



©NYC & Company/Julienne Schaer



*31<sup>st</sup> Annual Meeting of*

# The Eastern Neuroradiological Society

---

**August 22 - 25, 2019**

New York Marriott at the Brooklyn Bridge • Brooklyn, New York

---

**SAM Credit Available**

*24.75 AMA PRA Category 1 Credit(s)<sup>TM</sup>*

**For more information, visit [www.enrs.org](http://www.enrs.org)**



## From The Program Chair

On behalf of the Eastern Neuroradiological Society, I would like to invite you to join us for the 31st Annual Meeting of the Society held on August 22 – 25, 2019. This year's meeting will be held at the New York Marriott at the Brooklyn Bridge, in Brooklyn, New York.

The Annual Meeting program represents a comprehensive, in-depth review of neuroradiology and head and neck imaging. The topics covered range from practical reviews of common topics to those of advanced imaging techniques and emerging technologies. Topics covered will include adult brain imaging and stroke imaging, head and neck imaging, imaging of the spine, pediatric neuroimaging, and interventional neuroradiology. This year, the advanced imaging session will also include lectures on artificial intelligence. The purpose is to make the audience familiar with this important technology that is likely to have increasing impact on the practice of radiology and medicine in general. Like previous years, multiple SAM sessions are embedded in the program, further enriching the experience and helping with MOC cycle certification and recertification.

The meeting location, Brooklyn, New York, hardly needs an introduction. The meeting will take place at the heart of one of the most cosmopolitan and culturally diverse cities in the world, easily accessible from anywhere on the east coast. The New York Marriott at the Brooklyn Bridge is near the vibrant neighborhoods of Brooklyn Heights and DUMBO, as well as the waterfront Brooklyn Bridge Park and Brooklyn Heights Promenade with spectacular views of the Manhattan skyline. The subway station and ferry landing are minutes away, as are the iconic Brooklyn Bridge and Manhattan Bridge, providing easy access around Brooklyn and Manhattan. Whether you enjoy dining, Broadway shows, operas, museums, parks, nightclubs or world-class shopping, New York has it all. For those not familiar with the city, we have taken advantage of the "insider" knowledge of our New York colleagues in order to provide up-to-date information on the best dining, shopping and sightseeing locales. Brooklyn is truly the new Manhattan, one of New York city's most exciting boroughs with a "cool" and vibrant community.

ENRS is one of my favorite meetings because it provides a rich, state-of-the-art program in an intimate and friendly atmosphere. It allows us to meet the experts and the up and comings, learn from one another, and socialize in an informal atmosphere. Please join us for this exciting educational and social experience in one of the greatest cities in the world, put together through the hard work of our excellent program and executive committees, and the program managers at ESI whom I would like to thank for their hard work.

I look forward to seeing you all in August.

*Reza Forghani*

**Reza Forghani, MD, PhD, FRCP**

ENRS Vice President / President-Elect and Program Committee Chair



**SPECIAL NOTE FOR THE DISABLED:** Educational Symposia (ESI) and the Eastern Neuroradiological Society (ENRS) wish to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently from other individuals because of the absence of auxiliary aids and services. If you need any auxiliary aids or services identified in the Americans with Disabilities Act, please contact ESI at (813) 806-1000.

**DISCLAIMER:** Educational Symposia (ESI) and the Eastern Neuroradiological Society (ENRS) as planners and presenters of this meeting, and Professional Travel as the official travel agency for this meeting, claim no liability for the acts of any suppliers or the safety of any attendees while in transit to, from, or during, this event or any optional activities. The total amount of liability, if any, for the meeting organizers is limited to a refund of the registration fee, and Professional Travel's responsibility is limited to that of an agent.

## Target Audience

The ENRS 31<sup>st</sup> Annual Meeting is targeted to academic and private practice neuroradiologists, general radiologists, and other health professionals with an interest in neuroimaging and head and neck imaging in the Northeastern United States and Canada. The meeting is also targeted to trainees and is an excellent venue for physicians-in-training, including residents and fellows, to enhance their knowledge. The meeting covers imaging of diseases of the brain, spine, otolaryngology, as well as neurointervention in adults and children. The imaging techniques covered range from routine, commonly used ones to the most recent, cutting-edge techniques.

## Accreditation

**Physicians:** This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint providership of Educational Symposia and the Eastern Neuroradiological Society. Educational Symposia is accredited by the ACCME to provide continuing medical education for physicians.

Educational Symposia designates this live activity for a maximum of 24.75 *AMA PRA Category 1 Credit(s)*<sup>™</sup>. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Self-Assessment Modules (SAMs):** Educational Symposia has been granted Deemed Status by the American Board of Radiology (ABR). This allows Educational Symposia to develop and implement SAMs that satisfy ABR Part II MOC requirements.

## Educational Objectives

At the conclusion of the meeting, the participant should be able to:

- Describe and characterize various brain neoplasms and their mimics and evaluate emergent conditions of the brain.
- Use advanced imaging techniques including perfusion, spectroscopy, and functional imaging for pre-operative evaluation of brain tumors and tumor response to treatment.
- Evaluate and differentiate demyelinating, inflammatory, and infectious disorders and their mimics in the brain as well as neurodegenerative diseases using conventional and newer imaging techniques. Identify common treatment-related complications in the brain.
- Describe and effectively evaluate, using conventional and advanced imaging techniques, different stroke etiologies and neurovascular diseases of the CNS.
- Effectively evaluate and derive a differential diagnosis for various diseases in the neck, sinonasal cavity, orbit, and temporal bone.
- Develop an approach for pre-operative evaluation and staging of head and neck cancer and post-treatment surveillance.
- Develop an approach for the evaluation of common ENT disorders including tinnitus, otalgia, facial weakness, and acquired sensorineural hearing loss.
- Identify the radiologic anatomy of the skull base, temporal bone and pituitary fossa and characterize various pathologies affecting the skull base and temporal bone.
- Develop an approach for the evaluation of the post-operative temporal bone.
- Evaluate emergent conditions of the extracranial head and neck.
- Evaluate various neoplastic and non-neoplastic demyelinating, inflammatory, infectious, and vascular disorders in the spine. Develop an approach for the evaluation and reporting of the degenerative conditions of the spine.
- Discuss advanced imaging techniques and their applications in the spine. Develop approaches for optimizing technique in spine imaging.
- Describe and characterize various pediatric brain and spine neoplasms and their mimics.
- Develop an approach for the evaluation of pediatric disorders affecting the brain, including metabolic disorders and developmental malformations of the CNS.
- Develop an approach for evaluating fetal MRIs.
- Become familiar with advanced pediatric imaging techniques and develop strategies for decreasing sedation in pediatric neuroimaging.
- Discuss cutting-edge advanced imaging and image post-processing techniques and their applications including dual-energy CT, 7 Tesla MRI, 3D printing and advanced visualization, radiomics & radiogenomics, and artificial intelligence.
- Review and apply health policy recommendations and clinical practice tips including establishing a clinic-based reading service.

*No special educational preparation is required for this CME activity.*

## 2018-2019 ENRS Executive Committee

### PRESIDENT & CHAIR

#### Claudia F. E. Kirsch, MD

Professor of Neuroradiology and Otolaryngology  
Division Chief Neuroradiology  
Northwell Health  
Zucker Hofstra School of Medicine  
Manhasset, NY

### VICE-PRESIDENT/PRESIDENT-ELECT

#### Reza Forghani, MD, PhD, FRCPC

Associate Professor, Departments of Radiology, Oncology,  
and Otolaryngology - Head and Neck Surgery  
McGill University  
FRQS Clinical Research Scholar and Clinical Investigator,  
McGill University Health Center Research Institute,  
Segal Cancer Centre, & Lady Davis Research Institute  
Montreal, Quebec, CANADA

### SECRETARY

#### Thierry A.G.M. Huisman, MD, PD, EDiNR, EDiPNR, FICIS

Radiologist-in-Chief, Texas Children's Hospital  
Edward B. Singleton Chair of Radiology  
Professor of Radiology, Neurology, Neurosurgery  
and Pediatrics

### TREASURER

#### Tanya J. Rath, MD

Senior Associate Consultant  
Neuroradiology Division  
Mayo Clinic  
Phoenix, AZ

### 1<sup>ST</sup> PAST-PRESIDENT

#### Eugene Yu, MD, FRCPC

Associate Professor of Medical Imaging and  
Otolaryngology Head and Neck Surgery  
Princess Margaret Cancer Centre University of Toronto  
Toronto, Ontario, Canada

### 2<sup>ND</sup> PAST-PRESIDENT

#### Christopher G. Filippi, MD

Vice Chair of Biomedical Imaging and  
Translational Science  
Professor of Radiology  
Lenox Hill Hospital and Lenox Hill Greenwich Village  
New York, NY

## 2018-2019 ENRS Program Committee

### PROGRAM CHAIR:

#### Reza Forghani, MD, PhD, FRCPC

Associate Professor, Departments of Radiology, Oncology,  
and Otolaryngology - Head and Neck Surgery  
McGill University  
FRQS Clinical Research Scholar and Clinical Investigator,  
McGill University Health Center Research Institute,  
Segal Cancer Centre, & Lady Davis Research Institute  
Director, Combined Research and Clinical Fellowship in  
Head and Neck Imaging  
Montreal, Quebec, CANADA

### ADULT BRAIN:

#### Laurie A. Loevner, MD

Chief, Division of Neuroradiology  
Professor of Radiology, Neurosurgery, Otorhinolaryngology:  
Head & Neck Surgery, and Ophthalmology  
University of Pennsylvania Health System  
Philadelphia, PA

#### Suyash Mohan, MD

Associate Professor of Radiology and Neurosurgery  
Director, Neuroradiology Clinical Research Division  
Perelman School of Medicine at the University of  
Pennsylvania  
Philadelphia, PA

#### C. Douglas Phillips, MD, FACR

Professor of Radiology  
Director of Head and Neck Imaging  
Weill Cornell Medical College  
New York-Presbyterian Hospital  
New York, NY

### HEAD AND NECK:

#### Tanya J. Rath, MD

Senior Associate Consultant  
Neuroradiology Division  
Mayo Clinic  
Phoenix, AZ

#### Deborah R. Shatzkes, MD

Professor of Radiology and Otolaryngology  
Donald and Barbara Zucker School of Medicine  
at Hofstra/Northwell  
Chief, Head & Neck Radiology  
Lenox Hill Hospital and The New York Head & Neck Institute  
Northwell Health  
New York, NY

### STROKE AND VESSELS:

#### Pina C. Sanelli, MD, MPH, FACR

Professor of Radiology  
Vice Chairman of Research  
Department of Radiology  
Northwell Health  
Manhasset, NY

#### Pamela W. Schaefer, MD

Associate Professor in Radiology  
Harvard Medical School  
Vice Chair, Post-Graduate Education and Fellowship Training  
Associate Director of Neuroradiology  
Clinical Director of MRI  
Massachusetts General Hospital  
Boston, MA

### SPINE:

#### Harprit S. Bedi, MD

Associate Professor in Radiology  
Director of Business Development, Radiology  
Boston University School of Medicine  
Boston, MA

#### Amish H. Doshi, MD

Associate Professor of Radiology and Neurosurgery  
Chief, Division of Neuroradiology  
Program Director, Neuroradiology  
Associate Program Director, Radiology Residency  
Icahn School of Medicine at Mount Sinai  
New York, NY

### PEDIATRIC:

#### Caroline D. Robson, MBChB

Operations Vice Chair, Radiology  
Division Chief, Neuroradiology  
Director of Head and Neck Imaging  
Boston Children's Hospital  
Associate Professor of Radiology, HMS  
Boston, MA

#### Manohar M. Shroff, MD, FRCPC

Professor of Radiology  
Department of Medical Imaging  
University of Toronto  
Chief of Radiology, Ontasian Chair - Pediatric Radiology  
Hospital for Sick Children (SickKids)  
Toronto, Ontario, CANADA

### ADVANCED TECHNIQUES, ARTIFICIAL INTELLIGENCE, & POLICY:

#### Christopher G. Filippi, MD

Vice Chair of Biomedical Imaging and Translational Science  
Professor of Radiology  
Lenox Hill Hospital and Lenox Hill Greenwich Village  
New York, NY

#### Reza Forghani, MD, PhD, FRCPC

Associate Professor, Departments of Radiology, Oncology,  
and Otolaryngology - Head and Neck Surgery  
McGill University  
FRQS Clinical Research Scholar and Clinical Investigator,  
McGill University Health Center Research Institute,  
Segal Cancer Centre, & Lady Davis Research Institute  
Montreal, Quebec, CANADA

### NEUROINTERVENTIONAL:

#### Michele H. Johnson, MD, FACR, FASER

Professor of Radiology and Biomedical Imaging and  
Neurosurgery  
Director, Interventional Neuroradiology  
Yale University School of Medicine  
New Haven, CT

### SCIENTIFIC PRESENTATIONS:

#### Laurent Letourneau-Guillon, MD

Clinical Assistant Professor  
Centre Hospitalier de l'Université de Montréal (CHUM)  
Montreal, Quebec, CANADA

#### Doris D.M. Lin, MD, PhD

Associate Professor of Radiology and Radiological Science  
Johns Hopkins University School of Medicine  
The Johns Hopkins Hospital  
Baltimore, MD

#### Carlos H. Torres, MD, FRCPC

Associate Professor of Radiology  
Program Director, Neuroradiology  
University of Ottawa  
Ottawa, Ontario, CANADA

### STUMP THE STARS:

#### Laurent Letourneau-Guillon, MD

Clinical Assistant Professor  
Centre Hospitalier de l'Université de Montréal (CHUM)  
Montreal, Quebec, CANADA

### SOCIAL AND MEMBER RELATIONS:

#### Maria J. Borja, MD

Assistant Professor of Neuroradiology  
NYU School of Medicine  
New York, NY

#### Mari Hagiwara, MD

Associate Professor  
Department of Radiology  
New York University Langone Medical Center  
New York, NY

#### C. Douglas Phillips, MD, FACR

Professor of Radiology  
Director of Head and Neck Imaging  
Weill Cornell Medical College  
New York-Presbyterian Hospital  
New York, NY

#### Deborah R. Shatzkes, MD

Professor of Radiology and Otolaryngology  
Donald and Barbara Zucker School of Medicine  
At Hofstra/Northwell  
Chief, Head & Neck Radiology  
Lenox Hill Hospital and  
The New York Head & Neck Institute  
Northwell Health  
New York, NY

# Program Schedule

Thursday, August 22, 2019

**8:00 AM Meeting Registration**

8:50 – 9:00 Introduction and Welcome

**ADULT BRAIN: NEOPLASM**

Moderators: Laurie A. Loevner, MD and Robini Nadgir, MD

## SAM SESSION

9:00 – 9:20 Imaging of Brain Tumors  
*Joseph M. Mettenburg, MD, PhD*

9:20 – 9:40 The Role of Proton MR Spectroscopy and Perfusion Imaging for Pretreatment Evaluation of Brain Tumors  
*Otto Rapalino, MD*

9:40 – 10:00 WHO Brain Tumor Classification - What a Neuroradiologist Needs to Know  
*Reza Hakimelahi, MD*

**10:00 – 10:20 Refreshment Break and Visit Technical Exhibits**

**ADULT BRAIN: NEOPLASM, COMPLICATIONS & MIMICS**

Moderators: Gloria Chiang, MD and Robini Nadgir, MD

10:20 – 10:40 Multi-Parametric Assessment of Treatment Response  
*Ronald L. Wolf, MD, PhD*

10:40 – 11:00 Neoplasm or Not?  
*Jacqueline A. Bello, MD, FACR*

11:00 – 11:15 Infratentorial Brain Tumors  
*Keivan Shifteh, MD, FACR*

11:15 – 11:30 fMRI and Tractography for Neurosurgical Planning  
*Karem Gharzeddine, MD*

11:30 – 11:45 Treatment Related Complications and Their Mimics in the CNS  
*Sachin Gujar, MBBS, MD*

11:45 – 12:15 PM **Scientific Paper Session #1** ♦

Moderators : Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Letourneau-Guillon, MD

**12:00 – 1:20 Lunch On Your Own**

**PEDIATRIC I**

Moderators: Diana P. Rodriguez, MD and Karuna V. Shekdar, MD

1:20 – 1:40 Congenital Pediatric Spine  
*Erin Simon Schwartz, MD, FACR*

1:40 – 2:00 Pediatric Spine Tumors  
*Karuna V. Shekdar, MD*

2:00 – 2:20 Inborn Errors Of Metabolism, Myelin Disorders, And Childhood Ataxia - Diagnostic Clues From Down Under  
*Paul A. Caruso, MD*

2:20 – 2:40 Fetal MRI  
*Elka Miller, MD, FRCPC*

2:40 – 3:00 Advances in Pediatric MRI  
*Mai-Lan Ho, MD*

**3:00 – 3:20 Refreshment Break and Visit Technical Exhibits**

**ADULT BRAIN: NON-TUMOR**

Moderators: C. Douglas Phillips, MD, FACR and Amar Vora, MD

3:20 – 3:40 Imaging of MS: What the Clinician Needs to Know  
*Susie Y. Huang, MD*

3:40 – 4:00 It's Not MS – Other White Matter Disease  
*Sam Payabvash, MD*

4:00 – 4:20 CNS Infections – New Thoughts  
*A. John Tsiouris, MD*

4:20 – 4:40 PET-MRI in Dementia Evaluations  
*Gloria Chiang, MD*

4:40 – 4:50 Low Dose and No-Dose Gadolinium Protocols  
*Bidyut K. Pramanik, MD*

4:50 – 5:00 Creating a Successful Clinic-Based Reading Service  
*C. Douglas Phillips, MD, FACR*

**5:00 End of Session**

5:00 – 6:30 **Scientific Paper Session #2** ♦

Moderators : Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Letourneau-Guillon, MD

**6:30 Welcome Reception**

Friday, August 23, 2019

**7:00 – 7:30 AM Breakfast & Learn** ♦  
Sponsored by Icometrix

**STROKE I**

Moderators: Pamela W. Schaefer, MD and Sean Symons, MD

## SAM SESSION

8:00 – 8:20 Acute Stroke Triage and Treatment – Early Window (0 - 6 hours)  
*Kambiz Nael, MD*

8:20 – 8:40 Acute Stroke Triage and Treatment – Late Window (6 – 24 hours)  
*Philip M. Meyers, MD, FACR, FSIR, FAHA*

8:40 – 9:00 Treatment of Large Core Strokes  
*Scott B. Raymond, MD*

9:00 – 9:20 Pediatric Stroke Update  
*Richard L. Robertson, MD*

9:20 – 9:40 Stroke Mimics  
*Jana Ivanidze, MD, PhD*

9:40 – 10:00 Advanced Imaging in the Evaluation of Hemorrhagic Stroke  
*Pamela W. Schaefer, MD*

**10:00 – 10:20 Refreshment Break and Visit Technical Exhibits**

**PEDIATRIC II**

Moderators: Manohar M. Shroff, MD, FRCPC and Bruno P. Soares, MD

10:20 – 10:40 Strategies to Decrease Sedation in Pediatric Neuroimaging  
*Camilo Jaimes Cobos, MD*

10:40 – 11:00 Updated WHO Classification for Pediatric Brain Tumors  
*Tina Young Pousaint, MD, FACR*

11:00 – 11:20 Neurometabolic Emergencies  
*Birgit Ertl-Wagner, MD*

11:20 – 11:40 Autoimmune Encephalitis  
*Manohar M. Shroff, MD, FRCPC*

11:40 – 12:00 PM Cobblestone Cortical Malformations: From Molecular Basis to Imaging Phenotypes  
*Alireza Radmanesh, MD*

**12:00 – 1:00 Lunch & Learn** ♦  
Sponsored by GE Healthcare

**SPINE I**

Moderators: Anna Derman, MD and Amish H. Doshi, MD

1:20 – 1:40 Optimizing Your Spine Imaging Protocols: Tips and Tricks  
*Lawrence N. Tanenbaum, MD, FACR*

1:40 – 2:00 AO Classification and TLICS - What the Surgeon Wants to Know  
*Charles H. Cho, MD, MBA*

2:00 – 2:20 Imaging of the Post-Operative Spine  
*William A. Mehan, Jr., MD, MBA*

2:20 – 2:40 Lines and Spines: Imaging Evaluation of Spinal Deformities  
*Majid Khan, MD*

2:40 – 2:50 Spinal Imaging of Spondyloarthropathies  
*Puneet B. Belani, MD*

2:50 – 3:00 MRA of Spinal Vascular Disease: Protocols and Pathology  
*Michele H. Johnson, MD, FACR, FASER*

**3:00 – 3:20 Refreshment Break and Visit Technical Exhibits**

**ADVANCED TECHNIQUES, ARTIFICIAL INTELLIGENCE & POLICY**

Moderators: Rajiv Gupta, MD and Timothy M. Shepherd, MD, PhD

3:20 – 3:40 Radiomics and Radiogenomics for Tumor Characterization  
*Christopher G. Filippi, MD*

3:40 – 4:00 A Primer on Artificial Intelligence: From Basics to Future Horizons  
*Reza Forghani, MD, PhD*

4:00 – 4:20 Advanced Image Visualization & 3D Printing  
*Edward P. Quigley, III, MD, PhD*

4:20 – 4:40 Dual Energy CT Applications in Neuroimaging & Head and Neck Imaging  
*Daniel J. Boulter, MD*

4:40 – 4:50 Overview of 7T MR Imaging  
*Bradley N. Delman, MD*

4:50 – 5:10 D.C. Update From a Senior Fellow of the Neiman Policy Institute  
*Joshua A. Hirsch MD, FACR, FSIR, FSNIS*

**5:10 End of Session**

**Friday, August 23, 2019 (Continued)**

- 5:10 – 5:35 **Scientific Paper Session #3** ♦  
Moderators : Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Létourneau-Guillon, MD
- 5:40 – 6:00 ASNR President's Address & Lecture ♦
- 6:00 – 6:30 **ENRS Annual Business Meeting (ENRS Members Only)** ♦

**Saturday, August 24, 2019****7:00 – 8:00 AM Continental Breakfast for Registrants and Visit Technical Exhibits**

- 7:15 - 7:45 **Scientific Paper Session #4** ♦  
Moderators : Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Létourneau-Guillon, MD

**HEAD AND NECK IMAGING I**

Moderators: Manon Belair, MD and David Landry, MD

**SAM SESSION**

- 8:00 – 8:20 Tinnitus  
Ashok Srinivasan, MD
- 8:20 – 8:40 Otagia  
Mari Hagiwara, MD
- 8:40 – 9:00 Facial Weakness  
Amy Fan-Yee Juliano, MD
- 9:00 – 9:20 Nodal Staging in Head and Neck Cancer: Evidence Based Best Practices  
Peter M. Som, MD, FACP, FRSM
- 9:20 – 9:30 You've Got to See This Case!  
Karen Buch, MD
- 9:30 – 9:40 Acquired Sensorineural Hearing Loss  
Marie-Constance Lacasse, MD, FRCPC
- 9:40 – 10:00 Surveillance Imaging in H/N Ca: Evidence Based Best Practices  
Eugene Yu, MD, FRCPC

**10:00 – 10:20 Refreshment Break and Visit Technical Exhibits****STROKE & VESSELS II**

Moderators: Clifford J. Eskey, MD, PhD and Pina C. Sanelli, MD, MPH, FACP

- 10:20 – 10:40 Large Vessel Vasculopathies  
Pamela W. Schaefer, MD
- 10:40 – 11:00 Intracranial Vessel Wall Imaging for Distinguishing Neurovascular Diseases  
Bruce A. Wasserman, MD
- 11:00 – 11:20 Small Vessel Vasculopathies  
Pina C. Sanelli, MD, MPH, FACP
- 11:20 – 11:40 Carotid Plaque Imaging  
Jae W. Song, MD, MS
- 11:40 – 12:00 PM Molecular Imaging of Vascular Inflammation  
John W. Chen, MD, PhD

**12:00 – 1:20 Lunch On Your Own****SPINE II**

Moderators: Amit Aggarwal, MD and Harpit S. Bedi, MD

**SAM SESSION**

- 1:20 – 1:40 Infections of the Spine and Spinal Cord  
Asim Z. Mian, MD
- 1:40 – 2:00 Imaging of Myelopathy: A Practical Approach  
Maria J. Borja, MD
- 2:00 – 2:20 Non-Traumatic Spine Emergencies  
Carlos H. Torres, MD, FRCPC
- 2:20 – 2:45 Advanced Imaging of Vertebral Body Lesions  
Puneet S. Pawha, MD
- 2:45 – 3:00 AI and Machine Learning in Spine Imaging: Review of Current Trends  
Javin Schefflein, MD

**3:00 – 3:20 Refreshment Break and Visit Technical Exhibits****Saturday, August 24, 2019 (Continued)****HEAD AND NECK IMAGING II**

Moderators: Laila Al Shafai, MD and Deborah R. Shatzkes, MD

- 3:20 – 3:40 DDx: Parotid Mass  
Claudia F.E. Kirsch, MD
- 3:40 – 4:00 DDx: Sinonasal Mass  
Deborah R. Shatzkes, MD
- 4:00 – 4:20 DDx: Orbital Mass  
Stephanie Lam, MD
- 4:20 – 4:40 DDx: Adult Neck Mass  
Carlos I. Torres, MD
- 4:40 – 4:55 DDx: Pediatric Neck Mass  
Karen K. Moeller, MD
- 4:55 – 5:10 DDx: Middle Ear Mass  
Hillary R. Kelly, MD
- 5:10 – 6:00 Stump the Stars  
Moderator: Laurent Létourneau-Guillon, MD

**6:00****End of Session****6:30****Closing Reception and Annual Dinner****Sunday, August 25, 2019****7:00 – 8:00 AM Continental Breakfast for Registrants and Visit Technical Exhibits**

- 7:15 - 7:45 **Scientific Paper Session #5** ♦  
Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Laurent Létourneau-Guillon, MD

**HEAD AND NECK IMAGING III**

Moderators: Amit Mahajan, MD and Osamu Sakai, MD, PhD, FACP

- 8:00 – 8:20 Sellar & Parasellar Anatomy & Pathology  
Girish M. Fatterpekar, MBBS, DNB, MD
- 8:20 – 8:40 Central Skull Base Variants & Pathology  
Suyash Moban, MD
- 8:40 – 9:00 Temporal Bone Trauma  
Vikas Jain, MBBS
- 9:00 – 9:20 Post-Operative Temporal Bone  
Gul Moonis, MBBS
- 9:20 – 9:30 Head and Neck Case Review: 5 Key Pearls to Avoid Pitfalls  
Eric S. Bartlett, MD, MPH
- 9:30 – 9:50 Acute Non-Traumatic ENT Emergencies  
Tanya J. Rath, MD

**9:50 – 10:10****Refreshment Break and Visit Technical Exhibits****NEURO INTERVENTIONAL**

Moderators: Allan L. Brook, MD, FSIR and Michele H. Johnson, MD, FACP, FASER

- 10:10 – 10:30 Carotid Stenosis: CEA, CAS, TCAR or Medicine, What is the Evidence  
Reade DeLeacy, MD, MBBS (Hons) FRANZCR
- 10:30 – 10:50 Thrombectomy for Large Vessel Occlusion Strokes: How Does Imaging Influence Triage?  
Donatella Tampieri, MD, FRCPC
- 10:50 – 11:10 The Unruptured Aneurysm: Optimal Imaging and Treatment Strategies for Management  
Clifford J. Eskey MD, PhD
- 11:10 – 11:30 The ABCs of Endovascular Aneurysm Treatment  
Peter K. Nelson, MD
- 11:30 – 11:45 New Frontiers in Neurointervention: Beyond Glue and Coils  
Dheeraj Gandhi, MD

**11:45 – 12:00 PM Closing Comments****12:00****End of Meeting**

Faculty &amp; topics subject to change.

♦ Session not accredited for AMA PRA Category 1 Credit(s)<sup>TM</sup>**ENRS Abstract Submission:****Deadline for abstract submissions****June 5, 2019**

Abstracts will be accepted for oral presentation in 2 categories: (1) Scientific Oral Presentation or (2) Excerpta Extraordinaire (brief presentation of interesting, educational case reports). Submissions are welcome in all major categories in neuroradiology. Authors will be notified by mid-June. Authors of accepted abstracts will be required to register for the meeting and pay the meeting registration fee.

Interested candidates should submit abstract(s) accompanied by a completed abstract submission form electronically to: Laurent Letourneau-Guillon MD, MSc at [laurent.letourneau-guillon.1@umontreal.ca](mailto:laurent.letourneau-guillon.1@umontreal.ca).

Visit <https://www.edusymp.com/esi/2019/ENRS19/CallforAbstracts2019.pdf> to access the submission form.

# Invited Faculty

**Amit Aggarwal, MD**

*Icahn School of Medicine at Mount Sinai*

**Laila Al Shafai, MD**

*Princess Margaret Cancer Centre  
University of Toronto*

**Eric S. Bartlett, MD, MPH**

*Princess Margaret Cancer Centre  
University of Toronto*

**Harprit S. Bedi, MD**

*Boston University School of Medicine*

**Manon Belair, MD**

*Centre Hospitalier de l'Université de Montréal*

**Puneet B. Belani, MD**

*Mount Sinai Hospital, New York*

**Jacqueline A. Bello, MD, FACR**

*Montefiore Medical Center*

**Maria J. Borja, MD**

*NYU School of Medicine*

**Daniel J. Boulter, MD**

*The Ohio State University Wexner  
Medical Center*

**Allan L. Brook, MD, FSIR**

*Montefiore Medical Center*

**Karen Buch, MD**

*Massachusetts General Hospital*

**Paul A. Caruso, MD**

*Massachusetts Eye and Ear Infirmary*

**John W. Chen, MD, PhD**

*Massachusetts General Hospital*

**Gloria Chiang, MD**

*Weill Cornell Medicine, New York  
Presbyterian Hospital*

**Charles H. Cho, MD, MBA**

*Harvard Medical School*

**Camilo Jaimes Cobos, MD**

*Boston Children's Hospital*

**Reade DeLeacy, MD, MBBS (Hons),  
FRANZCR**

*Cerebrovascular Center  
New York, NY*

**Bradley N. Delman, MD**

*Mt. Sinai School of Medicine  
New York, NY*

**Anna Derman, MD**

*Maimonides Medical Center  
New York, NY*

**Amish H. Doshi, MD**

*Icahn School of Medicine at Mount Sinai*

**Birgit Ertl-Wagner, MD**

*University of Toronto*

**Clifford J. Eskey, MD, PhD**

*Geisel School of Medicine at Dartmouth*

**Girish M. Fatterpekar, MBBS,  
DNB, MD**

*NYU Langone Medical Center*

**Christopher G. Filippi, MD**

*Lenox Hill Hospital*

**Reza Forghani, MD, PhD, FRCPC**

*McGill University*

**Dheeraj Gandhi, MD**

*University of Maryland School of Medicine*

**Karem Gharzeddine, MD**

*Memorial Sloan Kettering Cancer Center*

**Sachin Gujar, MBBS, MD**

*Johns Hopkins Medical Institutions*

**Rajiv Gupta, MD**

*Harvard Medical School*

**Mari Hagiwara, MD**

*New York University Langone Medical Center*

**Reza Hakimelahi, MD**

*Memorial Sloan Kettering Cancer Ctr*

**Joshua A. Hirsch MD, FACR,  
FSIR, FSNIS**

*Massachusetts General Hospital*

**Mai-Lan Ho, MD**

*Nationwide Children's Hospital*

**Susie Y. Huang, MD**

*Massachusetts General Hospital*

**Jana Ivanidze, MD, PhD**

*Weill Cornell Medicine*

**Vikas Jain, MBBS**

*Case Western Reserve University*

**Michele H. Johnson, MD, FACR,  
FASER**

*Yale University School of Medicine*

**Amy Fan-Yee Juliano, MD**

*Harvard Medical School*

**Hillary R. Kelly, MD**

*Harvard Medical School*

**Majid Khan, MD**

*Johns Hopkins University School of Medicine*

**Claudia F.E. Kirsch, MD**

*Donald and Barbara Zucker School of  
Medicine at Hofstra/Northwell*

**Marie-Constance Lacasse, MD,  
FRCPC**

*University of Sherbrooke*

**Stephanie Lam, MD**

*McGill University*

**David Landry, MD**

*Centre Hospitalier de l'Université de Montréal*

**Laurent Letourneau-Guillon, MD**

*Centre Hospitalier de l'Université de Montréal*

**Doris D.M. Lin, MD, PhD**

*The Johns Hopkins Hospital*

**Laurie A. Loevner, MD**

*University of Pennsylvania Health System*

**Amit Mahajan, MD**

*Yale University*

**William A. Mehan, Jr., MD, MBA**

*Massachusetts General Hospital*

**Joseph M. Mettenberg, MD, PhD**

*University of Pittsburgh Medical Center*

**Philip M. Meyers, MD, FACR, FSNIS,  
FSIR, FAHA**

*Neurological Institute of New York*

**Asim Z. Mian, MD**

*Boston University Medical Center*

**Elka Miller, MD, FRCPC**

*Children's Hospital of Eastern Ontario*

**Karen K. Moeller, MD**

*Norton Children's Hospital*

**Suyash Mohan, MD**

*Perelman School of Medicine at the University  
of Pennsylvania*

**Gul Moonis, MBBS**

*Columbia University Medical Center*

**Rohini Nadgir, M.D.**

*Johns Hopkins School of Medicine  
Baltimore, MD*

**Kambiz Nael, MD**

*Icahn School of Medicine at Mount Sinai*

**Peter K. Nelson, MD**

*Vanderbilt University Medical Center*

**Puneet S. Pawha, MD**

*Icahn School of Medicine at Mount Sinai*

**Sam Payabvash, MD**

*Yale School of Medicine*

**C. Douglas Phillips, MD, FACR**

*Weill Cornell Medical College  
New York-Presbyterian Hospital*

**Bidyut K. Pramanik, MD**

*Donald and Barbara Zucker School of  
Medicine at Hofstra/Northwell*

**Edward P. Quigley, III, MD, PhD**

*University of Utah*

**Alireza Radmanesh, MD**

*New York University School of Medicine*

**Otto Rapalino, MD**

*Massachusetts General Hospital*

**Tanya J. Rath, MD**

*Mayo Clinic  
Phoenix, AZ*

**Scott B. Raymond, MD**

*University of Vermont Medical Center*

**Richard L. Robertson, MD**

*Harvard Medical School*

**Diana P. Rodriguez, MD**

*Children's Hospital  
Boston, MA*

**Osamu Sakai, MD, PhD, FACR**

*Boston Medical Center, Boston University  
School of Medicine*

**Pina C. Sanelli, MD, MPH, FACR**

*Donald and Barbara Zucker School of  
Medicine at Hofstra/Northwell*

**Pamela W. Schaefer, MD**

*Massachusetts General Hospital*

**Javin Schefflein, MD**

*Mount Sinai Hospital*

**Erin Simon Schwartz, MD, FACR**

*The Children's Hospital of Philadelphia*

**Deborah R. Shatzkes, MD**

*Donald and Barbara Zucker School of  
Medicine at Hofstra/Northwell*

**Karuna V. Shekdar, MD**

*The Children's Hospital of Philadelphia*

**Timothy M. Shepherd, MD, PhD**

*New York University*

**Keivan Shifteh, MD, FACR**

*Montefiore Medical Center*

**Manohar M. Shroff, MD, FRCPC**

*University of Toronto*

**Bruno P. Soares, MD**

*University of Vermont Medical Center*

**Peter M. Som, MD, FACR, FRSM**

*Icahn School of Medicine at Mount Sinai*

**Jae W. Song, MD, MS**

*University of Pennsylvania*

**Ashok Srinivasan, MD**

*University of Michigan*

**Jared M. Steinklein, MD**

*Hofstra Northwell School of Medicine*

**Sean Symons, MD**

*Sunnybrook Health Sciences Centre,  
University of Toronto*

**Donatella Tampieri, MD, FRCPC**

*Queen's University, Kingston, Ontario*

**Lawrence N. Tanenbaum, MD, FACR**

*RadNet, Inc.*

**Carlos H. Torres, MD, FRCPC**

*University of Ottawa*

**Carlos I. Torres, MD**

*McGill University*

**A. John Tsiouris, MD**

*Weill Cornell Medicine*

**Amar Vora, MD**

*Weill Cornell Medical College*

**Bruce A. Wasserman, MD**

*Johns Hopkins School of Medicine*

**Ronald L. Wolf, MD, PhD**

*University of Pennsylvania Health System*

**Tina Young Poussaint, MD, FACR**

*Boston Children's Hospital*

**Eugene Yu, MD, FRCPC**

*Princess Margaret Cancer Centre,  
University of Toronto*

# Registration Information

31<sup>st</sup> Annual Meeting of

# The Eastern Neuroradiological Society

ENRS19

A late fee of \$75 will be added to any registration postmarked after **July 22, 2019**.

ENRS Member .....  \$425.00

Non-Member .....  \$750.00

Members-in-Training .....  \$250.00

Resident  Fellow  Medical Student

Yes, I plan to attend the  
Welcome Reception ..... \$15.00  
Thursday, August 22, 2019

Yes, I plan to attend the  
Annual Gala Dinner..... \$25.00  
Saturday, August 24, 2019

Yes, I plan to have a guest attend  
 Guest / Spouse Reception /  
Dinner Fee ..... \$175.00  
 Children under 12 years of age ..... \$75.00

**TOTAL ENCLOSED: \$** \_\_\_\_\_

## 4 Easy Ways To Register

We Accept



**INTERNET**  
ENRS.Edu symp.com

### MAIL

Check payable to:  
ENRS

c/o Educational Symposia  
5620 West Sigh Avenue  
Tampa, Florida USA  
33634-4490

### FAX

(813) 806-1001

### PHONE

(813) 806-1000

Name \_\_\_\_\_ Degree  M.D.  D.O.  Ph.D.  Other

Company / Institution \_\_\_\_\_ Specialty:  Staff Neuroradiologist  Staff Head & Neck  Private Practice Neuroradiologist  Private Practice Head & Neck  Other

Address \_\_\_\_\_ City / State / Zip Code / Country

Phone \_\_\_\_\_ Email (Required for Electronic Syllabus)

Card Number / Card Type:  Master Card  Visa  American Express  Discover \_\_\_\_\_ Expiration Date \_\_\_\_\_ Security Code \_\_\_\_\_

Billing Address \_\_\_\_\_ City / State / Zip Code / Country

Cardholder Signature \_\_\_\_\_

**Cancellations:** Requests for refund of registration fees, less a \$75.00 administrative fee, will be made to those providing written notification of cancellation by July 22, 2019. After that date, there will be no refunds given for cancellations. Please email notice of cancellation to: [cancel@edusymp.com](mailto:cancel@edusymp.com) or fax to 813-806-1001.



## New York Marriott at the Brooklyn Bridge

### About The Hotel

Completely transformed and brimming with contemporary style, the New York Marriott at the Brooklyn Bridge provides an unforgettable destination for your city adventure. The hotel is just across the East River from Manhattan, near the vibrant neighborhoods of Brooklyn Heights and DUMBO. The subway station is moments away, as is the iconic Brooklyn Bridge. Spacious, stunningly designed rooms and suites offer plush pillowtop bedding, wall-mounted flat-screen TVs, modern workspaces and locally-inspired artwork. Additional perks at the luxury hotel include an indoor pool and a fitness center.

Your downtown getaway awaits at the New York Marriott at the Brooklyn Bridge.

### How To Get There

Fly directly to LaGuardia Airport located 10.4 miles Southwest, Newark Liberty International 14.8 miles East, or John F. Kennedy International Airport just 19 miles Northwest from the New York Marriott at the Brooklyn Bridge. Daily national and international non-stop flights are available.

### SPACE IS LIMITED - RESERVE TODAY:

Visit [ENRS.edusymp.com](http://ENRS.edusymp.com) to visit the accommodations page for additional hotel information and reservation link.

Call New York Marriott at the Brooklyn Bridge for reservations at: 877-303-0104 and provide Group Name: **2019 ENRS Annual Meeting** to receive the group discount.

Call Professional Travel at (813) 806-1050 for further assistance.

**Deluxe Resort Guestroom .....\$227.00 nt.**  
(Single/Double Occupancy)

Complimentary internet access within the guest room.

### ROOM PREFERENCE:

King/Two Queen Beds (upon availability). Group room rates may be available three (3) days prior and after meeting, subject to availability and confirmation by the hotel.

**HOTEL TAX:** 14.75% and \$3.50 occupancy tax per night

**HOTEL CUT-OFF DATE: July 24, 2019**

**PARKING:** \$40 per night, SUVs are subject to additional charges.

**DEPOSIT POLICY:** Credit cards will be charged first night room and tax charges at time of reservation.

**CANCELLATION POLICY:** All cancellations, arrival and departure date changes must be made 72 hours or more prior to scheduled arrival date/time to avoid penalties. Check in time is: 4:00 PM; check out time is: 11:00 AM.

**HOTEL:** 333 Adams Street  
Brooklyn, New York

**PHONE:** (718) 246-7000