whittingstall K
SHERBROOKE, QC | L'ORIGINE DES VARIATIONS ANATOMIQUES DES ARTÈRES COMMUNICANTES DU CERCLE DE WILLIS
CANADA | *Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2025*

June 2025 | Wing C, Gillet V, Bilodeau ML, Bouchard V, Côté S, **Huck J**, Ouellet A, Whittingstall K
SHERBROOKE, QC | REMODELAGE DES VAISSEAUX CÉRÉBRAUX MATERNELS LORS D'UNE GROSSESSE NORMALE
CANADA | *Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2025*

May 2025 | **Huck J**, Vanderweyen D, Rundek T, Elkind M, Gutierrez J, Descoteaux M, Whittingstall K
QUEBEC CITY, QC | ASSESSING THE PRECISION OF AUTOMATED DETECTION AND DIAMETER ESTIMATION OF CEREBRAL ARTERIES IN THE CIRCLE OF WILLIS
CANADA | *Colloque d'imagerie médicale de Québec 2025*

May 2025 | Nguyen CN, **Huck J**, Côté S, Tétreault P, Whittingstall K
QUEBEC CITY, QC | DÉTECTION AUTOMATIQUE DES STÉNOSES INTRACRÂNIENNES LÉGÈRES DANS LE POLYGONE DE WILLIS À PARTIR DE L'IRM PAR TEMPS DE VOL (TOF-MRA)
CANADA | *Colloque d'imagerie médicale de Québec 2025*

December 2024 | Vanderweyen D*, **Huck J***, Côté S*, Fathy K*, Remahi S, Rheault F, Beaudoin, A-M, Whittingstall K
CHICAGO, IL | WHITE MATTER HYPERINTENSITIES PREFERENTIALLY ACCUMULATE WITHIN THE BORDER ZONES REGIONS OF THE BRAIN IN HEALTHY
USA | *Radiology Conference & Annual Meeting*

* These authors contributed equally to this work
** abstract received the Trainee Research Prize award

June 2024 | Langlois M, **Huck J**, Nguyen CN, Vanderweyen D, Côté S, Bouchard L, Whittingstall K
SHERBROOKE, QC | L'ORIGINE DES VARIATIONS ANATOMIQUES DES ARTÈRES COMMUNICANTES DU CERCLE DE WILLIS
CANADA | *Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2024*

June 2024 | Vanderweyen D*, **Huck J***, Côté S*, Fathy K*, Remahi S, Rheault F, Beaudoin A-M, Whittingstall K
SHERBROOKE, QC | L'ACCUMULATION PRÉFÉRENTIELLE DES HYPERINTENSITÉS DE LA MATIÈRE BLANCHE DANS LES RÉGIONS LIMITROPHES DU CERVEAU CHEZ LES INDIVIDUS SAINS
CANADA | *Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2024*

* These authors contributed equally to this work

June 2024 | Nguyen CN, **Huck J**, Côté S, Tetreault P, Whittingstall K
SHERBROOKE, QC | ÉVALUATION QUANTITATIVE DES RÉTRÉCISSEMENTS ARTÉRIELS AU POLYGONE DE WILLIS : UNE APPROCHE BASÉE SUR LA SURFACE
CANADA | *Journée scientifique de la Faculté de Médecine et des Sciences de la Santé (FMSS) 2024*

May 2024 | Nguyen CN, **Huck J**, Côté S, Tetreault P, Whittingstall K
MONTREAL, QC | AMÉLIORATION DE LA QUANTIFICATION DU POLYGONE DE WILLIS: UNE APPROCHE BASÉE SUR LA RECONSTRUCTION EN 3D DE LA SURFACE
CANADA | *Québec Bio-Imaging Network Annual Research Day*

May 2024 | Doyon V, Côté S, **Huck J**, Whittingstall K
MONTREAL, QC | ÉTUDE DE LA PERFUSION DE L'HIPPOCAMPE PAR SUPER SELECTIVE ARTERIAL SPIN LABELLING EN IRM
CANADA | *Québec Bio-Imaging Network Annual Research Day*

December 2024 | Vanderweyen D*, **Huck J***, Côté S*, Fathy K*, Remahi S, Rheault F, Whittingstall K, Beaudoin A-M
CHICAGO, IL | WHITE MATTER HYPERINTENSITIES PREFERENTIALLY ACCUMULATES WITHIN THE BORDER ZONES REGIONS OF THE BRAIN IN HEALTHY INDIVIDUALS
USA | *Radiological Society of North America (RSNA)*

* These authors contributed equally to this work

February 2020
MONTREAL, QC
CANADA

Huck J, Jäger AT, Fan AP, Steele CJ, Grahl S, Schneider U, Villringer A, Tardif CL, Bazin PL, Gauthier CJ
THE BIAS OF VEINS ON RESTING STATE MEASURES OF CENTRALITY
Quebec Bio-Imaging Network Annual Conference

March 2019
MONTREAL, QC
CANADA

Huck J, Jäger AT, Fan AP, Steele CJ, Grahl S, Schneider U, Villringer A, Tardif CL, Bazin PL, Gauthier CJ
GLOBAL DEGREE CENTRALITY (DEGC) IN RESTING-STATE FUNCTIONAL MRI IS HIGHER IN NODES NEAR VEINS AND DECREASES OVER DISTANCE
Quebec Bio-Imaging Network Annual Conference

May 2019
MONTREAL, QC
CANADA

Huck J, Jäger AT, Fan AP, Steele CJ, Grahl S, Schneider U, Villringer A, Tardif CL, Bazin PL, Gauthier CJ
GLOBAL DEGREE CENTRALITY (DEGC) IN RESTING-STATE FUNCTIONAL MRI IS HIGHER IN NODES NEAR VEINS AND DECREASES OVER DISTANCE
PERFORM Centre Research Conference

March 2018
MONTREAL, QC
CANADA

Huck J, Wanner Y, Fan AP, Schmidt AT, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin PL, Gauthier CJ
HIGH RESOLUTION ATLASING OF THE VENOUS BRAIN VASCULATURE FROM 7T QUANTITATIVE SUSCEPTIBILITY
Quebec Bio-Imaging Network Annual Conference

May 2018
MONTREAL, QC
CANADA

Huck J, Wanner Y, Fan AP, Schmidt AT, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin PL, Gauthier CJ
HIGH RESOLUTION ATLASING OF THE VENOUS BRAIN VASCULATURE FROM 7T QUANTITATIVE SUSCEPTIBILITY
PERFORM Centre Research Conference

** abstract won Conference Best Student Oral Presentation

Invited Guest Lectures / Presentations

September 2022
MONTREAL, QC
CANADA

Huck J
INTRODUCTION TO MAGNETIC RESONANCE IMAGING
Department of Physics, Concordia University, PHYS 663 Quantitative Human Systems Physiology

June 2020
MONTREAL, QC
CANADA

Huck J
INTRODUCTION TO MAGNETIC RESONANCE IMAGING
Department of Physics, Concordia University

June 2019
AMSTERDAM
NETHERLANDS

Huck J, Wanner Y, Fan AP, Schmidt AT, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin PL, Gauthier CJ
THE VENAT ATLAS - INTRODUCTION AND APPLICATIONS
University of Amsterdam

July 2018
AMSTERDAM
NETHERLANDS

Huck J, Wanner Y, Fan AP, Schmidt AT, Grahl S, Schneider U, Villringer A, Steele CJ, Tardif CL, Bazin PL, Gauthier CJ
HIGH RESOLUTION ATLASING OF THE VENOUS BRAIN VASCULATURE FROM 7T QUANTITATIVE SUSCEPTIBILITY
University of Amsterdam

March 2017
LONDON, ON
CANADA

Huck J, Bazin PL, Gauthier CJ
PLASTICITY-INDUCED CHANGES IN VASCULAR AND METABOLIC PROPERTIES IN THE HUMAN BRAIN
CFMM Winter school, Western University in London

July 2016
LEIPZIG
GERMANY

Huck J, Bazin PL, Gauthier CJ
VESSELNESS FILTER ON QSM DATA
Neurophysics group, Max Planck Institute for Cognition and Brain Science, Leipzig, Germany

RESEARCH & RELEVANT WORK EXPERIENCE

Postdoctoral Associate — University of Calgary
with Dr Ashley D. Harris — September 2025 - Current

- Mentoring of graduate and undergraduate students completing theses
- Responsible for analyses of large datasets and dissemination of results
- Development of a method for correlation of quantitative susceptibility values and metabolites
- Ethics
- Lead investigator on a multimodal neuroimaging study comparing brain markers in migraine across children, youth, and adults

Postdoctoral Associate — Universite de Sherbrooke
with Dr Kevin Whittingstall — March 2023 - July 2025

- Mentoring of graduate and undergraduate students completing theses
- Responsible for analyses of large datasets and dissemination of results
- Validation of diameter estimates of arteries in the MRA/CTA dataset
- Automatic detection of intercranial stenosis (ICS)
- Development of a method for vascular correlation to neuronal inflammation in WM
- Accumulation of white matter hyperintensities in border zones during aging

PhD Candidate — Montreal University
with Dr Claudine Gauthier — September 2016 - December 2022

- Mentoring of graduate and undergraduate students completing theses
- Responsible for analyses of large datasets and dissemination of results
- Aiding in the data collection of pulse wave velocity measurements
- Quantitative susceptibility map (QSM) reconstruction for multiple research projects
- Development of a method for generating a venous atlas (VENAT)
- Influence of veins on rs derived metrics
- Development of biomarkers for individuals with a family history of Alzheimer's Disease

Teaching Assistant — Montreal University
with Georges Abi-Nader — January 2019 - April 2019

- Tutorials in Mechanics (PHYS204), Electricity and Magnetism (PHYS205), and Waves and Modern Physics (PHYS206)

Teaching Assistant — Montreal University
with Dr Sushile Misra, Dr Ramesh Sharma, and Dr Barry Frank — September 2018 – December 201

- Tutorials in Mechanics (PHYS204), Electricity and Magnetism (PHYS205), and Waves and Modern Physics (PHYS206)

Teaching Assistant — Montreal University
with Dr Christophe Grova — January 2018 – April 2018

- Marking Assignments in Electricity and Magnetism (PHYS205)

Teaching Assistant — Montreal University
with Dr Barry Frank — September 2017 – December 2017

- Marking Assignments in Electricity and Magnetism (PHYS205)

Teaching Assistant — Montreal University
with Joseph Shin — June 2017 – August 2017

- Marking Assignments in Electricity and Magnetism (PHYS205)

Teaching Assistant — Montreal University
with Dr Ramesh Sharma — January 2017 – April 2017

- Marking Assignments in Electricity and Magnetism (PHYS205)

Teaching Assistant — Montreal University
with Dr Claudine Gauthier — September 2016 – December 2016

- Marking Assignments in Electricity and Magnetism (PHYS205)

Research Assistant
Max Planck Institute for Human Cognitive and Brain Sciences
with Dr Pierre-Louis Bazin
September 2016 – December 2016

- Contribution of modules for Medical Image Processing, Analysis, and Visualization (MIPAV)
- Aiding in the data collection of a 7T multi-modal plasticity initiative (mMPI) dataset

International Intern
Siemens · Corporate Technology, Imaging and Computer Vision
with Dr Mariappan Nadar
February 2015 – August 2015

- Contribution of MR sequences implementation (compressed sensing)

Master's Thesis
Friedrich Alexander University Erlangen
with Dr Prof. Dr.-Ing. habil. Andreas Maier
August 2014 - February 2015

- Title: Tracking Salient Structures in X-ray Tomography Sequences
- Development of a program to track the moving salient structures, e.g., ribs, liver dome, diaphragm, guide-wires and catheters

Research Assistant
Fraunhofer-Institute for Integrated Circuits
with Dr. rer. nat. Anja Eggert
June 2013 – April 2014

- Computer Tomography recordings of milk protein foams
- Image reconstruction and analysis

Research Assistant
Natural and Medical Sciences Institute at the University of Tübingen
with Prof. Dr. rer. nat. Volker Bucher
November 2011 – March 2012

- Validation of a novel adhesion test (plasma enhanced cross-cut method
- Cleanroom activities
- Participation in various industrial projects

Bachelor's Thesis
Hochschule Koblenz – RheinAhrCampus
with Prof. Dr. Jens Bongartz and Prof. Dr. rer. nat. Volker Bucher
March 2011 – November 2011

- Title: Entwicklung eines in vitro-Haftungstest für Verkapselungsschichten von intelligenten Implantaten (Development of an in vitro-test for liability for encapsulation of intelligent implants)
- Measurements on a humidity sensor
- Validation of a novel adhesion test (plasma enhanced cross-cut method)
- Designing of shadow masks for structured thin films

Student Assistant as a Medical Technical Assistant
Radiological Institute, Bonn - BadGodesberg
June 2009 – September 2010

- Prepare patients for and guide through MR imaging procedures
- Planning and running MR sequences on head, spline, extremities, and mammography

RELEVANT TECHNICAL SKILLS

Languages

- German: Native proficiency
- English: Fluent (spoken and written)
- French: Intermediate (B1)

Programming Languages

Languages	# of Years Experience	Experience Level
C	1	beginner
C++	2	beginner
MATLAB	6	advanced
Java	5	advanced
Python	5	advanced

ACADEMIC & PROFESSIONAL INTERESTS

Time-of-Flight (TOF), Circle of Willis (CW), arterial vasculature, Quantitative Susceptibility mapping (QSM), Veinous Vasculature, Magnetic Resonance Imaging (MRI), Functional MRI (fMRI), biomarkers, Oxygen Extraction Fraction (OEF), Registration, Image reconstruction, neurodegenerative diseases

CONFERENCES ATTENDED

- American Academy of Neurology (AAN), San Diego, CA, USA, April 2025
- 5th ICP Network Symposium in Utrecht, Netherlands, November 2023
- Cognitive Neuroscience Unit retreat, Montreal Neurological Institute, Montreal, November 2022
- Quebec Network on Bioimaging; June 2022, Sherbrook Canada
- International Society for Magnetic Resonance Imaging in Medicine; May 2022, London, United Kingdom
- Organization for Human Brain Mapping Annual Conference: July 2020, Montreal Canada (online due to COVID)
- 4th ICP Network Symposium in Baltimore, Maryland, USA September 2019
- International Society for Magnetic Resonance Imaging in Medicine; May 2019, Montreal, Canada
- PERFORM Annual Conference; May 2019, Montreal Canada
- Quebec Network on Bioimaging; March 2019 Montreal Canada
- International Society for Magnetic Resonance Imaging in Medicine; June 2018, Paris, France
- PERFORM Annual Conference; May 2018, Montreal Canada
- Quebec Network on Bioimaging; March 2018, Montreal Canada
- PERFORM Annual Conference; May 2017, Montreal Canada

STUDENT CO-SUPERVISION

Yvonne Wanner	MITACS summer intern (Master's student)	2017/05 – 2017/08
Richard Bingley	specialization project (Bachelor's student)	2018/01 – 2018/05
Laura Bilicz	Google Summer of Code (Bachelor's student) (https://summerofcode.withgoogle.com/)	2018/05 – 2018/08
Timur Zhanabaev	specialization project (Bachelor's studend)	2019/05 – 2019/08
Chan Nam Nguyen	Master Student	2024/01 – 2025/07
Charley Wing	Master Student	2024/06 – 2025/07
Cedrik Marchildon	Master Student	2023/07 – 2025/07
Vincent Doyon	PhD Student	2024/04 – 2025/07
Marie-Laurence Bilodeau	summer intern (Master's student)	2024/06 – 2024/09
Mathilde Langlois	Master's Student	2024/01 – 2025/07
Matea Armstrong	Master's Student	2025/09 – today

VOLUNTEER EXPERIENCE

Graduate Physics Association 2017/07 – 2018/07