



31st 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



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, FRCPC

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" 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>TM</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

### 1ST 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,

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 Hofstral/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**

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Thursday, Augus	t 22, 2019
8:00 AM	Meeting Registration
8:50 - 9:00	Introduction and Welcome
ADULT BRAIN: N	
	. Loevner, MD and Jared M. Steinklein, MD
9:00 – 9:20	Imaging of Brain Tumors
9.00 - 9.20	Joseph M. Mettenburg, MD, PhD
9:20 – 9:40	The Role of Proton MR Spectroscopy and Perfusion Imaging for Pretreatment Evaluation of Brain Tumors <i>Otto Rapalino</i> , <i>MD</i>
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
	EOPLASM, COMPLICATIONS & MIMICS
	hiang, MD and Carlos I. Torres, 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 – 12:00 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	D. I. M. L. L. W. C. I. L. M.
1:20 – 1:40	Rodriguez, MD and Karuna V. Shekdar, MD  Congenital Pediatric Spine
1.20 1.40	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: N	
3:20 – 3:40	las Phillips, MD, FACR and Amar Vora, MD 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 Triouris MD

A. John Tsiouris, MD

Gloria Chiang, MD

End of Session

Bidyut K. Pramanik, MD

**Welcome Reception** 

C. Douglas Phillips, MD, FACR

Scientific Paper Session #2 ♦

Laurent Létourneau-Guillon, MD

PET-MRI in Dementia Evaluations

Low Dose and No-Dose Gadolinium Protocols

Creating a Successful Clinic-Based Reading Service

Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCPC and

4:20 - 4:40

4:40 - 4:50

4:50 - 5:00

5:00 - 6:00

5:00

6:30

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 - 8:40Acute 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 - 9:20Pediatric Stroke Update Richard L. Robertson, MD Stroke Mimics 9:20 - 9:40Jana Ivanidze, MD, PhD 9:40 - 10:00Advanced Imaging in the Evaluation of Hemorrhagic Stroke Javier M. Romero, MD, FAHA 10:00 - 10:20 **Refreshment Break and Visit Technical Exhibits PEDIATRIC II** Moderators: Manohar M. Shroff, MD, FRCPC and Bruno P. Soares, MD Strategies to Decrease Sedation in Pediatric Neuroimaging 10:20 - 10:40Camilo Jaimes Cobos, MD Updated WHO Classification for Pediatric Brain Tumors 10:40 - 11:00 Tina Young Poussaint, MD, FACR Neurometabolic Emergencies 11:00 - 11:20Birgit Ertl-Wagner, MD Autoimmune Encephalitis 11:20 - 11:40Manohar M. Shroff, MD, FRCPC Cobblestone Cortical Malformations: 11:40 - 12:00 PM From Molecular Basis to Imaging Phenotypes Alireza Radmanesh, MD 12:00 - 1:20 **Lunch On Your Own SPINE I** Moderators: Anna Derman, MD and Amish H. Doshi, MD Optimizing Your Spine Imaging Protocols: Tips and Tricks 1:20 - 1:40Lawrence N. Tanenbaum, MD, FACR 1:40 - 2:00AO Classification and TLICS - What the Surgeon Wants to Know Charles H. Cho, MD, MBA 2:00 - 2:20Imaging of the Post-Operative Spine William A. Mehan, Jr., MD, MBA Lines and Spines: Imaging Evaluation of Spinal Deformities 2:20 - 2:40Majid Khan, MD 2:40 - 2:50Spinal Imaging of Spondyloarthropathies Puneet B. Belani, MD 2:50 - 3:00MRA of Spinal Vascular Disease: Protocols and Pathology Michele H. Johnson, MD, FACR, FASER 3:00 - 3:20Refreshment Break and Visit Technical Exhibits **ADVANCED TECHNIQUES, ARTIFICIAL INTELLIGENCE & POLICY** Moderators: Rajiv Gupta, MD and Timothy M. Shepherd, MD, PhD 3:20 - 3:40Radiomics and Radiogenomics for Tumor Characterization Christopher G. Filippi, MD 3:40 - 4:00A Primer on Artificial Intelligence: From Basics to Future Horizons Reza Forghani, MD, PhD 4:00 - 4:20Advanced Image Visualization & 3D Printing Edward P. Quigley, III, MD, PhD Dual Energy CT Applications in Neuroimaging & Head and Neck Imaging 4:20 - 4:40Daniel I. Boulter, MD 4:40 - 4:50Overview of 7T MR Imaging Bradley N. Delman, MD D.C. Update From a Senior Fellow of the 4:50 - 5:10Neiman Policy Institute Joshua A. Hirsch MD, FACR, FSIR, FSNIS 5:10 **End of Session** 

**Continental Breakfast for Registrants and** 

**Visit Technical Exhibits** 

Friday, August 23, 2019

7:00 - 8:00 AM

### Moderators: Doris Lin, MD, Carlos H. Torres, MD, FRCPC and Moderators: Laila Al Shafai, MD and Deborah R. Shatzkes, MD Laurent Létourneau-Guillon, MD 3:20 - 3:40DDx: Parotid Mass 5:40 - 6:00ASNR President's Address & Lecture ◆ Claudia F.E. Kirsch, MD 6:00 - 6:30ENRS Annual Business Meeting (ENRS Members Only) ◆ 3:40 - 4:00DDx: Sinonasal Mass Rihan Khan, MD Saturday, August 24, 2019 DDx: Orbital Mass 4:00 - 4:207:00 - 8:00 AM Continental Breakfast for Registrants and Stephanie Lam, MD Visit Technical Exhibits 4:20 - 4:40DDx: Adult Neck Mass **HEAD AND NECK IMAGING I** Carlos I. Torres, MD Moderators: Manon Belair, MD and David Landry, MD 4:40 - 4:55DDx: Pediatric Neck Mass **SAM SESSION** Karen K. Moeller, MD 8:00 - 8:20**Tinnitus** 4:55 - 5:10DDx: Middle Ear Mass Ashok Srinivasan, MD Hillary R. Kelly, MD Otalgia 8:20 - 8:40Stump the Stars 5:10 - 6:00Mari Hagiwara, MD Moderator: Laurent Létourneau-Guillon, MD Facial Weakness 8:40 -9:00 6:00 **End of Session** Amy Fan-Yee Juliano, MD 6:30 **Closing Reception and Annual Dinner** Nodal Staging in Head and Neck Cancer: 9:00 - 9:20Evidence Based Best Practices Sunday, August 25, 2019 Peter M. Som, MD, FACR, FRSM 7:00 - 8:00 AM **Continental Breakfast for Registrants and** 9:20 - 9:30You've Got to See This Case! Visit Technical Exhibits Karen Buch, MD **HEAD AND NECK IMAGING III** Acquired Sensorineural Hearing Loss 9:30 - 9:40Moderators: Amit Mahajan, MD and Osamu Sakai, MD, PhD, FACR Marie-Constance Lacasse, MD, FRCPC 8:00 - 8:20 Sellar & Parasellar Anatomy & Pathology 9:40 - 10:00 Surveillance Imaging in H/N Ca: Girish M. Fatterpekar, MBBS, DNB, MD Evidence Based Best Practices 8:20 - 8:40Central Skull Base Variants & Pathology Eugene Yu, MD, FRCPC Suyash Mohan, MD 10:00 - 10:20 **Refreshment Break and Visit Technical Exhibits** 8:40 - 9:00Temporal Bone Trauma STROKE & VESSELS II Vikas Jain, MBBS Moderators: Clifford J. Eskey, MD, PhD and Pina C. Sanelli, MD, MPH, FACR 9:00 - 9:20Post-Operative Temporal Bone Large Vessel Vasculopathies 10:20 - 10:40Gul Moonis, MBBS Pamela W. Schaefer, MD 9:20 - 9:30Head and Neck Case Review: 5 Key Pearls to Avoid Pitfalls 10:40 - 11:00Intracranial Vessel Wall Imaging for Distinguishing Eric S. Bartlett, MD, MPH Neurovascular Diseases 9:30 - 9:50Acute Non-Traumatic ENT Emergencies Bruce A. Wasserman, MD Tanya J. Rath, MD 11:00 - 11:20 Small Vessel Vasculopathies 9:50 - 10:10 Refreshment Break and Visit Technical Exhibits Pina C. Sanelli, MD, MPH, FACR **NEURO INTERVENTIONAL** 11:20 - 11:40 Carotid Plaque Imaging Moderators: Allan L. Brook, MD, FSIR and Michele H. Johnson, MD, FACR, FASER Jae W. Song, MD, MS 10:10 - 10:30 Carotid Stenosis: CEA, CAS, TCAR or Medicine, 11:40 - 12:00 PM Molecular Imaging of Vascular Inflammation What is the Evidence John W. Chen, MD, PhD Reade DeLeacy, MD, MBBS (Hons) FRANZCR 12:00 - 1:20 **Lunch On Your Own** 10:30 - 10:50Thrombectomy for Large Vessel Occlusion Strokes: How Does Imaging Influence Triage? Donatella Tampieri, MD, FRCPC Moderators: Amit Aggarwal, MD and Harpit S. Bedi, MD SAM SESSION 10:50 - 11:10The Unruptured Aneurysm: Optimal Imaging and Treatment Strategies for Management 1:20 - 1:40Infections of the Spine and Spinal Cord Clifford J. Eskey MD, PhD Asim Z. Mian, MD The ABCs of Endovascular Aneurysm Treatment 11:10 - 11:30 1:40 - 2:00Imaging of Myelopathy: A Practical Approach Peter K. Nelson, MD Maria J. Borja, MD New Frontiers in Neurointervention: Beyond Glue and Coils 11:30 - 11:452:00 - 2:20Non-Traumatic Spine Emergencies Dheeraj Gandi, MD Carlos H. Torres, MD, FRCPC 11:45 - 12:00 PM Closing Comments 2:20 - 2:40Advanced Imaging of Vertebral Body Lesions Puneet S. Pawha, MD 12:00 **End of Meeting** 2:40 - 2:50CDE and Structured Reporting in the Spine Adam E. Flanders, MD 2:50 - 3:00Al and Machine Learning in Spine Imaging: Review of Current Trends Javin Schefflein, MD Faculty & topics subject to change.

Saturday, August 24, 2019 (Continued)

**HEAD AND NECK IMAGING II** 

# ENRS Abstract Submission:

3:00 - 3:20

Deadline for abstract submissions

Refreshment Break and Visit Technical Exhibits

Friday, August 23, 2019 (Continued)

5:10 - 5:35

Scientific Paper Session #3 ♦

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.

◆ Session not accredited for AMA PRA Category 1 Credit(s)™

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

Adam E. Flanders, MD

Thomas Jefferson University 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

Rihan Khan, MD

Dartmouth-Hitchcock Medical Center

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. Mettenburg, MD, PhD

University of Pittsburgh Medical Center

Philip M. Meyers, MD, FACR, **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

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

**Javier M. Romero, MD, FAHA** *Massachusetts General Hospital* 

**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

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University of Toronto

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Ashok Srinivasan, MD University of Michigan

Jared M. Steinklein, MD Hofstra Northwell School of Medicine

University of Toronto

Sean Symons, MD Sunnybrook Health Sciences Centre,

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

Faculty & topics subject to change.

# **Registration Information**

31st 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 <sup>.00</sup>
Non-Member	□ \$750.00
Members-in-Training	□ \$250 <sup>.00</sup>
☐ Resident ☐ Fellow ☐ Medical Student	

☐ Yes, I plan to attend the  Welcome Receptions	15 <sup>.00</sup>
Thursday, August 22, 2019	

☐ Yes, I plan to attend the	
Annual Gala Dinner\$25	j.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: \$**

# **Easy Ways To Register**













# MAIL

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Name







Degree ☐ M.D. ☐ D.O. ☐ Ph.D. ☐ Other

Specialty: Staff Neuroradiologist Staff Head & Neck Private Practice Neuroradiologist Private Practice Head & Neck Other

Address City / State / Zip Code / Country

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Card Number / Card Type: ☐ Master Card ☐ Visa ☐ American Express ☐ Discover **Expiration Date** Security Code

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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 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 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