

**Faculty of Medicine of Harvard University
Curriculum Vitae**

Date Prepared: December 12, 2020

Name: Jurriaan M. Peters

Office Address: 300 Longwood Avenue, FE9

Home Address: 15 Hines Ct #1, Marblehead MA 01945

Work Phone: (617) 355-1566

Work E-Mail: juriaan.peters@childrens.harvard.edu

Work Fax: (617) 730-0463

Place of Birth: Leiden, the Netherlands

Education

2002	MD	Medicine	Catholic University of Leuven
2016	PhD	Medicine (S K Warfield)	Utrecht University

Postdoctoral Training

07/02 - 04/03	Resident	Adult Neurology (Program Director: Professor Jan J. Heimans, MD, PhD)	VU University Medical Center
04/03 - 06/06	Resident	Adult Neurology (Program Director: Sebastiaan F.T.M. de Bruijn, MD, PhD)	Haga Teaching Hospital
07/06 - 06/07	Clinical Fellow	Epilepsy and Clinical Neurophysiology (Program Director: Blaise F.D. Bourgeois, MD)	Boston Children's Hospital, Harvard Medical School
07/07 - 06/10	Resident	Child Neurology (Program Directors: Basil T. Darras, MD, David K. Urion, MD)	Boston Children's Hospital, Harvard Medical School
07/10 - 06/11	Intern	Pediatrics (Program Directors: Theodore C. Sectish, MD, Robert J. Vinci, MD)	BCRP – Boston Combined Residency Program in Pediatrics, Harvard Medical School
07/11 - 06/12	Research Fellow	Basic Neuroscience, ABPN Neuroscience Track (Program Director: Mustafa Sahin,	Boston Children's Hospital, Harvard Medical School

MD, PhD)

Faculty Academic Appointments

07/12 - 02/14	Instructor	Neurology	Harvard Medical School
02/14 - Present	Assistant Professor	Neurology	Harvard Medical School

Appointments at Hospitals/Affiliated Institutions**Current**

07/12 - Present	Assistant	Neurology	Boston Children's Hospital
-----------------	-----------	-----------	----------------------------

Other Professional Positions

2018 - 2019	Consultant	Okulus LLC	Epidiolex(R) P&T simulations
2019 - 2020	Consultant	Philips Neuro Inc.	High Density EEG
2019 - Present	Consultant	Greenwich Biosciences Inc.	Phase III trial of Epidiolex(R) in infants with TSC
	Scientific Advisory Board		Epidiolex(R) in TSC
	Speakers Bureau		Epidiolex(R) in TSC
2020 - Present	Consultant	CRICO Adler, Cohen, Harvey, Wakeman and Guekguezian LLP	Medicolegal expertise
2020 - Present	Consultant	Novartis	Tuberous Sclerosis Complex Curriculum and TSC Seizure Clinical Data
2020 - Present	Consultant Speakers Bureau Scientific Advisory Board	Neurelis Inc.	Valtoco(R)

Major Administrative Leadership PositionsLocal

2013 - Present	Co-Director, Clinical Neurophysiology Core, Translational Neuroscience Center	Boston Children's Hospital
2014 - Present	Director, Computational Neurophysiology, Division of Epilepsy & Clinical Neurophysiology	Boston Children's Hospital
2015 - Present	Director, BIDMC/BCH Clinical Neurophysiology Fellowship Program	Boston Children's Hospital

2019 - Present	Director, BCH/BIDMC Epilepsy Fellowship Program	Boston Children's Hospital
----------------	---	----------------------------

Regional

2020 - Present	President, Greater Boston Epilepsy Society (GBES)	Greater Boston
----------------	---	----------------

Committee Service

Local

2013 - 2016	Career Development Curriculum 2013 - 2016	Boston Children's Hospital Committee member, lecturer
2013 - 2016	Epilepsy Surgery Scheduling Improvement Committee 2013 - 2016	Boston Children's Hospital Epilepsy Representative
2019 - Present	Graduate Medical Education Committee (GMEC) 2019 - Present	Boston Children's Hospital Member, Annual Program Review Subcommittee

National

2016 - Present	American Board of Clinical Neurophysiology (ABCN) 2016 - 2019 2019 - Present	Member, Examination Development Committee Item Writing Panel Co-Chair, Pediatric EEG Board Exam
2018 - Present	High Density EEG (hdEEG) Consortium 2018 - Present	Founding Member

Professional Societies

2003 - Present	Dutch Association of Clinical Neurophysiology (NVKNF)	
2003 - Present	Dutch Association of Neurology (NVN)	
2006 - Present	American Epilepsy Society 2016 - 2019	Member, Student and Resident Education Subcommittee, EEG Section Workgroup
2007 - Present	American Association of Neurology (AAN)	
2007 - Present	Child Neurology Society (CNS)	
2007 - Present	Massachusetts Medical Society	
2011 - Present	American Clinical Neurophysiology Society 2012 - 2015 2016 - 2017	Member, Membership Committee Co-Chair, Membership Committee
2012 - Present	International Child Neurology Association (ICNA)	

Grant Review Activities

2014	Action Medical Research, West Sussex, United Kingdom 2014	Reviewer
2017	Nationaal Epilepsie Fonds (NEF) 2017	Reviewer
2017 - Present	Scientific Review Group, NST-1 study section 2017 - Present	National Institutes of Health/NINDS Ad-hoc member and reviewer
2018	Medical Research Council (MRC) 2018	Reviewer
2018	Tuberous Sclerosis Alliance 2018	Reviewer

Editorial Activities

Ad hoc Reviewer

Acta Neurologica Belgica

American Journal of Case Reports

Annals of Neurology

BioMed Research International

BMJ Case Reports

Cognitive Neurodynamics

Developmental Neurorehabilitation

Developmental Science

Emerging Infectious Diseases

Epilepsia

Epilepsia Open

Epilepsy and Behavior

Epilepsy Research

European Journal of Paediatric Neurology

European Neurology

European Radiology

IEEE Journal of Biomedical and Health Informatics

IEEE Transactions on Neural Systems and Rehabilitation Engineering

Journal of Child Neurology
Journal of Clinical Neurophysiology
Journal of Neuroimaging
Journal of Neurology, Neurosurgery, and Psychiatry
Journal of Pediatric Neurology
Journal of Pediatrics
Molecular Neurobiology
Neuroepidemiology
NeuroImage Clinical
Neuropsychiatric Electrophysiology
Pediatric Neurology
Pediatrics
PLOS ONE
Seizure - European Journal of Epilepsy

Other Editorial Roles

2012	Editor, Book Sims KC, Senior Editor. Peters JM, Musolino P, Elibol Ward Z, Junior Editors. Lippincott Williams & Wilkins, Nov 2013. ISBN 1451175485.	<i>Handbook of Pediatric Neurology</i>
2016 - Present	Editor, Journal Editor	<i>European Journal of Paediatric Neurology</i>

Honors and Prizes

2003	Young Scientist Scholarship	International Society for Brain Electromagnetic Topography, Santa Fe, NM
2006	TopScholar Epilepsy Fellows Scholarship	Annual Meeting of the American Epilepsy Society, San Diego, CA
2008	Von L. Meyer travel award	Boston Children's Hospital
2010	The J. Kiffin Penry Pediatric Epilepsy MiniFellowship Program	J. Kiffin Penry Pediatric Epilepsy Mini-Fellowship Network
2015	Faculty Innovated Research Award	Boston Children's Hospital Medical Staff Organization
2020	Fellow of the American Clinical Neurophysiology	American Clinical Neurophysiology Society

Society (FACNS)

Report of Funded and Unfunded Projects

Grants and Sponsored Research

Past

- | | |
|-------------|---|
| 2012 - 2013 | <p>Faculty Development Fellowship, Department of Neurology, Boston Children's Hospital
 Harvard Medical School Foundation funds, the Eleanor and Miles Shore 50th
 Anniversary Fellowship Program for Scholars in Medicine
 PI, Direct Costs: \$25,000
 Study of implementation, accuracy and clinical impact of high density EEG in the
 pediatric Epilepsy Monitoring Unit</p> |
| 2012 - 2013 | <p>Development of a web-based EEG platform for remote reading, teaching, and data
 exchange
 World Federation of Neurology Pilot Grant
 PI, Direct Costs: \$12,000
 Development and implementation of an open-source, open-access web-based EEG
 platform for remote EEG reading, EEG teaching, EEG archiving, and data exchange in
 developing and low-resource countries.</p> |
| 2012 - 2015 | <p>Epilepsy Center Without Walls: Potential EEG biomarkers and antiepileptogenic
 strategies for epilepsy in TSC
 NIH/NINDS, P20 1P20NS080199
 Investigator (PI: E Bebin)
 5-center prospective study with serial imaging, EEG, clinical examination and
 neuropsychological assessments of your patients with TSC to explore potential EEG
 biomarkers and antiepileptogenic strategies for epilepsy in TSC.</p> |
| 2012 - 2019 | <p>Early Biomarkers of Autism Spectrum Disorders in Infants with TSC - Autism Centers of
 Excellence (ACE) 2012 Network Grant
 NIH/NINDS, 1U01NS082320
 Investigator (PI: Mustafa Sahin, PI: D Krueger)
 5-center prospective study with serial imaging, EEG, clinical examination and
 neuropsychological assessments of young patients with TSC to explore potential early
 biomarkers for Autism Spectrum Disorders in TSC.</p> |
| 2013 - 2019 | <p>MRI Biomarkers of Patients with Tuberous Sclerosis Complex and Autism
 NIH, 1R01 NS079788
 Investigator (PI: S Warfield)
 Development and validation of a set of advanced MRI measures in a longitudinal study
 of young children with autism from known (TSC) and unknown causes, which uniquely
 identify the brain changes that underlie autism, to identify infants at increased risk
 autism, to allow for monitoring of response to drug therapy, and ultimately to tailor
 interventions to alter the developmental trajectory.</p> |
| 2015 - 2016 | <p>Functional and structural connectivity and anatomopathological correlation of
 epileptogenesis in Tuberous Sclerosis Complex
 Harvard Catalyst Early Clinical Data Support for Grant Submissions
 PI, Direct Costs: \$30,000
 Ex-vivo tissue imaging study with registered and quantitative neuropathological
 correlation to assess abnormal connectivity and disrupted microcircuitry beyond tubers,</p> |

in the vicinity of the epileptogenic focus.

Current

- 2017 - 2022** Preventing Epilepsy Using Vigabatrin in Infants with Tuberous Sclerosis Complex (PREVeNT Trial)
NIH/NINDS, NIH 1U01NS092595-01A1
Investigator (PI: Martina Bebin)
The central hypothesis of this proposal is that through early identification of electroencephalography (EEG) biomarkers we can identify at risk infants with TSC and that early treatment versus delayed treatment with vigabatrin in this population will prevent further progression of epileptogenesis and have direct favorable impact on disease severity and epilepsy-associated comorbidities.
- 2017 - 2021** Dense array image-compatible EEG for enhanced neonatal care
NIH/NINDS, 5R01EB024343-03
Co-Investigator (PI: Giorgio Bonmasser)
The goal of this project is to demonstrate the feasibility and safety of developing a dense array, image-compatible, neonatal EEG net "NeoNet" (hdEEG) using novel conductive Thin Film technologies.
- 2018 - 2020** Interictal Frequency Oscillations as Non-Invasive Biomarkers of Epileptogenicity in Pediatric Patients
NIH/NINDS, 1R21NS101373-01A1
Co-Investigator (PI: Christos Papadelis, PI: Steven Stuffelbeam)
This R21 application aims to non-invasively detect and reliably localize HFOs from pediatric patients with refractory epilepsy using high-density scalp electroencephalography (EEG) and magnetoencephalography (MEG), identify their onset generator, and correlate the resection of this generator with patients' postsurgical outcome.
- 2020 - 2021** A Phase 2 Open-label 12-Week Trial of Adjunctive Ganaxolone Treatment (Part A) in Tuberous Sclerosis Complex-related Epilepsy followed by Long-term Treatment (Part B)
Marinus Pharmaceuticals
Site PI
The goal of this study is to assess preliminary safety and efficacy of ganaxolone as adjunctive therapy for the treatment of primary seizure types in patients with genetically or clinically confirmed TSC-related epilepsy through the end of the 12 week treatment period. NCT04285346.

Current Unfunded Projects

- 2013 - Present** DTI tractography in Sclerosis Complex and non-syndromic Autism Spectrum disorder
PI
Study of microstructural integrity of multiple anatomical and functionally relevant major white matter pathways in TSC and ASD to identify biomarkers of neurological phenotype.
- 2014 - Present** Multiple projects involving improved electrical source imaging (ESI)
Co-investigator and PI
Multiple projects involving improved electrical source imaging (ESI), including identifying dynamic patterns in scalp EEG of epileptic patients and applying source localization techniques to these dynamics. Responsible for analysis of clinical and

hdEEG data, and provided expertise in the clinical evaluation of epilepsy to ensure that techniques developed have direct clinical relevance for epilepsy surgery.

- 2017 - Present Serial DTI in Tuberous Sclerosis Complex and localization of the epileptogenic zone
PI
Study of longitudinal DTI evolution in the normal appearing white matter, the perituber region and the tubers in TSC to assess location of epileptogenic zone.

Report of Local Teaching and Training

Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)

- | | | |
|----------------|--|---|
| 2012 - Present | Inpatient service case discussions | Boston Children's Hospital
Boston, Massachusetts,
United States |
| | Pediatric Neurology residents and Epilepsy fellows | 4 lectures per year |
| 2013 - Present | Neuropathology lecture series | Boston Children's Hospital
Boston, Massachusetts,
United States |
| | Pediatric Neurology residents | 2 lectures per year |
| 2014 - Present | Epilepsy lecture series | Boston Children's Hospital
Boston, Massachusetts,
United States |
| | Pediatric Neurology residents and Epilepsy fellows | 2 lectures per year |

Clinical Supervisory and Training Responsibilities

- | | | |
|----------------|---|----------------------------|
| 2012 - Present | Inpatient service Pediatric Neurology, Epilepsy and neurological ICU consultation team / Pediatric Neurology residents and Epilepsy fellows | Boston Children's Hospital |
| | | 8 weeks/year, full-time |

Formally Mentored Harvard Medical, Dental, and Graduate Students

- | | |
|------|---|
| 2010 | Danielle Pier, HMS class of 2010 / Pediatric Neurologist, Massachusetts General Hospital for Children
Guillain-Barre syndrome in a child with pain: lessons learned from a late diagnosis - First authorship on case report: PMID 20456276. |
| 2012 | Jolene M Singh, Harvard University class of 2014 / Computational Radiology Laboratory, Boston Children's Hospital
Tubers Are Neither Static Nor Discrete: Evidence From Serial Diffusion Tensor Imaging - Epilepsy Foundation Student Fellowship. Co-author on paper on longitudinal diffusion changes in tuberous sclerosis complex: PMID 26432846. |

Other Mentored Trainees and Faculty

- | | |
|-------------|--|
| 2008 - 2012 | Ivan Sanchez Fernandez, MD / Clinical and Research Fellow, Boston Children's Hospital
<i>Career Stage:</i> Clinical Fellow in Neurology <i>Mentoring Role:</i> Supervisor
<i>Accomplishments:</i> Multiple first-author original publications in Epilepsia, Neurology, and others; Epilepsy Fellowship at Boston Children's Hospital; local, regional and national (invited) talks; Department of Child Neurology, Hospital Sant Joan de Déu, Universidad de Barcelona, Spain. PMIDs 21399511, 22532549, 22578248, 23163318, |
|-------------|--|

23445896.

- 2010 Meritxell T Fernandez, BSc / Resident in Pediatrics, Universidad de Lleida, Spain
Career Stage: Undergraduate student, Quiron Hospital Group, Barcelona, Spain
Mentoring Role: Supervisor *Accomplishments:* BSc at Quiron Hospital Group, Barcelona, Spain. Neurology Research elective. Second authorship on research paper on use of EEG during Wada test: PMID 22341967.
- 2011 - 2012 Jacqueline Tan, BSc
Career Stage: Undergraduate student, VU University Medical Center, Amsterdam, the Netherlands *Mentoring Role:* Supervisor *Accomplishments:* Brain Functional Networks in Syndromic and Non-Syndromic Autism: A Graph Theoretical Study of EEG Connectivity - BSc. Co-authorship on EEG connectivity study in autism spectrum disorder: PMID 23445896.
- 2012 - 2014 Anna K Prohl, BSc / Medical Student, Quinnipiac University
Career Stage: Undergraduate student, Bowdoin College, Brunswick ME *Mentoring Role:* Supervisor *Accomplishments:* Tuberous sclerosis complex and diffusion tensor imaging - Epilepsy Foundation Student Fellowship. Co-authorship on original research papers: PMIDs 24315019, 24489482, 26432846.
- 2012 - 2016 Archana Patel, M.D., M.P.H. / Assistant in Neurology, Instructor in Neurology, Boston Children's Hospital and Harvard Medical School
Career Stage: Resident, Fellow *Mentoring Role:* Supervisor *Accomplishments:* Supervisory role in the development of a questionnaire-based diagnostic and therapeutic approach to pediatric epilepsy, Muhimbili National Hospital, Tanzania. First authorship of paper on the use of questionnaire for pediatric epilepsy, PMID 27088519.
- 2013 - Present Peter E Davis, MD / Assistant in Neurology, Instructor in Neurology, Boston Children's Hospital and Harvard Medical School
Career Stage: Assistant in Neurology *Mentoring Role:* Co-mentor *Accomplishments:* Co-author in review on TSC and Autism Spectrum Disorder, PMID 25986747. PMIDs 29101226, 31297797, 31812987, 31838998.
- 2014 Merel Boom, MSc
Career Stage: Graduate student, University of Amsterdam, the Netherlands *Mentoring Role:* Supervisor *Accomplishments:* Lesion-Constrained Electrical Source Imaging: A Novel Approach in Epilepsy Surgery for Tuberous Sclerosis Complex - MSc. Research elective on tuberous sclerosis complex and electrical source localization for epilepsy surgery. First author on review paper on TSC and epilepsy surgery. Co-author on original research paper on TSC epilepsy surgery and electrical source imaging, PMID 31261349.
- 2014 Robbert R Struyven, MD / Student, Master of Science in Data Science, Harvard University
Career Stage: Medical student, Catholic University of Leuven, Belgium *Mentoring Role:* Supervisor *Accomplishments:* Diffusion Imaging in Tuberous Sclerosis Complex - Correlation with Neuropathology. Medical student research elective, ranked 2nd in "Abstract competition" of the Student Health Science Symposium. Co-first author on original paper on this topic: PMID 31353853.
- 2016 John J Bushman, BSc in Biomedical Engineering / Associate Research Engineer, A123 Systems
Career Stage: Undergraduate student, Rochester Institute of Technology, Rochester

NY Mentoring Role: Supervisor Accomplishments: White Matter Mean Diffusivity Correlates With Myelination in Tuberous Sclerosis Complex - Two-month summer Internship on the coregistration of tissue pathology and ex-vivo MRI. Co-authorship on TSC ex-vivo imaging paper, PMID 31353853.

- 2016 Emma A van der Poest Clement, MSc
Career Stage: Graduate student, Erasmus University, Rotterdam, the Netherlands
Mentoring Role: Supervisor Accomplishments: Erasmus University, Rotterdam, the Netherlands. Vigabatrin for Epileptic Spasms and Tonic Seizures in Tuberous Sclerosis Complex - Research elective on the use of vigabatrin in tuberous sclerosis complex. First authorship on original research paper on vigabatrin in TSC, and on case report: PMIDs 31912454, 29687739
- 2017 Anne-Elise de Groen, MSc
Career Stage: Graduate student, University of Amsterdam, the Netherlands
Mentoring Role: Supervisor Accomplishments: The Evolution of Subclinical Seizures in Children With Tuberous Sclerosis Complex - MSc. Research elective on electrographical seizures in tuberous sclerosis complex. First author, PMID 31290714.
- 2018 Brechtie Mulder, MSc
Career Stage: Graduate student, VU Free University, Amsterdam, the Netherlands
Mentoring Role: Supervisor Accomplishments: Tuberous sclerosis complex lesion network mapping in infantile spasms - MSc. Six-month research elective for master's thesis. Co-author on original paper on TSC lesion network mapping in infantile spasms (in progress), and platform presentation at international meeting.
- 2019 Maaïke Nijman, MSc
Career Stage: Graduate student, University of Amsterdam, the Netherlands
Mentoring Role: Supervisor Accomplishments: Structural MRI markers of epileptogenic zone in tuberous sclerosis complex - MSc. Six-month research elective for master's thesis. First author on original paper on structural MRI markers of the epileptogenic zone in TSC (in progress.)

Formal Teaching of Peers

No presentations below were sponsored by 3rd parties/outside entities

- | | | |
|----------------|--|---|
| 2013 | Non-epileptic events in pediatrics
Seminar Series, Department of
Psychiatry
Boston Children's Hospital | One hour lecture
Boston, Massachusetts |
| 2013 - Present | 1. Fits, faints and funny turns:
Non-epileptic paroxysmal events in
childhood. 2. Bayesian and conventional
interpretation of diagnostic testing
Satellite Seminar Series (Boston
Children's North)
Boston Children's Hospital | 2 lectures per year

Peabody, Massachusetts |
| 2014 | Advanced neurophysiology techniques
Michael J. Bresnan Child Neurology
Course
Boston Children's Hospital | One lecture per course
Boston, Massachusetts |

2016	1. Seizure... or NOT? 2. Epilepsy, Boston Children's Hospital, and the WHO (International Neurology Colloquium) Michael J. Bresnan Child Neurology Course Boston Children's Hospital	Two lectures per course Boston, Massachusetts
2018	Computational Neurophysiology Lennox-Lombroso Pediatric Epilepsy Conference Boston Children's Hospital	One lecture per course Boston, Massachusetts
2018	Seizure... or NOT? Paroxysmal non-epileptic events in pediatrics Michael J. Bresnan Child Neurology Course Boston Children's Hospital	One lecture per course Boston, Massachusetts
2020	Paroxysmal non-epileptic events in pediatrics Michael J. Bresnan Child Neurology Course Boston Children's Hospital	One lecture per course Boston, Massachusetts

Local Invited Presentations

No presentations below were sponsored by 3rd parties/outside entities

2009	Non-epileptic paroxysmal events in children / Grand Rounds Department of Medicine, Boston Children's Hospital	
2011	Computational EEG Analysis, a Clinician's and a Physicist's Perspective / Seminar Epilepsy Research Seminar Series Boston Children's Hospital	
2012	A graph theoretical approach to functional connectivity in autism / Oral Presentation Fetal-Neonatal Neuroimaging & Developmental Science Center, Boston Children's Hospital	
2012	Brain Functional Networks in Tuberous Sclerosis Complex and Autism: a Graph Theoretical Study of EEG Connectivity / Research Seminar Center for Pain and the Brain, Boston Children's Hospital	
2013	Brain networks and EEG functional connectivity in autism and TSC / Lab meeting Cash Lab, Massachusetts General Hospital	
2013	EEG Source Localization: Improving Diagnostics Through Advanced Engineering / Seminar Epilepsy Research Seminar Series Boston Children's Hospital	
2014	Neuroimaging and Neurophysiology correlates of autism in Tuberous Sclerosis Complex / Oral Presentation Monthly autism meeting Boston Children's Hospital	

2015	Rapid advances in neuroimaging, neurophysiology, and targeted treatment of Tuberous Sclerosis Complex / Oral Presentation Neuroradiology lecture series Boston Children's Hospital
2016	Seizure ... or NOT? Non-epileptic paroxysmal events in children / Conference Neurology Nursing Teaching Conference Boston Children's Hospital
2017	Localization and prediction of epilepsy in Tuberous Sclerosis Complex / Grand Rounds Longwood Epilepsy Grand Rounds Boston Children's Hospital
2018	Tuberous Sclerosis Complex: Towards systemic and surgical prevention of epilepsy / Lecture Fetal-Neonatal Neuroimaging & Developmental Science Center (FNNDSC) Boston Children's Hospital
2018	Tuberous Sclerosis Complex: Towards systemic and surgical prevention of epilepsy / Lecture Joint laboratory meeting of Kwiatkowski, Priolo, Henske and Sahin Brigham and Women's Hospital
2019	Tuberous Sclerosis Complex: Prevention of epileptic encephalopathy in multilesional epilepsy / Grand Rounds Longwood Neurology Grand Rounds Harvard Institutes of Medicine

Report of Regional, National and International Invited Teaching and Presentations

Those presentations below sponsored by 3rd parties/outside entities are so noted and the sponsor(s) is identified.

Regional

2009	Jeavons syndrome: More than meets the eye? / Oral Presentation - Presenter Greater Boston Epilepsy Society, Fall Meeting 2009 Boston, Massachusetts
2012	Brain functional networks in tuberous sclerosis complex and autism: a graph theoretical study of EEG connectivity / Oral Presentation - Presenter Autism Consortium 2012 Symposium Boston, Massachusetts
2016	Imaging and EEG to guide early treatment of TSC: can we improve neurological outcome? / Oral Presentation - Presenter TSC Medical Symposium University of Connecticut, Connecticut Children's Medical Center Hartford, Connecticut
2016	Tubers are neither static nor discrete: Lines of evidence and clinical implications / Oral Presentation - Presenter Greater Boston Epilepsy Society Boston, Massachusetts
2018	Tuberous Sclerosis Complex: Novel techniques for prediction and localization of epilepsy

/ Grand Rounds - Invited Speaker
 Neurology Grand Rounds
 Dartmouth Hitchcock Medical Center, Geisel School of Medicine
 Dartmouth, New Hampshire

National

- 2000 Population study of Benign Rolandic Epilepsy: Is treatment needed? / Oral Presentation - Presenter
 Annual Meeting of the Child Neurology Society
 St. Louis, Missouri
- 2012 Loss of white matter microstructural integrity is associated with adverse neurological outcome in tuberous sclerosis complex / Oral Presentation - Presenter
 64th Annual meeting of the American Academy of Neurology
 New Orleans, Louisiana
- 2013 Brain Functional Networks in Tuberous Sclerosis Complex and Autism: a Graph Theoretical Study of EEG Connectivity / Oral Presentation - Presenter
 65th Annual Meeting of the American Academy of Neurology
 San Diego, California
- 2014 Advanced neuroimaging and neurophysiological measure of tuberous sclerosis complex: Pathology beyond tubers / Oral Presentation - Presenter
 Special Interest Group (SIG) meeting, 68th Annual meeting of the American Epilepsy Society
 Seattle, Washington
- 2014 Neuroimaging and neurophysiological correlates of autism in Tuberous Sclerosis Complex / Grand Rounds - Presenter
 UCLA Semel Institute Grand Rounds
 University of California, Los Angeles
 Los Angeles, California
- 2015 Case presentation I: Implantation Strategy. Electrocorticography and intracranial EEG course / Teaching Presentation - Presenter
 American Clinical Neurophysiology Society, Annual Meeting and Courses
 Houston, Texas
- 2015 Electrocorticography during pediatric epilepsy surgery. Intraoperative Monitoring course, part II / Teaching Presentation - Presenter
 American Clinical Neurophysiology Society, Annual Meeting and Courses
 Houston, Texas
- 2015 Rapid advances in neuroimaging, neurophysiology, and targeted treatment of Tuberous Sclerosis Complex / Lecture - Invited Speaker
 Weill Cornell Medical Center
 New York, New York
- 2016 Targeted treatment of Tuberous Sclerosis Complex: Insights from neurophysiology and neuroimaging / Grand Rounds - Presenter
 Neurology Grand Rounds
 University of Connecticut, Connecticut Children's Medical Center
 Hartford, Connecticut

- 2016 MRI biomarkers and early medical interventions in Tuberous Sclerosis Complex / Oral Presentation - Presenter
4th Annual Flux Congress
Washington University
St. Louis, Missouri
- 2016 Pediatric State of the Art Symposium / Lecture - Chair
2016 Annual Meeting of the American Epilepsy Society
Houston, Texas
- 2017 Tuberous Sclerosis Special Interest Group (SIG): Biomarkers and Risk Factors for Epilepsy in TSC: Diagnosis, Prediction and Prevention / Oral Presentation - Author & Presenter (Selected Oral Abstract)
2017 Annual Meeting of the American Epilepsy Society
Washington, District of Columbia
- 2018 Technological advances in pediatric epilepsy surgery: implications for Tuberous Sclerosis Complex / Grand Rounds - Invited Speaker
Department of Neurosurgery
Baylor College of Medicine
Houston, Texas
- 2018 High density EEG: Application in multilesional epilepsy / Oral Presentation - Author & Presenter (Selected Oral Abstract)
Inaugural High Density Consortium Meeting
Tampa, Florida
- 2018 Tuberous Sclerosis Complex: Towards preventative and targeted treatment of epilepsy / Grand Rounds - Invited Speaker
UVM Neuroscience Grand Rounds
University of Vermont Medical Center
Burlington, Vermont
- 2018 Tuberous Sclerosis Complex: Novel localization techniques for early epilepsy surgery / Grand Rounds - Invited Speaker
Epilepsy Rounds
University of Alabama Birmingham
Birmingham, Alabama
- 2018 Tuberous Sclerosis Complex: Towards prevention of epilepsy / Grand Rounds - Invited Speaker
Pediatric Grand Rounds
University of Alabama Birmingham
Birmingham, Alabama
- 2019 Methods for HD EEG ESI and Lesion-Constrained ESI. In concurrent session "Current and Future Clinical Practice of High Density EEG and Electrical Source Imaging in Epilepsy" / Lecture - Invited Speaker
American Clinical Neurophysiology Society Annual Meeting
Las Vegas, Nevada
- 2019 Epilepsy in Tuberous Sclerosis Complex: Insights from advanced EEG and imaging techniques / Grand Rounds - Invited Speaker
Epilepsy Lecture Series, Northwestern Comprehensive Epilepsy Center

Northwestern University
Chicago, Illinois

- 2020 Tuberous Sclerosis Complex: Prevention of epileptic encephalopathy in multilesional epilepsy / Grand Rounds - Invited Speaker
Grand Rounds, Department of Neurology
Vanderbilt University
Nashville, Tennessee
- 2020 Epilepsy surgery in tuberous sclerosis complex: research priorities and study design / Investigators Workshop – Chair
2020 Annual Meeting of the American Epilepsy Society
Virtual Event
- 2021 Prevention of epileptic encephalopathy in multilesional epilepsy / Grand Rounds - Invited Speaker
Grand Rounds, Department of Neurology
Columbia University
New York, New York
- 2021 Preventative medical and early surgical treatment of epilepsy in Tuberous Sclerosis Complex / Grand Rounds – Invited Speaker
Grand Rounds, Department of Pediatrics
Oregon Health & Science University
Portland, Oregon

International

- 2003 Benigne Rolandische Epilepsie: Is behandelend nodig? / Oral Presentation - Presenter
Children and epilepsy: towards an individualized treatment regimen
Utrecht, Netherlands
- 2005 Computer-assisted EEG interpretation / Oral Presentation - Author & Presenter (Selected Oral Abstract)
Annual Meeting of the Dutch Society of Clinical Neurophysiology
St Michelsgestel, Netherlands
- 2009 EEG and Imaging in the Diagnosis of Pediatric Epilepsy / Invited Presentation - Invited Speaker
Symposium: Epilepsy and Stigma: How do we conquer it in Africa
Lusaka
- 2013 Brain Functional Networks in Tuberous Sclerosis Complex and Autism: a Graph Theoretical Study of EEG Connectivity / Oral Presentation - Presenter
International Research Conference on TSC and Related Disorders: From molecules to Medicines
Washington, District of Columbia
- 2015 Recent advances in neuroimaging, neurophysiology, and targeted treatment of Tuberous Sclerosis Complex / Invited lecture - Invited Speaker
Epilepsy Research rounds
Utrecht University
Utrecht, Netherlands

- 2016 White matter diffusivity reflects cumulative neurological comorbidity in Tuberous Sclerosis Complex / Platform Presentation - Presenter
International Child Neurology Association (ICNA) meeting
Amsterdam, Netherlands
- 2016 Autism spectrum disorder and tuberous sclerosis complex / Lecture - Invited Speaker
International Scientific Symposium on Syndromic Autism (Syndromaler Autismus Interprofessionelle Tagung)
Kork (Kehl), Germany
- 2018 Tuberous Sclerosis Complex: Towards Prevention of Epilepsy / Grand Rounds - Invited Speaker
Pediatric Neurology Grand Rounds
Amsterdam University Medical Center
Amsterdam, Netherlands
- 2018 - 2018 Clinical Neuroscience Minor (elective), Computer analysis of the EEG, Peers – Lecturer
Amsterdam University Medical Centre
Amsterdam, Netherlands
- 2018 - 2018 Clinical Neuroscience Minor (elective), EEG and pediatric epilepsy, Peers – Lecturer
Amsterdam University Medical Centre
Amsterdam, Netherlands
- 2018 Computer Analysis of the EEG / Lecture - Invited Speaker
Amsterdam University Medical Centre, Clinical Neuroscience Minor (elective)
Amsterdam, Netherlands
- 2018 EEG and Pediatric Epilepsy / Lecture - Invited Speaker
Amsterdam University Medical Centre, Clinical Neuroscience Minor (elective)
Amsterdam, Netherlands
- 2019 Tubers associated with Infantile Spasms impact a common brain network in tuberous sclerosis complex / Oral Presentation - Co-Author
2019 International Tuberous Sclerosis Complex Research Conference
Toronto, Canada

Report of Clinical Activities and Innovations

Current Licensure and Board Certification

- 2002 - Present Dutch Medical License (full)
- 2006 - Present Educational Commission for Foreign Medical Graduates certification
- 2010 - Present Registration as Neurologist in the Netherlands
- 2012 - Present Massachusetts Medical License (full)
- 2013 - Present American Board of Clinical Neurophysiology (ABCN)

- 2014 - Present American Board of Psychiatry and Neurology (ABPN), with Special Qualification in Child Neurology
- 2016 - Present Subspecialty Certification in Epilepsy, American Board of Psychiatry and Neurology (ABPN)

Practice Activities

2012 - Present	Ambulatory care	Comprehensive Tuberous Sclerosis Program, Boston Children's Hospital	2 sessions/month
2012 - Present	Ambulatory care	Pediatric Neurology/Epilepsy (BCH Peabody), Boston Children's Hospital	4 sessions/month
2012 - Present	Electrical Source Imaging	Division of Epilepsy and Clinical Neurophysiology, Boston Children's Hospital	2-4 sessions/month
2012 - Present	Inpatient service	Epilepsy Service, Boston Children's Hospital	6 weeks/year
2012 - Present	Outpatient EEG interpretation	Division of Epilepsy and Clinical Neurophysiology, Boston Children's Hospital	1-2 sessions/month
2016 - Present	Ambulatory care	Pediatric Neurology (BCH Lexington), Boston Children's Hospital	2 sessions/month
2016 - Present	Ambulatory care	Pediatric Neurology/Epilepsy (BCH Lexington), Boston Children's Hospital	2 sessions/month

Clinical Innovations

Continuous Spike and Wave during Sleep Syndrome (CSWS) characterization - Boston Children's Hospital (2012 - 2014)	As a member of a research group studying CSWS at BCH, we revised and outlined diagnostic criteria, characterized longitudinal clinical course of the condition, outlined techniques for spike quantification on the EEG, and provided additional etiological insights based on MR imaging.
--	--

Report of Technological and Other Scientific Innovations

Advanced neuroimaging and neurophysiology in Tuberous Sclerosis Complex (2011 - Present)	I am the dedicated epileptologist in the multidisciplinary TSC program at Boston Children's Hospital, and TSC forms a major research focus. With my collaborators we were the first to describe decreased microstructural integrity in autism, suggesting the use of DTI as a biomarker for neurological outcome in TSC. Next, using EEG functional connectivity measures, we found alterations of brain network properties common to both idiopathic and TSC-related autism, suggesting a common biological mechanism. Based on my previous work and
--	---

expertise, I am responsible for EEG interpretation in two large NIH-funded prospective multicenter trials studying early EEG and advanced neuroimaging predictors of epilepsy and autism in TSC. In addition, I am developing a longitudinal imaging technique called Epilepsy Longitudinal Diffusion Imaging (ELoDI) which allows the visualization of diffusion changes over time associated with epileptogenicity.

Web-based EEG platform (2012 - 2013)

I designed a novel software system which is an open-source, open access, web-based EEG platform. Locally recorded EEGs can be stored on a server, and remotely and securely accessed via any internet browser without installation of software. It allows for near real-time or offline remote EEG reading, data-exchange, and teaching. Vector-based graphics adjust to screen resolution and connection speed is typically not a limiting factor as the signal gets downsampled, and an image gets generated locally on demand only. While digitized EEGs may be available now in limited resource regions, pediatric EEGs are often not interpreted properly or timely, creating a clinical deficiency in diagnosis and treatment of epilepsy. The system also allows for researchers to become less dependent on data transfer of large files, and data can be read “streaming” and nearly in real-time. The software is currently piloted in Zambia (clinical service, and teaching) and Tanzania (research).

Density Weighted Statistics (DWS) in Diffusion Tensor Imaging (DTI) tractography (2012 - 2015)

Together with my mentor, Dr. Simon K. Warfield, Ph.D., we describe a novel solution for the problem of partial volume averaging in region-of-interest (ROI) analysis with DTI tractography. When voxels associated with a fiber tract are identified, the proportion of the voxel associated with the fiber tract is important. A common strategy to select a tract-based ROI has been to threshold the streamline density to identify voxels associated with a particular white matter tract. Average DTI parameters of the region are then assessed by computing the mean value by summing the parameter over all the voxels above the threshold and dividing by the number of voxels in the region. However, partial volume effects confound the analysis. We describe the use of streamline density directly to enable an appropriate weighted average of diffusion tensor parameters. In our analysis, the diffusion tensor parameters of a region are calculated on the basis of equal weighting of each of the trajectories, rather than equal weighting of each voxel.

EEG dynamics and electrical source imaging (ESI) (2013 - Present)

As a member of the Computational Radiology Laboratory, I collaborate with Drs. Hyde, Warfield, and Erem on a number of studies identifying dynamic patterns in scalp EEG of epileptic patients. We apply novel source localization techniques to these dynamics using the DESI algorithm we developed. In these studies, I am responsible for analysis of clinical and hdEEG data, and provide expertise in the clinical evaluation of epilepsy to ensure that the techniques developed have direct clinical relevance for improving epilepsy surgery.

Report of Education of Patients and Service to the Community

Activities

No activities below were sponsored by 3rd parties/outside entities

2011

BNN Radio (The Netherlands) / Health Care Correspondent
Radio interview regarding current affairs of health care in Massachusetts and USA

- 2013 Interview Dradio (Deutschlandradio), with Leonie Seng / Science Report on EEG Network Analysis
- 2015 TSC Family Day, Waltham, MA / Speaker
Oral presentation, "Epilepsy and Tuberous Sclerosis Complex: How to optimize 12 developmental outcome"
- 2019 Journal of Child Neurology Podcast / Guest Speaker
Electrographic Seizures in Tuberous Sclerosis Complex
Interview for the JCN Podcast

Educational Material for Patients and the Lay Community

No materials below were sponsored by 3rd parties/outside entities

Books, monographs, articles and presentations in other media

- | | | | |
|------|--|---|--|
| 2011 | Amerikaanse teamgeest inspireert Nederlandse kinderneuroloog | Full-length biographical interview for De Neuroloog, the Dutch Neurological Association's professional magazine | Maathuis M. Amerikaanse teamgeest inspireert Nederlandse kinderneuroloog. De Neuroloog 2009;16(1):11- 12 |
| 2011 | Hot topics in Pediatric Neuroradiology | Invited editorial on DTI and autism in TSC study | Poussaint, T.Y. Diffusion Imaging Provides Insight into White Matter Microstructural Integrity in Tuberous Sclerosis Complex. AJNR 2011; 32(6):993-997 |
| 2012 | Autism may involve disordered white matter in the brain | Interview for Boston Children's Hospital science and clinical innovation blog, Vector | Fliesler N. A view of autism: altered brain pathways, disordered white matter. http://vectorblog.org/2011/12/aview-of-autism-altered-brainpathways-disordered-white-matter . Published Dec 8, 2011. Accessed Jun 10, 2013. |
| 2013 | 'Network' analysis of brain may explain features of autism | Interview for Boston Children's Hospital science and clinical | Fliesler N. Could "network" analysis of the brain explain autism's features |

		innovation blog, Vector	http://vectorblog.org/2013/03/child-network-analysis-of-the-brain-explain-autism-features Published Mar 1, 2013. Accessed Jun 10, 2013.
2013	Autistische hersenen zijn fijner geweven	Coverage of autism network analysis in the Dutch newspaper	Volkskrant reporter. Autistische hersenen zijn fijner geweven. http://www.volkskrant.nl/vk/nl/2844/Archief/archief/articledetail/3401159/2013/02/28/Autistischehersenen-zijn-fijnergeweven.d.html Published Feb 28, 2013. Accessed Jun 20, 2013
2013	Brain connectivity differs in children with autism	Interview and research summary for Neuropsychiatry “News” section.	Freeston, S. News: Brain connectivity differs in children with autism, EEG study suggests. Neuropsychiatry 2013;3(2):131-132
2013	Falsch verbunden: Hirnregionen autistischer Kinder sind auf ungewöhnliche Weise miteinander vernetzt.	Interview with “Gehirn und Geist” the German edition of Scientific American’s “Brain and Mind”	Klotzbücher, L. Falsch verbunden Hirnregionen autistischer Kinder sind auf ungewöhnliche Weise miteinander vernetzt. http://www.gehirn-undgeist.de/alias/autismus/falschverbunden/1185521 . Published Feb 28, 2013. Accessed Jun 20, 2013
2013	Redondance et déconnexion	Invited	Taquet M. & Peters

		commentary to the autism network analysis study in Nouvelles magazine	J.M. Le réseau cérébral fonctionnel des enfants atteints d'autisme: Redondance et déconnexion. Article in French. Nouvelles, Med Sci (Paris) 2013; 29(6-7):567-9.
2016	A new model for detecting seizures in the neuro ICU	Press coverage in Neurology Today, the AAN's news outlet	Tailan, J. A new model for detecting seizures in the neuro ICU. Neurology Today 2016;16(1):1, 12-13
2016	Seizure or not? Nonepileptic paroxysmal events in pediatrics	Featured in Boston Children's Hospital Clinical Health Blog	https://notes.childrenshospital.org/seizure-or-not-non-epileptic-paroxysmal-events-in-pediatrics/ Published Nov 2, 2016. Accessed Nov 8, 2016.

Recognition

2010 - 2016	Patient's Choice Award, Compassionate Doctor Award	Rated and awarded by patients on Vitals.com
-------------	--	---

Report of Scholarship

ORCID: 0000-0002-6725-2814

Peer-Reviewed Scholarship in print or other media

Research Investigations

1. **Peters JM**, Camfield CS, Camfield PR. Population study of benign rolandic epilepsy: is treatment needed? Neurology. 2001 Aug 14; 57(3): 537-9. PubMed PMID: 11502931.
2. **Peters JM**, Waber DP, McAnulty GB, Duffy FH. Event-related correlations in learning impaired children during A hybrid go/no-go choice reaction visual-motor task. Clinical EEG (electroencephalography). 2003 Jul 1; 34(3): 99-109. PubMed PMID: 14521272.
3. van Putten MJ, **Peters JM**, Mulder SM, de Haas JA, Bruijninx CM, Tavy DL. A brain symmetry index (BSI) for online EEG monitoring in carotid endarterectomy. Clinical neurophysiology : official journal of the International Federation of Clinical Neurophysiology. 2004 May 1; 115(5): 1189-94. PubMed PMID: 15066544.

4. **Peters JM**, Padberg M, Nederveen PJ, Tavy DL, van Putten MJ. Neuromonitoring met on-line qEEG tijdens carotisendarteriectomie: ervaringen met de Brain Symmetry Index. *Tijdschr Neurol Neurochir*. 2005; 106(4): 143-150.
5. Depositario-Cabacar DT, **Peters JM**, Pong AW, Roth J, Rotenberg A, Riviello, Jr JJ, Takeoka M. High-dose intravenous levetiracetam for acute seizure exacerbation in children with intractable epilepsy. *Epilepsia*. 2010 Jul 1; 51(7): 1319-22. PubMed PMID: 20163437.
6. **Peters JM**, Sahin M, Vogel-Farley VK, Jeste SS, Nelson, 3rd CA, Gregas MC, Prabhu SP, Scherrer B, Warfield SK. Loss of white matter microstructural integrity is associated with adverse neurological outcome in tuberous sclerosis complex. *Academic radiology*. 2012 Jan 1; 19(1): 17-25. PubMed PMID: 22142677; PubMed Central PMCID: PMC3343770.
 - 110+ citations, proposal of "Density Weighted Statistics" in diffusion tensor imaging and tractography
7. Taquet M, Scherrer B, Commowick O, **Peters JM**, Sahin M, Macq B, Warfield SK. Registration and analysis of white matter group differences with a multi-fiber model. *Med Image Comput Comput Assist Interv*. 2012 Jan 1; 15(Pt 3): 313-20. PubMed PMID: 23286145; PubMed Central PMCID: PMC3671390.
8. **Peters JM**, Tomas-Fernandez M, van Putten MJ, Loddenkemper T. Behavioral measures and EEG monitoring using the Brain Symmetry Index during the Wada test in children. *Epilepsy & behavior : E&B*. 2012 Mar 1; 23(3): 247-53. PubMed PMID: 22341967.
9. Sánchez Fernández I, Hadjiloizou S, Eksioglu Y, **Peters JM**, Takeoka M, Tas E, Abdelmoumen I, Rotenberg A, Kothare SV, Riviello, Jr JJ, Loddenkemper T. Short-term response of sleep-potentiated spiking to high-dose diazepam in electric status epilepticus during sleep. *Pediatric neurology*. 2012 May 1; 46(5): 312-8. PubMed PMID: 22520353.
10. Akhondi-Asl A, Hans A, Scherrer B, **Peters JM**, Warfield SK. Whole Brain Group Network Analysis Using Network Bias and Variance Parameters. *Proceedings. IEEE International Symposium on Biomedical Imaging*. 2012 May 1; 2012: 1511-1514. PubMed PMID: 26539256; PubMed Central PMCID: PMC4629860.
11. Sánchez Fernández I, Takeoka M, Tas E, **Peters JM**, Prabhu SP, Stannard K, Gregas M, Eksioglu Y, Rotenberg A, Riviello, Jr JJ, Kothare SV, Loddenkemper T. Early thalamic lesions in patients with sleep-potentiated epileptiform activity. *Neurology*. 2012 May 29; 78(22): 1721-7. PubMed PMID: 22539569; PubMed Central PMCID: PMC3359583.
12. *Fernández IS, ***Peters JM**, Hadjiloizou S, Prabhu SP, Zarowski M, Stannard KM, Takeoka M, Rotenberg A, Kothare SV, Loddenkemper T. Clinical staging and electroencephalographic evolution of continuous spikes and waves during sleep. *Epilepsia*. 2012 Jul 1; 53(7): 1185-95. PubMed PMID: 22578248.
13. Fernández IS, **Peters JM**, Takeoka M, Rotenberg A, Prabhu S, Gregas M, Riviello, Jr JJ, Kothare S, Loddenkemper T. Patients with electrical status epilepticus in sleep share similar clinical features regardless of their focal or generalized sleep potentiation of epileptiform activity. *Journal of child neurology*. 2013 Jan 1; 28(1): 83-9. PubMed PMID: 22532549.

14. Weisenfeld NI, **Peters JM**, Tsai PT, Prabhu SP, Dies KA, Sahin M, Warfield SK. A magnetic resonance imaging study of cerebellar volume in tuberous sclerosis complex. *Pediatric neurology*. 2013 Feb 1; 48(2): 105-10. PubMed PMID: 23337002; PubMed Central PMCID: PMC3763730.
15. Chavakula V, Sánchez Fernández I, **Peters JM**, Popli G, Bosl W, Rakhade S, Rotenberg A, Loddenkemper T. Automated quantification of spikes. *Epilepsy & behavior : E&B*. 2013 Feb 1; 26(2): 143-52. PubMed PMID: 23291250.
16. **Peters JM**, Taquet M, Vega C, Jeste SS, Fernández IS, Tan J, Nelson, 3rd CA, Sahin M, Warfield SK. Brain functional networks in syndromic and non-syndromic autism: a graph theoretical study of EEG connectivity. *BMC medicine*. 2013 Feb 27; 11: 54. PubMed PMID: 23445896; PubMed Central PMCID: PMC3626634.
 - Covered in national and international press, including Reuters, 160+ citations
17. Fernández IS, Chapman KE, **Peters JM**, Kothare SV, Nordli, Jr DR, Jensen FE, Berg AT, Loddenkemper T. The tower of Babel: survey on concepts and terminology in electrical status epilepticus in sleep and continuous spikes and waves during sleep in North America. *Epilepsia*. 2013 Apr 1; 54(4): 741-50. PubMed PMID: 23163318; PubMed Central PMCID: PMC5030106.
18. Lewis WW, Sahin M, Scherrer B, **Peters JM**, Suarez RO, Vogel-Farley VK, Jeste SS, Gregas MC, Prabhu SP, Nelson 3rd CA, Warfield SK. Impaired language pathways in tuberous sclerosis complex patients with autism spectrum disorders. *Cerebral cortex (New York, N.Y. : 1991)*. 2013 Jul 1; 23(7): 1526-32. PubMed PMID: 22661408; PubMed Central PMCID: PMC3673171.
19. Sánchez Fernández I, **Peters JM**, An S, Bergin A, Takeoka M, Rotenberg A, Kothare SV, Riviello, Jr JJ, Loddenkemper T. Long-term response to high-dose diazepam treatment in continuous spikes and waves during sleep. *Pediatric neurology*. 2013 Sep 1; 49(3): 163-170.e4. PubMed PMID: 23953953; PubMed Central PMCID: PMC6382391.
20. Taquet M, Scherrer B, **Peters JM**, Prabhu SP, Warfield SK. A fully Bayesian inference framework for population studies of the brain microstructure. *Medical image computing and computer-assisted intervention : MICCAI ... International Conference on Medical Image Computing and Computer-Assisted Intervention*. 2014 Jan 1; 17(Pt 1): 25-32. PubMed PMID: 25333097; PubMed Central PMCID: PMC4209905.
21. Taimouri V, Akhondi-Asl A, Tomas-Fernandez X, **Peters JM**, Prabhu SP, Poduri A, Takeoka M, Loddenkemper T, Bergin A, Harini C, Madsen JR, Warfield SK. Electrode localization for planning surgical resection of the epileptogenic zone in pediatric epilepsy. *International journal of computer assisted radiology and surgery*. 2014 Jan 1; 9(1): 91-105. PubMed PMID: 23793723; PubMed Central PMCID: PMC3955988.
22. Taquet M, Scherrer B, Commowick O, **Peters JM**, Sahin M, Macq B, Warfield SK. A mathematical framework for the registration and analysis of multi-fascicle models for population studies of the brain microstructure. *IEEE transactions on medical imaging*. 2014 Feb 1; 33(2): 504-17. PubMed PMID: 24235301; PubMed Central PMCID: PMC3984609.
23. Tanaka N, **Peters JM**, Prohl AK, Takaya S, Madsen JR, Bourgeois BF, Dworetzky BA, Hämäläinen MS, Stufflebeam SM. Clinical value of magnetoencephalographic spike propagation represented by spatiotemporal source analysis: correlation with surgical outcome. *Epilepsy research*. 2014 Feb 1; 108(2): 280-8. PubMed PMID: 24315019; PubMed Central PMCID: PMC3933022.

24. Klehm J, Thome-Souza S, Sánchez Fernández I, Bergin A, Bolton J, Harini C, Kadish NE, Libenson M, **Peters JM**, Poduri A, Rotenberg A, Takeoka M, Bourgeois B, Loddenkemper T. Clobazam: effect on frequency of seizures and safety profile in different subgroups of children with epilepsy. *Pediatric neurology*. 2014 Jul 1; 51(1): 60-6. PubMed PMID: 24830765.
25. Sánchez Fernández I, Chapman K, **Peters JM**, Klehm J, Jackson MC, Berg AT, Loddenkemper T. Treatment for continuous spikes and waves during sleep (CSWS): survey on treatment choices in North America. *Epilepsia*. 2014 Jul 1; 55(7): 1099-108. PubMed PMID: 24917485.
26. Pinto A, Fernández IS, **Peters JM**, Manganaro S, Singer J, Vendrame M, Prabhu SP, Loddenkemper T, Kothare SV. Localization of sleep spindles, k-complexes, and vertex waves with subdural electrodes in children. *Journal of clinical neurophysiology: official publication of the American Electroencephalographic Society*. 2014 Aug 1; 31(4): 367-74. PubMed PMID: 25083850.
27. Thome-Souza S, Kadish NE, Ramgopal S, Sánchez Fernández I, Bergin A, Bolton J, Harini C, Libenson M, Olson H, **Peters JM**, Poduri A, Rotenberg A, Takeoka M, Kothare SV, Kapur K, Bourgeois BF, Loddenkemper T. Safety and retention rate of rufinamide in 300 patients: a single pediatric epilepsy center experience. *Epilepsia*. 2014 Aug 1; 55(8): 1235-44. PubMed PMID: 25070475.
28. **Peters JM**, Prohl AK, Tomas-Fernandez XK, Taquet M, Scherrer B, Prabhu SP, Lidov HG, Singh JM, Jansen FE, Braun KP, Sahin M, Warfield SK, Stamm A. Tubers are neither static nor discrete: Evidence from serial diffusion tensor imaging. *Neurology*. 2015 Nov 3; 85(18): 1536-45. PubMed PMID: 26432846; PubMed Central PMCID: PMC4642145.
 - Accompanied by editorial in same Neurology issue
29. Taquet M, Scherrer B, Boumal N, **Peters JM**, Macq B, Warfield SK. Improved fidelity of brain microstructure mapping from single-shell diffusion MRI. *Medical image analysis*. 2015 Dec 1; 26(1): 268-86. PubMed PMID: 26529580; PubMed Central PMCID: PMC4679640.
30. Wu J, **Peters JM**, Goyal M, Krueger D, Sahin M, Northrup H, Au KS, Cutter G, Bebin EM. Clinical Electroencephalographic Biomarker for Impending Epilepsy in Asymptomatic Tuberous Sclerosis Complex Infants. *Pediatric neurology*. 2016 Jan 1; 54: 29-34. PubMed PMID: 26498039; PubMed Central PMCID: PMC4691569.
32. Erem B, Martinez Orellana R, Hyde DE, **Peters JM**, Duffy FH, Stovicek P, Warfield SK, MacLeod RS, Tadmor G, Brooks DH. Extensions to a manifold learning framework for time-series analysis on dynamic manifolds in bioelectric signals. *Physical review. E*. 2016 Apr 1; 93(4): 042218. PubMed PMID: 27176304; PubMed Central PMCID: PMC4866516.
33. Im K, Ahtam B, Haehn D, **Peters JM**, Warfield SK, Sahin M, Ellen Grant P. Altered Structural Brain Networks in Tuberous Sclerosis Complex. *Cerebral cortex (New York, N.Y. : 1991)*. 2016 May 1; 26(5): 2046-58. PubMed PMID: 25750257; PubMed Central PMCID: PMC4830286.
34. Patel A, Ciccone O, Njau A, Shanungu S, Grollnek AK, Fredrick F, Hodgeman R, Sideridis GD, Kapur K, Harini C, Kija E, **Peters JM**. A pediatric epilepsy diagnostic tool for use in resource-limited settings: A pilot study. *Epilepsy & behavior : E&B*. 2016 Jun 1; 59: 57-61. PubMed PMID: 27088519.
35. Erem B, Hyde DE, **Peters JM**, Duffy FH, Warfield SK. Dynamic Electrical Source Imaging (DESI) of Seizures and Interictal Epileptic Discharges Without Ensemble Averaging. *IEEE transactions on*

- medical imaging. 2017 Jan 1; 36(1): 98-110. PubMed PMID: 27479957; PubMed Central PMCID: PMC5217759.
36. Sánchez Fernández I, **Peters JM**, Akhondi-Asl A, Klehm J, Warfield SK, Loddenkemper T. Reduced thalamic volume in patients with Electrical Status Epilepticus in Sleep. *Epilepsy research*. 2017 Feb 1; 130: 74-80. PubMed PMID: 28160673.
 37. Hyde DE, Tomas-Fernandez X, Stone SS, **Peters JM**, Warfield SK. Localization of stereo-electroencephalography signals using a finite difference complete electrode model. Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference. 2017 Jul 1; 2017: 3600-3603. PubMed PMID: 29060677.
 38. Davis P, Filip-Dhima R, Sideridis G, **Peters JM**, Au KS, Northrup H, Bebin EM, Wu J, Krueger D, Sahin M. Presentation and Diagnosis of Tuberous Sclerosis Complex in Infants. *Pediatrics*. 2017 Dec 1; 140(6). PubMed PMID: 29101226; PubMed Central PMCID: PMC5703775.
 39. Vega C, Sánchez Fernández I, **Peters JM**, Thome-Souza MS, Jackson M, Takeoka M, Wilkening GN, Pearl PL, Chapman K, Loddenkemper T. Response to clobazam in continuous spike-wave during sleep. *Developmental medicine and child neurology*. 2018 Mar 1; 60(3): 283-289. PubMed PMID: 29168169.
 40. Harini C, Sharda S, Bergin A, Poduri A, Yuskaitis C, **Peters JM**, Rakesh K, Kapur K, Pearl PL, Prabhu SP. Detailed Magnetic Resonance Imaging (MRI) Analysis in Infantile Spasms. *Journal of child neurology*. 2018 May 1; 33(6): 405-412. PubMed PMID: 29575949.
 41. Winawer MR, Griffin NG, Samanamud J, Baugh EH, Rathakrishnan D, Ramalingam S, Zagzag D, Schevon CA, Dugan P, Hegde M, Sheth SA, McKhann GM, Doyle WK, Grant GA, Porter BE, Mikati MA, Muh CR, Malone CD, Bergin AMR, **Peters JM**, McBrien DK, Pack AM, Akman CI, LaCoursiere CM, Keever KM, Madsen JR, Yang E, Lidov HGW, Shain C, Allen AS, Canoll PD, Crino PB, Poduri A, Heinzen EL. Somatic SLC35A2 variants in the brain are associated with intractable neocortical epilepsy. *Annals of neurology*. 2018 Jun 1; 83(6): 1133-1146. PubMed PMID: 29679388; PubMed Central PMCID: PMC6105543.
 42. Hyde D, Tomas-Fernandez X, Stone S, **Peters JM**, Warfield S. A Comparison of Point and Complete Electrode Models in a Finite Difference Model of Invasive Electrode Measurements. Conference proceedings : ... Annual International Conference of the IEEE Engineering in Medicine and Biology Society. IEEE Engineering in Medicine and Biology Society. Annual Conference. 2018 Jul 1; 2018: 4677-4680. PubMed PMID: 30441393.
 43. Benjamin CFA, Li AX, Blumenfeld H, Constable RT, Alkawadri R, Bickel S, Helmstaedter C, Meletti S, Bronen R, Warfield SK, **Peters JM**, Reutens D, Połczyńska M, Spencer D, Hirsch LJ. Presurgical language fMRI: Clinical practices and patient outcomes in epilepsy surgical planning. *Human brain mapping*. 2018 Jul 1; 39(7): 2777-2785. PubMed PMID: 29528160; PubMed Central PMCID: PMC6033659.
 44. van der Poest Clement EA, Sahin M, **Peters JM**. Vigabatrin for Epileptic Spasms and Tonic Seizures in Tuberous Sclerosis Complex. *Journal of child neurology*. 2018 Jul 1; 33(8): 519-524. PubMed PMID: 29687739.

45. Heunis T, Aldrich C, **Peters JM**, Jeste SS, Sahin M, Scheffer C, de Vries PJ. Recurrence quantification analysis of resting state EEG signals in autism spectrum disorder - a systematic methodological exploration of technical and demographic confounders in the search for biomarkers. *BMC medicine*. 2018 Jul 2; 16(1): 101. PubMed PMID: 29961422; PubMed Central PMCID: PMC6027554.
46. Tamilya E, Park EH, Percivati S, Bolton J, Taffoni F, **Peters JM**, Grant P, Pearl PL, Madsen JR, Papadelis C. Surgical resection of ripple onset predicts outcome in pediatric epilepsy. *Annals of neurology*. 2018 Sep 1; 84(3): 331-346. PubMed PMID: 30022519.
47. *Baumer FM, ***Peters JM**, Clancy S, Prohl AK, Prabhu SP, Scherrer B, Jansen FE, Braun KPJ, Sahin M, Stamm A, Warfield SK. Corpus Callosum White Matter Diffusivity Reflects Cumulative Neurological Comorbidity in Tuberous Sclerosis Complex. *Cerebral cortex (New York, N.Y. : 1991)*. 2018 Oct 1; 28(10): 3665-3672. PubMed PMID: 29939236; PubMed Central PMCID: PMC6132277.
48. Benjamin CFA, Dhingra I, Li AX, Blumenfeld H, Alkawadri R, Bickel S, Helmstaedter C, Meletti S, Bronen RA, Warfield SK, **Peters JM**, Reutens D, Połczyńska MM, Hirsch LJ, Spencer D. Presurgical language fMRI: Technical practices in epilepsy surgical planning. *Human brain mapping*. 2018 Oct 1; 39(10): 4032-4042. PubMed PMID: 29962111; PubMed Central PMCID: PMC6175127.
49. Hussain S, Schmid E, **Peters JM**, Goyal M, Bebin EM, Northrup H, Sahin M, Krueger DA, Wu J. High vigabatrin dosage is associated with lower risk of infantile spasms relapse among children with tuberous sclerosis complex. *Epilepsy research*. 2018 Dec 1; 148: 1-7. PubMed PMID: 30296632; PubMed Central PMCID: PMC6347124.
50. **Peters JM**, Prohl A, Kapur K, Nath A, Scherrer B, Clancy S, Prabhu SP, Sahin M, Franz DN, Warfield SK, Krueger DA. Longitudinal Effects of Everolimus on White Matter Diffusion in Tuberous Sclerosis Complex. *Pediatric neurology*. 2019 Jan 1; 90: 24-30. PubMed PMID: 30424962; PubMed Central PMCID: PMC6314307.
51. Tamilya E, AlHilani M, Tanaka N, Tsuboyama M, **Peters JM**, Grant P, Madsen JR, Stufflebeam SM, Pearl PL, Papadelis C. Assessing the localization accuracy and clinical utility of electric and magnetic source imaging in children with epilepsy. *Clinical neurophysiology : official journal of the International Federation of Clinical Neurophysiology*. 2019 Apr 1; 130(4): 491-504. PubMed PMID: 30771726.
52. Sansevere A, Kapur K, **Peters JM**, Fernández IS, Loddenkemper T, Soul JS. Seizure Prediction Models in the Neonatal Intensive Care Unit. *Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society*. 2019 May 1; 36(3): 186-194. PubMed PMID: 30882530; PubMed Central PMCID: PMC6565438.
53. Stergachis AB, Pujol-Giménez J, Gyimesi G, Fuster D, Albano G, Troxler M, Picker J, Rosenberg P, Bergin A, **Peters JM**, El Achkar CM, Harini C, Manzi S, Rotenberg A, Hediger MA, Rodan L. Recurrent SLC1A2 variants cause epilepsy via a dominant negative mechanism. *Annals of neurology*. 2019 Jun 1; 85(6): 921-926. PubMed PMID: 30937933; PubMed Central PMCID: PMC6800210.
54. **Peters JM**, Struyven RR, Prohl AK, Vasung L, Stajduhar A, Taquet M, Bushman JJ, Lidov H, Singh JM, Scherrer B, Madsen JR, Prabhu SP, Sahin M, Afacan O, Warfield SK. White matter mean diffusivity correlates with myelination in tuberous sclerosis complex. *Annals of clinical and translational neurology*. 2019 Jul 1; 6(7): 1178-1190. PubMed PMID: 31353853; PubMed Central PMCID: PMC6649396.

55. Prohl AK, Scherrer B, Tomas-Fernandez X, Filip-Dhima R, Kapur K, Velasco-Annis C, Clancy S, Carmody E, Dean M, Valle M, Prabhu SP, **Peters JM**, Bebin EM, Krueger DA, Northrup H, Wu J, Sahin M, Warfield SK. Reproducibility of Structural and Diffusion Tensor Imaging in the TACERN Multi-Center Study. *Frontiers in integrative neuroscience*. 2019 Jul 17; 13: 24. PubMed PMID: 31417372; PubMed Central PMCID: PMC6650594.
56. Davis P, Kapur K, Filip-Dhima R, Trowbridge SK, Little E, Wilson A, Leuchter A, Bebin EM, Krueger D, Northrup H, Wu J, Sahin M, **Peters JM**. Increased electroencephalography connectivity precedes epileptic spasm onset in infants with tuberous sclerosis complex. *Epilepsia*. 2019 Aug 1; 60(8): 1721-1732. PubMed PMID: 31297797; PubMed Central PMCID: PMC6687536.
57. de Groen AC, Bolton J, Bergin A, Sahin M, **Peters JM**. The Evolution of Subclinical Seizures in Children With Tuberous Sclerosis Complex. *Journal of child neurology*. 2019 Oct 1; 34(12): 770-777. PubMed PMID: 31290714.
 - Author interview and article coverage in J Child Neurol podcast
58. Ahtam B, Dehaes M, Sliva DD, **Peters JM**, Krueger DA, Bebin EM, Northrup H, Wu J, Warfield SK, Sahin M, Grant P. Resting-State fMRI Networks in Children with Tuberous Sclerosis Complex. *Journal of neuroimaging : official journal of the American Society of Neuroimaging*. 2019 Nov 1; 29(6): 750-759. PubMed PMID: 31304656.
59. Wu J, Goyal M, **Peters JM**, Krueger D, Sahin M, Northrup H, Au KS, O'Kelley S, Williams M, Pearson DA, Hanson E, Byars AW, Krefting J, Beasley M, Cutter G, Limdi N, Bebin EM. Scalp EEG spikes predict impending epilepsy in TSC infants: A longitudinal observational study. *Epilepsia*. 2019 Nov 5. PubMed PMID: 31691264.
60. Hyde DE, **Peters JM**, Warfield SK. Multi-Resolution Graph Based Volumetric Cortical Basis Functions From Local Anatomic Features. *IEEE transactions on bio-medical engineering*. 2019 Dec 1; 66(12): 3381-3392. PubMed PMID: 30872218.
61. Prohl AK, Scherrer B, Tomas-Fernandez X, Davis P, Filip-Dhima R, Prabhu SP, **Peters JM**, Bebin EM, Krueger DA, Northrup H, Wu J, Sahin M, Warfield SK. Early white matter development is abnormal in tuberous sclerosis complex patients who develop autism spectrum disorder. *Journal of neurodevelopmental disorders*. 2019 Dec 16; 11(1): 36. PubMed PMID: 31838998; PubMed Central PMCID: PMC6912944.
62. **Peters JM**, Hyde DE, Chu CJ, Boom M, Scherrer B, Madsen JR, Stone SS, Quaalam H, Prabhu SP, Sahin M, Warfield SK. Lesion-Constrained Electrical Source Imaging: A Novel Approach in Epilepsy Surgery for Tuberous Sclerosis Complex. *Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society*. 2020 Jan 1; 37(1): 79-86. PubMed PMID: 31261349; PubMed Central PMCID: PMC6934937.
63. Karimi D, **Peters JM**, Quaalam A, Prabhu SP, Sahin M, Krueger DA, Koleyzon A, Engx C, Warfield SK, Gholipour A. Learning to detect brain lesions from noisy annotations. *Proc IEEE Int Symp Biomed Imaging*. Forthcoming 2020.
64. Cook IA, Wilson AC, **Peters JM**, Goyal MN, Bebin EM, Northrup H, Krueger D, Leuchter AF, Sahin M. EEG Spectral Features in Sleep of Autism Spectrum Disorders in Children with Tuberous Sclerosis Complex. *Journal of autism and developmental disorders*. 2020 Mar 1; 50(3): 916-923. PubMed PMID: 31811616.

65. *Grayson LE, ***Peters JM**, McPherson T, Krueger DA, Sahin M, Wu J, Northrup HA, Porter B, Cutter GR, O'Kelley SE, Krefting J, Stone SS, Madsen JR, Fallah A, Blount JP, Weiner HL, Bebin EM. Pilot Study of Neurodevelopmental Impact of Early Epilepsy Surgery in Tuberous Sclerosis Complex. *Pediatric neurology*. 2020 Apr 14. PubMed PMID: 32418847.
66. Scherrer B, Prohl AK, Taquet M, Kapur K, **Peters JM**, Tomas-Fernandez X, Davis P, Bebin E, Krueger DA, Northrup H, Wu J, Sahin M, Warfield SK, on behalf of the TACERN Study Group. The Connectivity Fingerprint of the Fusiform Gyrus Captures the Risk of Developing Autism in Infants with Tuberous Sclerosis Complex. *Cerebral cortex (New York, N.Y. : 1991)*. 2020 Apr 14; 30(4): 2199-2214. PubMed PMID: 31812987; PubMed Central PMCID: PMC7175001.
67. Sánchez Fernández I, Yang E, Calvachi P, Amengual-Gual M, Wu J, Krueger D, Northrup H, Bebin ME, Sahin M, Yu KH, **Peters JM**. Deep learning in rare disease. Detection of tubers in tuberous sclerosis complex. *PloS one*. 2020 Apr 29; 15(4): e0232376. PubMed PMID: 32348367; PubMed Central PMCID: PMC7190137.
68. Taquet M, Smith S, Prohl AK, **Peters JM**, Warfield SK, Scherrer B, Harrison PJ. A structural brain network of genetic vulnerability to psychiatric illness. *Molecular psychiatry*. 2020 May 6. PubMed PMID: 32372008.
69. Zagorchev L, Brueck M, Flaeschner N, Wenzel F, Hyde D, Ewald A, **Peters JM**. Patient-specific sensor registration for electrical source imaging using a deformable head model. *IEEE transactions on bio-medical engineering*. 2020 Jun 17; PP. PubMed PMID: 32746029.
 - Selected as a featured article in the Transactions in Biomedical Engineering January Issue, 2021.
70. Amador A, Bostick CD, Olson H, **Peters JM**, Camp CR, Krizay D, Chen W, Han W, Tang W, Kanber A, Kim S, Teoh J, Sah M, Petri S, Paek H, Kim A, Lutz CM, Yang M, Myers SJ, Bhattacharya S, Yuan H, Goldstein DB, Poduri A, Boland MJ, Traynelis SF, Frankel WN. Modelling and treating GRIN2A developmental and epileptic encephalopathy in mice. *Brain : a journal of neurology*. 2020 Jun 24. PubMed PMID: 32577763.
71. Harini C, Yuskaitis C, Libenson MH, Yang E, DeLeo M, Zhang B, Mysak K, Marti C, **Peters JM**, Bergin AM, Pearl PL, Prabhu SP. Hippocampal involvement with vigabatrin-related MRI signal abnormalities in patients with infantile spasms - a novel finding. *J Child Neurol*. 2020; in press

**Co-first/-senior author*

Other peer-reviewed scholarship

1. Kingma R, **Peters JM**, Coene LN. Intracranial penetration of a halo pin causing an epileptic seizure. *The Journal of bone and joint surgery. British volume*. 2006 Dec 1; 88(12): 1654-5. PubMed PMID: 17159182.
2. Sánchez Fernández I, **Peters JM**. Picture of the month--quiz case. Moyamoya disease. *Archives of pediatrics & adolescent medicine*. 2009 Feb 1; 163(2): 179-80. PubMed PMID: 19188651.
3. **Peters JM**, Maclean AV, Young GS. Rapid resolution of diffusion weighted MRI abnormality in a patient with a stuttering stroke. *BMJ case reports*. 2010 Jan 1; 2010. PubMed PMID: 22315635; PubMed Central PMCID: PMC3027891.

4. Pier DB, Hallbergson A, **Peters JM**. Guillain-Barré syndrome in a child with pain: lessons learned from a late diagnosis. *Acta paediatrica* (Oslo, Norway : 1992). 2010 Oct 1; 99(10): 1589-91. PubMed PMID: 20456276.
5. **Peters JM**, Madhavan VL, Kazacos KR, Husson R, Dangoudoubiyam S, Soul JS. Good outcome with early empiric treatment of neural larva migrans due to *Baylisascaris procyonis*. *Pediatrics*. 2012 Mar 1; 129(3): e806-11. PubMed PMID: 22311989.
6. Kelly TG, Madhavan VL, **Peters JM**, Kazacos KR, Silvera VM. Spinal cord involvement in a child with raccoon roundworm (*Baylisascaris procyonis*) meningoencephalitis. *Pediatric radiology*. 2012 Mar 1; 42(3): 369-73. PubMed PMID: 21629989.
7. O'Rourke DJ, Bergin A, Rotenberg A, **Peters JM**, Gorman MP, Poduri A, Cryan J, Lidov H, Madsen J, Harini C. Rasmussen's encephalitis presenting as focal cortical dysplasia. *Epilepsy & behavior case reports*. 2014 Mar 12; 2: 86-9. PubMed PMID: 25667877; PubMed Central PMCID: PMC4307873.
8. **Peters JM**, Fernández IS. Insult to injury: transient encephalopathy in a brain-injured adolescent. *Journal of paediatrics and child health*. 2014 May 1; 50(5): 411-4. PubMed PMID: 24372698.
9. Walsh BH, Baumer FM, Bernson-Leung ME, Lerou P, **Peters JM**. Teaching video neuroimages: nonepileptic myoclonus in a neonate following severe hypoxic-ischemic injury. *Neurology*. 2015 Mar 24; 84(12): e90. PubMed PMID: 25802277.
10. Baumer FM, **Peters JM**, El Achkar CM, Pearl PL. SCN2A-Related Early-Onset Epileptic Encephalopathy Responsive to Phenobarbital. *Journal of pediatric epilepsy*. 2016 Mar 1; 5(1): 42-46. PubMed PMID: 27595042; PubMed Central PMCID: PMC5004990.
11. Kaye HL, **Peters JM**, Gersner R, Chamberland M, Sansevere A, Rotenberg A. Neurophysiological evidence of preserved connectivity in tuber tissue. *Epilepsy & behavior case reports*. 2016 Oct 6; 7: 64-68. PubMed PMID: 28616385; PubMed Central PMCID: PMC5459951.
12. Guerriero RM, Patel A, Walsh B, Baumer FM, Shah AS, **Peters JM**, Rodan L, Agrawal P, Pearl PL, Takeoka M. Systemic Manifestations in Pyridox(am)ine 5'-Phosphate Oxidase Deficiency. *Pediatric neurology*. 2017 Nov 1; 76: 47-53. PubMed PMID: 28985901; PubMed Central PMCID: PMC6008785.
13. van der Poest Clement EA, Yang E, Holm IA, **Peters JM**. Hypochondroplasia and epilepsy: the neurological spectrum of FGFR3 mutations. *Journal of the International Child Neurology Association*. 2018 Feb 14; 1(1). Available from: <https://doi.org/10.17724/jicna.2018.100>.
14. Bushlin I, Smith L, **Peters JM**, El Achkar CM. Clinical Reasoning: A 6-week-old infant with migrating focal seizures. *Neurology*. 2020 Jan 28; 94(4): 178-183. PubMed PMID: 31932516.

Scholarship without named authorship

1. Capal JK, Bernardino-Cuesta B, Horn PS, Murray D, Byars AW, Bing NM, Kent B, Pearson DA, Sahin M, Krueger DA. Influence of seizures on early development in tuberous sclerosis complex.*. *Epilepsy & behavior : E&B*. 2017 May 1; 70(Pt A): 245-252. PubMed PMID: 28457992; PubMed Central PMCID: PMC5497719.
(*Member of TACERN Study Group)

2. Capal JK, Horn PS, Murray DS, Byars AW, Bing NM, Kent B, Bucher LA, Williams ME, O'Kelley S, Pearson DA, Sahin M, Krueger DA. Utility of the Autism Observation Scale for Infants in Early Identification of Autism in Tuberous Sclerosis Complex.*. *Pediatric neurology*. 2017 Oct 1; 75: 80-86. PubMed PMID: 28844798; PubMed Central PMCID: PMC5610103.
(*Member of TACERN Study Group)
3. Srivastava S, Prohl AK, Scherrer B, Kapur K, Krueger DA, Warfield SK, Sahin M. Cerebellar volume as an imaging marker of development in infants with tuberous sclerosis complex.*. *Neurology*. 2018 Apr 24; 90(17): e1493-e1500. PubMed PMID: 29572283; PubMed Central PMCID: PMC5921037.
(*Member of TACERN Study Group)
4. Bernardo D, Nariai H, Hussain S, Sankar R, Salamon N, Krueger DA, Sahin M, Northrup H, Bebin EM, Wu J. Visual and semi-automatic non-invasive detection of interictal fast ripples: A potential biomarker of epilepsy in children with tuberous sclerosis complex.*. *Clinical neurophysiology : official journal of the International Federation of Clinical Neurophysiology*. 2018 Jul 1; 129(7): 1458-1466. PubMed PMID: 29673547.
(*Member of TACERN Study Group)
5. Williams ME, Pearson DA, Capal JK, Byars AW, Murray DS, Kissinger R, O'Kelley SE, Hanson E, Bing NM, Kent B, Wu J, Northrup H, Bebin EM, Sahin M, Krueger D. Impacting development in infants with tuberous sclerosis complex: Multidisciplinary research collaboration.*. *The American psychologist*. 2019 Apr 1; 74(3): 356-367. PubMed PMID: 30945897; PubMed Central PMCID: PMC6612428.
(*Member of TACERN Study Group)
6. Farach LS, Pearson DA, Woodhouse JP, Schraw JM, Sahin M, Krueger DA, Wu J, Bebin EM, Lupo PJ, Au KS, Northrup H. Tuberous Sclerosis Complex Genotypes and Developmental Phenotype.*. *Pediatric neurology*. 2019 Jul 1; 96: 58-63. PubMed PMID: 31005478; PubMed Central PMCID: PMC6837240.
(*Member of TACERN Study Group)
7. Schoenberger A, Capal JK, Ondracek A, Horn PS, Murray D, Byars AW, Pearson DA, Williams ME, Bebin M, Northrup H, Wu J, Sahin M, Krueger DA. Language predictors of autism spectrum disorder in young children with tuberous sclerosis complex.*. *Epilepsy & behavior : E&B*. 2020 Feb 1; 103(Pt A): 106844. PubMed PMID: 31864941; PubMed Central PMCID: PMC6947531.
(*Member of TACERN Study Group)
8. Farach LS, Richard MA, Lupo PJ, Sahin M, Krueger DA, Wu J, Bebin EM, Au KS, Northrup H. Epilepsy Risk Prediction Model for Patients With Tuberous Sclerosis Complex.*. *Pediatric neurology*. 2020 Jul 29; 113: 46-50. PubMed PMID: 33011641.
(*Member of TACERN Study Group)

Non-peer reviewed Scholarship in print or other media

Reviews, chapters, monographs and editorials

1. **Peters JM**, Vriens EM, Stam CJ. Continue EEG-monitoring op de intensive care. *Tijdschr Neurol Neurochir*. 2003; 104(5): 276-282.
2. Westover, **Peters JM**. Epilepsy and non-epileptic paroxysmal events. In: Greer D, Westover MB, Choi E, Awad K, editor(s). *Pocket Neurology*. Philadelphia PA: Lippincott Williams & Wilkins. 2010.

3. Loddenkemper T, Fernández IS, **Peters JM**. Continuous spike and waves during sleep and electrical status epilepticus in sleep. *Journal of clinical neurophysiology : official publication of the American Electroencephalographic Society*. 2011 Apr 1; 28(2): 154-64. PubMed PMID: 21399511.
4. Sánchez Fernández I, Loddenkemper T, **Peters JM**, Kothare SV. Electrical status epilepticus in sleep: clinical presentation and pathophysiology. *Pediatric neurology*. 2012 Dec 1; 47(6): 390-410. PubMed PMID: 23127259.
5. Sánchez Fernández I, Chapman KE, **Peters JM**, Harini C, Rotenberg A, Loddenkemper T. Continuous Spikes and Waves during Sleep: Electroclinical Presentation and Suggestions for Management. *Epilepsy research and treatment*. 2013 Jan 1; 2013: 583531. PubMed PMID: 23991336; PubMed Central PMCID: PMC3748771.
6. Taquet M, **Peters JM**. [The brain functional network of children with autism: redundancy and disconnection]. *Medecine sciences : M/S*. 2013 Jun 1; 29(6-7): 567-9. PubMed PMID: 23859506.
7. **Peters JM**, Taquet M, Prohl AK, Scherrer B, van Eeghen AM, Prabhu SP, Sahin M, Warfield SK. Diffusion tensor imaging and related techniques in tuberous sclerosis complex: review and future directions. *Future neurology*. 2013 Sep 1; 8(5): 583-597. PubMed PMID: 24489482; PubMed Central PMCID: PMC3904372.
8. Bolton J, **Peters JM**, Poduri A. Cerebral Dysgenesis. In: Sims KB, Peters JM, Musolino P, Elibol-Ward MZ, editor(s). *Handbook of Pediatric Neurology*. Philadelphia PA: Lippincott Williams & Wilkins. 2013.
9. Pinto A, **Peters JM**, Khwaja OS. Common Neurogenetic Syndromes. In: Sims KB, Peters JM, Musolino P, Elibol-Ward MZ, editor(s). *Handbook of Pediatric Neurology*. Philadelphia PA: Lippincott Williams & Wilkins. 2013.
10. **Peters JM**, Olson H, Loddenkemper T. Epilepsy and non-epileptic paroxysmal events. In: Sims KB, Peters JM, Musolino P, Elibol-Ward MZ, editor(s). *Handbook of Pediatric Neurology*. Philadelphia PA: Lippincott Williams & Wilkins. 2013.
11. **Peters JM**, Taquet M, Scherrer B, Singh J, Prohl AK, Prabhu SP, Sahin M, Warfield SK. Insights in tuberous sclerosis complex from novel diffusion-weighted imaging models. *Siemens MAGNETOM Flash*. 2014 Feb.
12. **Peters JM**. Epilepsy Syndromes. *Neurology Board Review*. 2015.
13. Davis P, **Peters JM**, Krueger DA, Sahin M. Tuberous Sclerosis: A New Frontier in Targeted Treatment of Autism. *Neurotherapeutics : the journal of the American Society for Experimental NeuroTherapeutics*. 2015 Jul 1; 12(3): 572-83. PubMed PMID: 25986747; PubMed Central PMCID: PMC4489948.
14. Boom M, Raskin JS, Curry DJ, Weiner HL, **Peters JM**. Technological advances in pediatric epilepsy surgery: Implications for tuberous sclerosis complex. *Future Neurol*. 2017; 12(2): 101-115.
15. **Peters JM**, Sahin M. Tuberous Sclerosis Complex. In: Cataltepe O, Jailo G, editor(s). *Pediatric Epilepsy Surgery: Preoperative Assessment and Surgical Treatment*. New York NY: Thieme Publishers. 2019.

16. Coorg RK, **Peters JM**. Stereo-EEG in Tuberous Sclerosis Complex. In: Schuele SU, editor(s). A Practical Approach to Stereo EEG. New York NY: Springer & Demos Medical Publishing. Forthcoming.
17. van der Poest Clement E, Jansen FE, Braun KPJ, **Peters JM**. Update on Drug Management of Refractory Epilepsy in Tuberous Sclerosis Complex. *Paediatric drugs*. 2020 Feb 1; 22(1): 73-84. PubMed PMID: 31912454.

Books/textbooks for the medical or scientific community

1. Sims KB, **Peters JM**, Musolino P, Elibol-Ward MZ. Handbook of Pediatric Neurology. Philadelphia PA: Lippincott Williams & Wilkins; 2013.

Thesis

1. **Peters JM**. Neurophysiological and neuroimaging markers of neurological outcome in Tuberous Sclerosis Complex. ISBN 978-94-6299-318-1. Utrecht University, Utrecht, Netherlands. Ridderprint BV (Ridderkerk) Netherlands. 2016. Available from: <https://www.narcis.nl/publication/RecordID/oai%3Adspace.library.uu.nl%3A1874%2F330429>.

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

1. Scherrer B, Kapur K, Prohl AK, **Peters JM**, Tomas-Fernandez X, Krueger D, Sahin M, Warfield SK: The connectivity fingerprint of the fusiform gyrus predicts the Autism Observation Scale for Infants (AOSI) in Tuberous Sclerosis Complex. Presented at International Society of Magnetic Resonance in Medicine (ISMRM) Annual Meeting 2018, Paris, France, June, 2018.
2. Hyde DE, Tomas-Fernandez X, Stone S, **Peters JM**, Warfield SK: Modeling of Invasive Electrographic Measurements: Point and Complete Electrode Models. Presented at IEEE Engineering in Medicine and Biology Society (EMBC'18), Honolulu, Hawaii, July, 2018.
3. AlHilani M, Tamil E, Madsen J, Grant P, **Peters JM**, Stufflebeam S, Pearl PL, Tanaka N, Papadelis C: Magnetoencephalography Compares Favorably to High-Density Electroencephalography for Interictal Spike Localization. Presented at Biomag 2018, Philadelphia, Pennsylvania, August, 2018.
4. **Peters JM**, Struyven RR, Prohl AK, Vasung L, Stajduhar A, Taquet M, Bushman JJ, Lidoy H, Singh JM, Scherrer B, Madsen JR, Prabhu SP, Sahin M, Afacan O, Warfield SK: 3T and 7T Ex Vivo Diffusion Imaging in Tuberous Sclerosis Complex: Correlation with Histopathology. Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.
5. Winawer MR, Griffin NG, Samanamud J, Baugh EH, Rathakrishnan D, Ramalingam S, Zagzag D, Schevon CA, Dugan P, Hegde M, Sheth SA, McKhann GM, Doyle WK, Grant GA, Porter BE, Mikati MA, Muh CR, Malone CD, Bergin A, **Peters JM**, McBrien DK, Pack AM, Akman CI, LaCoursiere CM, Keever KM, Madsen JR, Yang E, Lidov HG, Shain C, Allen AS, Canoll P, Crino PB, Poduri A, Heinzen EL: Brain Somatic Variants in SLC35A2 in Intractable Neocortical Epilepsy. Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.

6. AlHilani M, Tamilia E, Tanaka N, Tsuboyama M, **Peters JM**, Grant P, Madsen JR, Stufflebeam SM, Pearl PL, Papadelis C: Clinical Utility of Magnetic and Electric Source Imaging in the Localization of Interictal Spikes Prior to Pediatric Epilepsy Surgery.
Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.
7. **Peters JM**, Grayson L, Krueger DA, Sahin M, Wu JY, Northrup HA, Porter B, Cutter GC, McPherson T, O'Kelley SE, Krefting J, Stone SS, Madsen JR, Fallah A, Blount JP, Weiner HL, Bebin EM: Early epilepsy surgery in Tuberous Sclerosis Complex: Preliminary results on safety, efficacy and neurodevelopmental outcomes.
Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.
8. Park EH, Barrit S, Harini C, Takeoka M, Moufawad El Achkar C, Bolton J, **Peters JM**, Bergin A, Pearl PL, Madsen JR: Granger Causality Analysis Using Short Segments of Electrocorticography Data Recorded During One-Stage Epilepsy Surgeries.
Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.
9. Papadelis C, Tamilia E, Park EY, Percivati S, Bolton J, Taffoni F, **Peters JM**, Grant P, Madsen JR, Pearl PL: Propagation Patterns of Interictal Spikes and Ripples Are Distinct: Onset Ripples Predict the Epileptogenic Zone Better Than Onset or Spread Spikes in Children with Refractory Epilepsy.
Presented at 2018 Annual Meeting of the American Epilepsy Society, New Orleans, Louisiana, December, 2018.
10. Sanchez-Fernandez I, Yang E, Calvachi P, Amengual-Gual M, Wu JY, Krueger DA, Northrup HA, Bebin EM, Sahin M, Yu KH, **Peters JM**: Deep Learning in Rare Disease: Detection of Tubers in Tuberous Sclerosis Complex.
Presented at 2019 Annual Meeting of the American Epilepsy Society, Baltimore, Maryland, December, 2019.
11. *Grayson LP, ***Peters JM**, Krueger DA, Sahin M, Wu JY, Northrup HA, Cutter GC, McPherson T, O'Kelley SE, Krefting J, Bebin EM: Neurodevelopmental Impact of Early Epilepsy Surgery in Tuberous Sclerosis Complex: Updated Results and Future Considerations.
Presented at 2019 Annual Meeting of the American Epilepsy Society, Baltimore, Maryland, December, 2019.
12. Nijman M, Yang E, Jaimes CE, Prohl AK, Sahin M, Krueger DA, Wu JY, Northrup HA, Stone SS, Madsen JR, Fallah A, Blount JP, Weiner HL, Grayson L, Grayson L, Begin EM, Porter BE, Warfield SK, Prabhu SP, **Peters JM**: Structural MRI Markers of the Epileptogenic Zone in Young Children with Tuberous Sclerosis Complex Undergoing Epilepsy Surgery.
Presented at 2019 Annual Meeting of the American Epilepsy Society, Baltimore, Maryland, December, 2019.
13. Karimi D, **Peters JM**, , Ouaalam A, Prabhu SP, Sahin M, Krueger DA, Kolevzon A, Engx C, Warfield SK, Gholipour A: Learning to detect brain lesions from noisy annotations.
Presented at IEEE International Symposium on Biomedical Imaging (ISBI 2020), Iowa City, Iowa, April, 2020.

Narrative Report

My **Area of Excellence** is **Clinical Expertise and Innovation**. As an adult neurologist, a child neurologist, and clinical neurophysiologist, with specific expertise in EEG signal processing, advanced neuroimaging techniques and their clinical application to patients with intractable epilepsy, tuberous sclerosis (TSC), and autism, I spend approximately 50% of my time in clinical research and innovation—mostly in the computational radiology laboratory (CRL) and covered in full by NIH funds. I spend 45% in clinical care, in the Multidisciplinary Tuberous Sclerosis Program, in the Comprehensive Epilepsy Clinic, and in a satellite clinic (general Pediatric Neurology), and approximately 5% in teaching activities.

Throughout my career, I have operated on the boundary between clinical care and cutting edge technology, applying innovations in EEG signal processing and advanced neuroimaging.

First, for children undergoing epilepsy surgery, my collaborators and I provide tailored imaging and EEG solutions for specific clinical problems, to optimize the chances of successful surgery and minimize surgical injury to functional areas. These innovations include the clinical application of patient-specific DTI tractography, 3D-renderings of the subdural electrode grids on the MRI brain surface, quantitative validation of the use of EEG during the Wada test, examination of the clinical impact of temporal lobe spike propagation in the MEG, and novel electrical source imaging modeling approaches.

Second, I am the main epileptologist in the multidisciplinary TSC program at Boston Children's Hospital, and TSC forms a major research focus. With my collaborators, I was the first to describe an altered microstructural integrity in autism, suggesting the use of DTI as a biomarker for neurological outcome in TSC. Next, using EEG functional connectivity measures, we found alterations of brain network properties common to both idiopathic and TSC-related autism, suggesting a common biological mechanism. Recently, I published data on longitudinal changes in DTI in TSC, providing imaging evidence that tubers and their direct environment are neither static nor discrete. Based on my previous work and expertise, I am responsible for EEG interpretation in two large NIH-funded prospective multicenter trials studying early EEG and advanced neuroimaging predictors of epilepsy and autism in TSC, and receive funding through a third NIH-grant in the expansion of this work to non-syndromic autism.

Finally, again focused on the integration of technological innovation and clinical care, as the past recipient of a World Federation of Neurology Pilot Grant, I have developed a web-based EEG platform for remote EEG reading, teaching, and data exchange. The platform was piloted in two sub-Saharan African nations.

Among my **Teaching** activities, I have mentored 15 undergraduate and graduate students, residents, fellows, and visiting physicians from institutions around the world. I supervise medical students, residents and fellows in the pediatrics, child neurology and clinical neurophysiology programs, and I have been invited to talk in CME-accredited teaching sessions in the medicine, psychiatry and nursing departments. Over the past years, I have received numerous invitations to present my work on DTI, abnormal EEG connectivity and brain functional networks, autism, and tuberous sclerosis complex, including invitations to national and international conferences. This work has also been featured in numerous professional and public news outlets.

In summary, within my **Area of Excellence in Clinical Expertise and Innovation**, I have an outstanding record of successful implementation and clinical application of technological advancements in the patient setting, highlighting my unique skillset of both clinical expertise and understanding of physics and engineering. My current expertise and experience allow me to continue to interact and collaborate with both computational scientists and child neurologists, and place me in an excellent position to continue

making important contributions to the field directly and to exert future influence through the researchers I train.