

Enedino Hernández-Torres, PhD.

Curriculum Vitae

Personal Information

PLACE AND DATE OF BIRTH: México, March 29, 1982
ADDRESS: Kettegård Alle 30, 2650, Hvidovre.
Denmark.
ORCID: [0000-0003-2873-5693](https://orcid.org/0000-0003-2873-5693)
WEB OF SCIENCE RESEARCHER ID: [AAG-2483-2019](https://orcid.org/AAG-2483-2019)
EMAIL: ninoht@drcmr.dk

Education

- 2007–2010 **PhD in Physics**, *Universidad de Guanajuato*, León, Guanajuato, México.
TITLE: *Diffusion tensor imaging in spine and brain.*
- 2004–2006 **MSc in Physics**, *Universidad de Guanajuato*, León, Guanajuato, México.
TITLE: *Monitoring an undigestible particle through three states of gastric distension.*
- 1999–2004 **Bachelor in Physics**, *Universidad Veracruzana*, Xalapa, Veracruz, México.
TITLE: *Theoretical study and computational simulation of tympanic membrane vibrations.*

Teaching & Work Experience

- 2020–
Currently **Research Fellow**, *Danish Research Centre for Magnetic Resonance*, Hvidovre, Denmark.
- 2019–2020 **Research Associate**, *University of British Columbia*, Neurology Division, Vancouver, BC, Canada.
- 2016–2019 **Research Associate**, *University of British Columbia*, Department of Paediatrics, Vancouver, BC, Canada.
- 2011–2016 **Postdoctoral Fellowship**, *University of British Columbia*, MRI Research Centre, Vancouver, BC, Canada.

Awards

- 2014–2015 Postdoctoral Scholarship from CONACyT, México
- 2012–2013 Postdoctoral Scholarship from CONACyT, México
- 2010 Award for the best academic performance in the Ph.D., from the *Universidad de Guanajuato*, Guanajuato, México
- 2010 Award for the best academic performance in the period 2009–2010, from the *Universidad de Guanajuato*, Guanajuato, México
- 2007 - 2010 Ph.D. Scholarship from CONACyT, México

- 2004 - 2006 M.Sc. Scholarship from CONACyT, México
- 2007 Award of creativity and technological innovation, for the development of a magnetic probe to monitor the gastroesophagic activity in different regions of the gastric tract, from the *Universidad de Guanajuato*

Computer skills

- Basic JAVA, HTML5, C, C++, FORTRAN
- Intermediate PYTHON, L^AT_EX, Linux, R, MEDINRIA, CAMINO, LABVIEW, ORIGIN
- Advanced MATLAB, FSL

Conference presentations and Talks

- Oral In conferences: Mexican society of Medical Physics (SMFM) symposium, International conference on Biomagnetism (BIOMAG), International Society for Magnetic Resonance in Medicine (ISMRM).
- Public: High-schools, Universities
- Poster In conferences: SMFM, BIOMAG, ISMRM, European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS), Organization for Human Brain Mapping (OHBM).

Languages

- Spanish:** Native
- English:** Advanced Level (writing, speaking)

Publications

- 2020** **18.** *Associations between myelin imaging and cognitive performance in multiple sclerosis.* S. Abel, I. Vavasour, L. Lee, P. Johnson, S. Ristow, N. Ackermans, J. Chan, H. Cross, C. Laule, A. Schabas, A. Dvorak, **E. Hernández-Torres**, R. Tam, A.J. Kuan, S.A. Morrow, J. Wilken, A. Rauscher, V. Bhan, A. Sayao, V. Devonshire, D.K.B. Li, R. Carruthers, A. Traboulsee, S. Kolind. *JAMA*, Accepted, 06/2020.
- 2019** **17.** *FLAIR² improves LesionTOADS automatic segmentation of multiple sclerosis lesions using multi-centre 2D, non-homogenized clinical magnetic resonance images.* Le M., **Hernández-Torres E.**, Jarrett M., Brosch T., Li D.K.B., Traboulsee A., Tam R.C., Rauscher., Wiggermann V. *NEUROIMAGE CLINICAL*. DOI:[10.1016/j.nicl.2019.101918](https://doi.org/10.1016/j.nicl.2019.101918)
- 16.** *The role of iron and myelin in orientation dependent R2* of white matter.* D. Kor, C. Birkl, S. Ropele, J. Doucette, T. Xu, V. Wiggermann, **E. Hernández-Torres**, S. Hametner, A. Rauscher. *NMR IN BIOMEDICINE*. DOI:[10.1002/nbm.4092](https://doi.org/10.1002/nbm.4092)
- 15.** *Rapid solution of the Bloch-Torrey equation in anisotropic tissue: Application to dynamic susceptibility contrast MRI of cerebral white matter.* J. Doucette, L. Wei, **E. Hernández-Torres**, C. Kames, N.D. Forkert, R. Aamand, T.E. Lund, B. Hansen, A. Rauscher. *NEUROIMAGE*. 185, pag. 198-207. DOI:[10.1016/j.neuroimage.2018.10.035](https://doi.org/10.1016/j.neuroimage.2018.10.035)

- 2018** **14.** *Increased mean R2* in the deep gray matter of multiple sclerosis patients: Have we been measuring atrophy?.* **E. Hernández-Torres**[†], V. Wiggermann[†], L. Machan, A.D. Sadovnick, D.K.B. Li, A.L. Traboulsee, S. Hametner, A. Rauscher. *JMRI*. [†]*Equal contribution*. DOI:[10.1002/jmri.26561](https://doi.org/10.1002/jmri.26561)
- 13.** *Longitudinal advanced MRI case report of white matter radiation necrosis.* V. Wiggermann, E. Lapointe, L. Litvin, C. Graf, **E. Hernández-Torres**, M. McKenzie, I. M Vavasour, C. Laule, E.L. MacMillan, D.K.B. Li, S.H. Kolind, A. Rauscher, A.L. Traboulsee. *ANNALS OF CLINICAL AND TRANSLATIONAL NEUROLOGY*. DOI:[10.1002/acn3.704](https://doi.org/10.1002/acn3.704)
- 2017** **12.** *Susceptibility-sensitive MRI of multiple sclerosis lesions and the impact of normal-appearing white matter changes.* V. Wiggermann, S. Hametner, **E. Hernández-Torres**, C., V. Endmayr, G. Kasprian, R. Höftberger, D.K.B. Li, A. Traboulsee, A. Rauscher. *NMR IN BIOMEDICINE*, 30(3), pag. 1108-1119. DOI:[10.1002/nbm.3727](https://doi.org/10.1002/nbm.3727)
- 11.** *Anisotropic cerebral vascular architecture causes orientation dependency in cerebral blood flow and volume measured with dynamic susceptibility contrast MRI.* **E. Hernández-Torres**[†], N. Kassner[†], N. Daniel Forkert, L. Wei, V. Wiggermann, M. Daemen, L. Machan, A. Traboulsee, D.K.B. Li, A. Rauscher. *JCBFM*, 37(3), pag. 1108-1119. [†]*Equal contribution*. DOI:[10.1177/0271678X16653134](https://doi.org/10.1177/0271678X16653134)
- 2016** **10.** *A prospective pilot investigation of brain volume, white matter hyperintensities, and hemorrhagic lesions after mild traumatic brain injury.* M. Jarrett, R. Tam, **E. Hernández-Torres**, N. Martin, W. Perera, Y. Zhao, E. Shahinfard, S. Dadachanji, J. Taunton, D.K.B. Li and A. Rauscher. *FRONTIERS IN NEUROLOGY*., Vol. 7. DOI:[10.3389/fneur.2016.00011](https://doi.org/10.3389/fneur.2016.00011)
- 2015** **9.** *FLAIR²: A combination of FLAIR and T2 for improved MS lesion detection.* V. Wiggermann, **E. Hernández-Torres**, A. Traboulsee, D.K.B. Li and A. Rauscher. *AMERICAN JOURNAL OF NEURORADIOLOGY*, Vol. 37. DOI:[10.3174/ajnr.A4514](https://doi.org/10.3174/ajnr.A4514)
- 8.** *Orientation dependent MR signal decay differentiates between people with MS, their asymptomatic siblings and unrelated healthy controls.* **E. Hernández-Torres**[†], V. Wiggermann[†], S. Hametner, T.R. Baumeister, A.D. Sadovnick, Y. Zhao, L. Machan, D.K.B. Li, A. Traboulsee, and A. Rauscher. *PLOS ONE*, 10(10). [†]*Equal contribution*. DOI:[10.1371/journal.pone.0140956](https://doi.org/10.1371/journal.pone.0140956)
- 2013** **7.** *Magnetic resonance frequency shifts during acute MS lesion formation.* V. Wiggermann, **E. Hernández-Torres**, I.M. Vavasour, G.R. Wayne Moore, C. Laule, A.L. MacKay, D.K.B. Li, A. Traboulsee, and A. Rauscher. *NEUROLOGY*, Vol.81, Pag. 1-8. DOI:[10.1212/WNL.0b013e31829bfd63](https://doi.org/10.1212/WNL.0b013e31829bfd63)
- 2011** **6.** *The influence of white matter fibre orientation on MR signal phase and decay.* C. Denk[†], **E. Hernández-Torres**[†], A. MacKay, and A. Rauscher. *NMR BIOMEDICINE*, Vol.24, Pag. 246-252. [†]*Equal contribution*. DOI:[10.1002/nbm.1581](https://doi.org/10.1002/nbm.1581)
- 2009** **5.** *Use of short-term bio-impedance for gastric motility assessment.* R. Huerta-Franco, M. Vargas-Luna, **E. Hernández-Torres**, K. Capaccione, T Córdova. *MEDICAL ENGINEERING AND PHYSICS*, Vol.31, Pag. 770-774. DOI:[10.1016/j.medengphy.2009.02.008](https://doi.org/10.1016/j.medengphy.2009.02.008)

4. *A methodology to measure the volume of spheroid and oblong solid bodies based on artificial vision technique.* T. Córdova-Fraga, J. Bernal-Alvarado, J.C. Martínez, M. Sosa, M. Vargas, **E. Hernández-Torres**, and R. Huerta. *REVISTA MEXICANA DE FÍSICA*, Vol.55, Pag. 145-148. [Link to Scopus](#)
- 2008 3. *Gender difference in the gastric emptying measured by magnetogastrography using a semi-solid test meal.* T. Córdova-Fraga, J.M. De la Roca-Chiapas, S. Solís, M. Sosa, J. Bernal-Alvarado, **E. Hernández-Torres**, M. Hernández-González. *ACTA GASTROENTEROLOGICA LATINOAMERICANA*, Vol.38, Pag. 240-245. [Link](#)
- 2007 2. *Magnetogastrography (MGG) reproducibility assessments of gastric emptying on healthy subjects.* JM de la Roca-Chiapas, T. Córdova, **E. Hernández-Torres**, S. Solorio, S. Solís, and M. Sosa. *PHYSIOLOGICAL MEASUREMENT*, Vol.28, Pag. 175-183. [Link](#)
- 2006 1. *Medición de la susceptibilidad magnética de sustancias líquidas en el laboratorio de física.* M Sosa, T Córdova, JJ Bernal, G Caldera, ME Cano, G Carrillo, F Córdoba, EG Delgado, MG Espinoza, PC García, **E. Hernández-Torres**, JC Hernández, I Pérez, M Reyes, JA Ruiz, and C Wiechers. *REVISTA MEXICANA DE FÍSICA*, Vol.52, Pag. 111-115. [Link to Scopus](#)

Submitted Journal Articles

Myelin water imaging depends on white matter fiber orientation in the human brain. C. Birkel, J. Doucette, M. Fan, **E. Hernández-Torres**, A. Rauscher. *MRM*, Invited for re-submission, 06/2020.