



11<sup>th</sup> Annual Meeting of the

American Society of

# FUNCTIONAL NEURORADIOLOGY

October 9-11, 2017

the Nines • Portland, Oregon

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

## Optional BOLD Functional MRI Hands-On Workshop

October 8, 2017

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

Workshop attendance is limited to the first 20 Registrants



Join us October 9-11, 2017 for the American Society of Functional Neuroradiology (ASFNR) 11th Annual Meeting in Portland, Oregon at the iconic the Nines Hotel. An optional Hands-on BOLD fMRI Workshop will be held on October 8.

The ASFNR Annual Meeting features an in-depth and comprehensive update on functional neuroimaging and advanced neuroimaging which will appeal to a broad range of neuroradiologists, neurologists, neurosurgeons, physicists, neuropsychiatrists and psychologists, cognitive neuroscientists, biomedical engineers, clinical and research fellows, residents, doctoral and postdoctoral students, and radiology technologists.

The 2 1/2 day meeting will feature a series of focused sessions with didactic lectures and panel discussions by nationally and internationally recognized experts as well as original research papers and posters.

The ASFNR 11th Annual Meeting will feature a roster of nationally recognized scientific keynote speakers. Major topics and objectives include:

- Artificial intelligence and machine learning in personalized medicine, image quality, and its application to diagnostic image interpretation.
- Advances in diffusion MR imaging including microstructural and microdynamic MR and updates on BOLD fMRI and resting state MRI.
- Neuropsychiatric MR imaging including addiction, connectivity, neurogenetics, and TMS.
- New insights into neurodegeneration, including the glymphatic system, cerebrovascular reactivity, iron and microglia, PET MR, and machine learning.
- A special session on glioma, including genomics, new WHO classification, white matter migration analysis, intravoxel incoherent motion MR, hyperpolarization of  $^{13}\text{C}$ , machine learning, and clinical trials.
- Pediatric neuroimaging centered on connectivity from the neonatal period through adolescence.
- Emerging technology from rapid MR acquisitions, metabolic imaging and bioscales, and myelin mapping to advanced neuroimaging of the spine.

On Sunday, October 8, 2017, there will be the ASFNR Hands-on Workshop for the BOLD fMRI image processing for presurgical planning. Attendance for the workshop is limited to the first 20 registrants and this very popular workshop is typically sold out very early on.

Portland, Oregon is quickly becoming a destination city with its unique cultural and artsy-hipster vibe that is gently ridiculed on the TV program, Portlandia. It is a foodie's paradise and recently named best food city in America. It is a laid-back city with award-winning microbrews and acclaimed Pinot Noirs from the world-renowned Willamette Valley of Oregon. The city has a legendary bookstore, Powell's, and, if we are lucky, a view of Mt Hood. Breakfast and brunch places have cult-like followings as does VooDoo donuts. The Nines Hotel, located in the heart of downtown, is a 5-star hotel within 20 minutes of the airport, which is serviced by a train that drops off right in front of the hotel.

I sincerely hope you will join us for this outstanding event.

**Christopher G. Filippi, M.D.**  
President and Program Chair

### Target Audience

This CME activity is intended to educate anyone interested in functional neuroimaging including neuroradiologists, neurologists, neurosurgeons, neuropsychiatrists, cognitive neuroscientist and psychologists, brain mapping scientists, physicists, residents, fellows, doctoral and postdoctoral students, engineers, and radiology technologists.

### Scientific Sponsor

Educational Symposia

### Educational Objectives

Attendees should, at the completion of this meeting, be able to:

- Describe the physical principles that inform BOLD and resting state fMRI, diffusion-weighted and diffusion tensor imaging, arterial spin labeling, MR perfusion imaging, susceptibility weighted imaging and MEG.
- Explain current, routine clinical applications and limitations of advanced neuroimaging and functional MR techniques in terms of diagnosis and precision health.
- Discuss effective ways to translate advanced neuroimaging and functional imaging into routine clinical practice while acknowledging potential barriers and limitations.

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

### 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 American Society of Functional Neuroradiology. Educational Symposia is accredited by the ACCME to provide continuing medical education for physicians.

Educational Symposia designates this live activity for a maximum of 20.0 *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.

**Technologists:** This program has been submitted to the ASRT. The number of A CE credits will be available approximately 30 days prior to the meeting. Please visit [asfmr.edusymp.com](http://asfmr.edusymp.com) or call 1-800-338-5901 regarding the availability of Category A CE Credit.

### Registration Information

Payment of the registration fee includes all meeting materials, including a color e-syllabus (printed color syllabus is available for \$95), welcome reception, daily continental breakfasts, and refreshment breaks.

Cancellations must be received in writing. A \$75 processing fee will be applied to all cancellations. Refunds requested in writing prior to **September 29, 2017** will be issued for the amount of registration paid, less the \$75 processing fee. No refunds will be made on or after that date.



## Optional BOLD Functional MRI Hands-On Workshop • October 8, 2017

### About This Workshop

This workshop will provide a practical step-by-step post-processing of BOLD fMRI studies with SPM8 software and data presentation.

### Target Audience

This CME activity is intended to educate neuroradiologists, neuroradiology fellows, physicists, clinical psychologists and MR technologists. The workshop is intended for those with beginner to intermediate level fMRI experience.

### Educational Objectives

Attendees should, at the completion of this workshop, be able to perform the following:

- Preprocessing of BOLD fMRI Data
  - Realignment/Coregistration
  - Spatial Normalization
  - Smoothing
- Single Subject Analysis
  - Model Specification
  - Model Estimation
  - Visualization of the BOLD data

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

### 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 (ACCME) through the joint providership of Educational Symposia and the American Society of Functional Neuroradiology. Educational Symposia is accredited by the ACCME to provide continuing medical education for physicians.

Educational Symposia designates this live activity for a maximum of 7.0 *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.

**Technologists:** This program has been submitted to the ASRT. The number of A CE credits will be available approximately 30 days prior to the meeting. Please visit <http://asfmr.edusymp.com> or call 1-800-338-5901 regarding the availability of Category A CE credit.

### Hardware/Software Requirements

Registrants are required to bring to the workshop their own laptop with a minimum 2G of RAM and 10G of hard disk space. The machines should have preloaded SPM8 and MATLAB software prior to the workshop. DICOM BOLD fMRI practice data sets will be available at the workshop. All registrants will be given instructions on downloading SPM8 and the 15-day free MATLAB license prior to the workshop.



# PROGRAM SCHEDULE

## Monday, October 9, 2017

**6:30 – 7:00 AM**      **Registration, Continental Breakfast and Visit Technical Exhibits**

**6:30 – 7:00**      **Breakfast & Learn Session (TBD)**

### PHYSICS PRIMERS

*Moderators: Gaurang V. Shah, M.D., FACR  
Timothy J. Kaufmann, M.D., Mehmet Kocak, M.D.*

7:00 – 7:20      **Bold fMRI**  
*Christopher Conklin, Ph.D.*

7:20 – 7:40      **DWI Physics**  
*Aaron S. Field, M.D., Ph.D.*

7:40 – 8:00      **DSC Perfusion: Physics and Leaking Correction: Practical Technical and Clinical Considerations**  
*Jerrold L. Boxerman, M.D., Ph.D.*

8:00 – 8:20      **Arterial Spin Labelling: From Theory to Practice**  
*Jeffrey M. Pollock, M.D.*

8:20 – 8:25      **Welcome**  
*Christopher G. Filippi, M.D.,  
ASFNR President and Program Chair*

### PRESURGICAL PLANNING: BOLD FMRI AND DTI

*Moderators: Erik H. Middlebrooks, M.D.,  
David Black, M.D., Andrew J. Kalnin, M.D.*

8:25 – 8:45      **How to Start a Clinical fMRI Program**  
*Kirk M. Welker, M.D.*

8:45 – 9:05      **Pitfalls in Bold fMRI and Neurovascular Uncoupling**  
*Andrei I. Holodny, M.D.*

9:05 – 9:25      **Resting State for fMRI for Presurgical Planning: Clinical Considerations**  
*Joshua S. Shimony, M.D., Ph.D.*

9:25 – 9:45      **DTI/Tractography for Surgical Mapping**  
*Aaron S. Field, M.D., Ph.D.*

9:45 – 10:00      **Tumor Surveillance: Raise Your Decision Confidence with Perfusion**  
*Rajan Jain, M.D.*

**10:00 – 10:15**      **Refreshment Break and Visit Technical Exhibits**

### ADVANCED NEUROIMAGING FOR GLIOMA

*Moderators: Rivka R. Colon, M.D., Mark S. Shiroishi, M.D.,  
Robert K. Fulbright, M.D.*

10:15 – 10:35      **Genomics, Molecular Imaging, and the New WHO Classification**  
*Whitney B. Pope, M.D., Ph.D.*

10:35 – 10:50      **IVIM: Basic Principles and Application to Neuroradiology**  
*John Conklin, M.D., Ph.D.*

10:50 – 11:05      **Hyperpolarization 13C and Tumor Metabolism**  
*Vesselin Miloushev, M.D., Ph.D.*

## Monday, October 9, 2017 (continued)

11:05 – 11:20      **Machine Learning and Glioma**  
*Peter D. Chang, M.D.*

11:20 – 11:35      **Addressing Treatment Response of Gliomas with DCE MRI**  
*Jerrold L. Boxerman, M.D., Ph.D.*

11:35 – 12:00 PM      **WM Migration Patterns in Glioma**  
*Mykol Larvie, M.D., Ph.D.*

12:00 – 12:20      **Clinical Trials: Where We Have Been and Where We Are Going?**  
*Daniel P. Barboriak, M.D.*

12:20 – 12:30      **Q&A: What is the Next Big Breakthrough?**  
*All Faculty*

**12:30 – 1:30**      **Lunch and Learn Session (TBD) or Lunch on Your Own ♦**

### VICTOR M. HAUGHTON, M.D. HONORARY LECTURE

1:30 – 2:15      **Microstructure and Microdynamic MRI**  
*Peter J. Basser, Ph.D.*

2:15 – 2:20      **Question & Answer Session**  
*Peter J. Basser, Ph.D.*

### TRANSLATING ADVANCED IMAGING INTO PRACTICE: TBI

*Moderators: Christopher G. Filippi, M.D.,  
Scott H. Faro, M.D., Richard Watts, D.Phil.*

2:20 – 2:40      **Subconcussive Impacts and Diffusion**  
*Christopher T. Whitlow, M.D., Ph.D., MHA*

2:40 – 3:00      **MR Susceptibility and Concussion**  
*Yvonne W. Lui, M.D.*

3:00 – 3:20      **MEG and TBI**  
*Joseph A. Maldjian, M.D.*

3:20 – 3:45      **Precision Imaging for TBI**  
*Pratik Mukherjee, M.D., Ph.D.*

**3:45 – 4:00**      **Refreshment Break and Visit Technical Exhibits**

### ADVANCES IN IMAGING: NEUROPSYCHIATRY AND COGNITION

*Moderators: William Moore, M.D., Daniel S. Chow, M.D.,  
Anul K. Mallik, M.D.*

4:00 – 4:25      **What Neuroimaging Has Taught Us About Addiction**  
*Jody Tanabe, M.D.*

4:25 – 4:45      **Imaging of Neuropsychiatric Disease: From Nodes to Networks**  
*Leo Sugrue, M.D., Ph.D.*

4:45 – 5:10      **Transcranial Magnetic Stimulation: Update on State-of-the-Art**  
*John D. Port, M.D., Ph.D.*

5:10 – 5:35      **Models in Neurogenetics: Past, Present, and Future**  
*J. Eric Schmitt, M.D., Ph.D.*

## Monday, October 9, 2017 (continued)

5:35 – 6:00      **Neuroimaging of Gene-Environment Interactions: A Systems Neuroscience Approach**  
*John-Paul Yu, M.D., Ph.D.*

### 6:00 Session Ends

6:00 – 6:30      **Study Group Session: Diffusion/Perfusion MR ♦**

6:00 – 6:30      **Study Group Session: BOLD fMRI ♦**

**6:30 – 8:00**      **Welcome Reception**

## Tuesday, October 10, 2017

**7:00 – 8:20 AM**      **Registration, Continental Breakfast and Visit Technical Exhibits**

7:45 - 8:20      **Annual Business Meeting (For Members Only)**

### FOCUS SESSION: ADVANCED IMAGING IN STROKE

*Moderators: Michael J. Hoch, M.D.,  
Ramon F. Barajas, Jr., M.D.*

8:20 – 8:25      **Welcome**  
*Christopher G. Filippi, M.D.*

8:25 – 8:45      **Current Status on Stroke Imaging**  
*Max Wintermark, M.D., MAS, M.B.A*

8:45 – 9:05      **ASL and Pediatric Stroke**  
*Arastoo Vossough, M.D., Ph.D.*

9:05 – 9:15      **T1 Rho and Acute Stroke**  
*Jennifer Soun, M.D.*

### RESTING STATE FMRI AND CONNECTIVITY

*Moderators: Marco Da Cunha Pinho, M.D.,  
Benjamin P. Liu, M.D.*

9:15 – 9:35      **Basic Principles of Resting State Functional MRI**  
*Haris Sair, M.D.*

9:35 – 9:55      **Functional Connectome in Health and Disease**  
*T. Jason Druzgal, M.D., Ph.D.*

9:55 – 10:15      **Language Function and Resting State fMRI**  
*Steven M. Stufflebeam, M.D.*

10:15 – 10:35      **Single Subject Reliability and Resting State Connectivity**  
*Jeff S. Anderson, M.D., Ph.D.*

**10:35 – 10:45**      **Refreshment Break and Visit Technical Exhibits**

### ADVANCED PEDIATRIC MR IMAGING

*Moderators: David R. Pettersson, M.D.,  
Doris D. M. Lin, M.D., Ph.D., Nadja Kadom, M.D.*

10:45 – 11:15      **KEYNOTE LECTURE: Adolescent Brain Cognitive Development Project**  
*Hugh Garavan, Ph.D.*

### Tuesday, October 10, 2017 (continued)

11:15 – 11:45	Maturation of Connectivity in Neonate <i>Christopher P. Hess, M.D., Ph.D.</i>
11:45 – 12:15 PM	Autism Imaging: The Way Forward <i>Timothy P.L. Roberts, M.D., Ph.D.</i>
12:15 – 12:30	Question and Answer Session <i>Faculty</i>
<b>12:30 - 1:30</b>	<b>Lunch and Learn Session (TBD) or Lunch on Your Own ♦</b>

#### FOCUS SESSION: NEURODEGENERATION

*Moderators: Jalal Andre, M.D., Ajay Gupta, M.D., Asim F. Choudhri, M.D.*

1:30 – 2:05	<b>KEYNOTE LECTURE:</b> Glymphatic System <i>Jeffrey Iliff, Ph.D.</i>
2:05 – 2:25	Cerebrovascular In Aging and Dementia <i>David J. Mikulis, M.D.</i>
2:25 – 2:45	Integrated PET MR Will Change How You Read Dementia <i>Timothy M. Shepherd, M.D., Ph.D.</i>
2:45 – 3:05	Iron and Microglia at 7T <i>Michael Zeineh, M.D., Ph.D.</i>
3:05 – 3:25	Machine Learning Meets Neuroradiology of Alzheimer's Disease <i>Sriram Natarajan, Ph.D.</i>
3:25 – 3:30	Question and Answer Session <i>Faculty</i>
<b>3:30 – 3:45</b>	<b>Refreshment Break and Visit Technical Exhibits</b>

#### DEEP MACHINE LEARNING

*Moderator: Thomas J. O'Neill, M.D., Peter D. Chang, M.D., Christopher T Whitlow, M.D., Ph.D., MHA*

3:45 – 4:05	MRI-based Predictive Modeling Using Transport-based Morphometry <i>Gustavo Rohde, Ph.D.</i>
4:05 – 4:25	Using Deep Learning To Improve the Quality of Medical Imaging <i>Gregory G. Zaharchuk, M.D., Ph.D.</i>
<b>4:25</b>	<b>Session Ends</b>
4:25 – 5:00	<b>KEYNOTE LECTURE:</b> Artificial Agents and Personalized Medicine ♦ <i>Dorin Comaniciu, Ph.D.</i>
5:00 – 6:00	Scientific Oral Presentations ♦
6:00 – 6:30	Study Group Session: Neuropsychiatric MR ♦
6:00 – 6:30	Study Group Session: Machine Learning ♦

### Wednesday, October 11, 2017

<b>7:00 – 8:25 AM</b>	<b>Registration, Continental Breakfast and Visit Technical Exhibits</b>
<b>7:00 – 8:25</b>	<b>Breakfast &amp; Learn Session (TBD)</b>
8:25 – 8:30	Welcome <i>Christopher G. Filippi, M.D.</i>

#### EMERGING TECHNIQUES

*Joshua P. Nickerson, M.D., Mahmud Mossa-Basha, M.D., Michael Iv, M.D., Asim Bag, M.D.*

8:30 – 9:00	<b>KEYNOTE LECTURE:</b> The Full Speed MRI Project <i>James G. Pipe, Ph.D.</i>
9:00 – 9:30	Metabolic MR Imaging and Metabolic Bioscales Address Unmet Clinical Needs <i>Keith R. Thulborn, M.D., Ph.D.</i>
9:30 – 9:50	Improved Detection of Cortical Lesions in Multiple Sclerosis Based On Cortical Myelin Content Derived From 3D T1- and T2-Weighted Imaging <i>Richard Watts, Ph.D., D.Phil.</i>
9:50 – 10:15	Iron Contrast Agents and BBB Disruption <i>Edward Neuwelt, M.D.</i>
<b>10:15 – 10:30</b>	<b>Refreshment Break and Visit Technical Exhibits</b>
10:30 – 10:50	Noninvasive Focal Neuromodulation with Ultrasonic Uncaging <i>Raag Airan, M.D., Ph.D.</i>
10:50 – 11:15	Ultra High Field Physiologic Imaging of the Brain <i>Jay J. Pillai, M.D.</i>

#### ADVANCES IN SPINE IMAGING

*Moderators: Izlem Izbudak, M.D., Saman Hazany, M.D., Amish H. Doshi, M.D.*

11:15 – 11:35	Diffusion Tensor Imaging of the Spinal Cord: Application in Pediatric Healthy Controls and Patients with Spinal Cord Injury <i>Feroze B. Mohamed, Ph.D.</i>
11:35 – 11:50	T1 Rho Imaging in Back Pain <i>Christopher G. Filippi, M.D.</i>
11:50 – 12:05 PM	DWI and Drop Metastases in Children <i>Susan Palasis, M.D.</i>
12:05 – 12:25	MR Perfusion: Its Role in Spinal Metastases <i>Sasan Karimi, M.D.</i>
12:25 – 12:30	Question and Answer Session <i>Faculty</i>
12:30	Closing Remarks <i>Kirk M. Welker, M.D.</i> <i>ASfNR President 2017-2018</i>
<b>12:35</b>	<b>End of Program</b>

### Sunday, October 8, 2017

<b>8:30 – 9:30 AM</b>	<b>Registration</b>
<b>ESSENTIALS OF FUNCTIONAL IMAGING</b>	
9:30 – 10:30	Introduction to BOLD, Paradigm Design, and SPM <i>Christopher Conklin, Ph.D.</i>
10:30 – 11:30	Clinical Overview of Motor and Language Activation <i>Scott H. Faro, M.D.</i>
11:30 – 11:45	Introduction to General Linear Model for Task Based fMRI Analysis <i>Feroze B. Mohamed, Ph.D.</i>
11:45 – 12:15 PM	Presenting BOLD fMRI Data-Statistical Processing Strategies <i>Devon Middleton, Ph.D.</i>
<b>12:15 – 12:30</b>	<b>Boxed Lunch</b>
<b>LANGUAGE DATA PROCESSING</b>	
12:30 – 2:30	Practical Exercises on Language Data Processing and Review <i>Devon Middleton, Ph.D.</i> <i>Christopher Conklin, Ph.D.</i> <i>Mahdi Alizadeh, Ph.D.,</i> <i>Anup K. Bhattacharya, B.A.</i> <i>Joshua Fisher, B.S.</i> <i>Feroze B. Mohamed, Ph.D.</i>
<b>2:30 – 2:45</b>	<b>Refreshment Break</b>
<b>SENSORY-MOTOR DATA PROCESSING</b>	
2:45 – 4:45	Practical Exercises on Sensory-Motor Data Processing <i>Devon Middleton, Ph.D.</i> <i>Christopher Conklin, Ph.D.</i> <i>Mahdi Alizadeh, Ph.D.</i> <i>Anup K. Bhattacharya, B.A.</i> <i>Joshua Fisher, B.S.</i> <i>Feroze B. Mohamed, Ph.D.</i>
4:45 – 5:00	Review SPM Processing with Question and Answer Session
<b>5:00</b>	<b>Workshop Concludes</b>

## INVITED FACULTY & MODERATORS (M)

### **Raag Airan, M.D., Ph.D.**

Assistant Professor  
Department of Radiology, Division  
of Neuroradiology  
Stanford University  
Stanford, CA

### **Jeffrey S. Anderson, M.D., Ph.D.**

Associate Professor  
Director of Functional Neuroimaging  
Department of Radiology  
University of Utah School of Medicine  
Salt Lake City, UT

### **(M) Jalal B. Andre, M.D.**

Assistant Professor  
Department of Radiology  
University of Washington  
Seattle, WA

### **(M) Asim K. Bag, M.D.**

Associate Professor, Neuroradiology Section  
Department of Radiology  
University of Alabama at Birmingham School  
of Medicine  
Birmingham, AL

### **(M) Ramon F. Barajas, Jr, M.D.**

Assistant Professor  
Department of Radiology & Advanced Imaging  
Research Center  
Oregon Health & Science University  
Portland, OR

### **Daniel P. Barboriak, M.D.**

Professor of Radiology  
Division of Neuroradiology  
Duke University Medical Center  
Durham, NC

### **Peter J. Bassar, Ph.D.**

Senior Investigator, Intramural Research  
Program, NIH  
Head, Section on Quantitative Imaging and  
Tissue Sciences  
Associate Scientific Director Division of Imaging,  
Behavior and Genomic Integrity  
National Institutes of Health  
Bethesda, MD

### **(M) David Black, M.D.**

Mayo Clinic  
Rochester, MN

### **Jerrold L. Boxerman, M.D., Ph.D.**

Associate Professor  
Department of Diagnostic Imaging  
Alpert Medical School of Brown University and  
Rhode Island Hospital  
Providence, RI

### **(M) Peter D. Chang, M.D.**

Diagnostic Neuroradiology/T32 Research Fellow  
University of California San Francisco  
San Francisco, CA

### **(M) Daniel S. Chow, M.D.**

Daniel Chow, M.D.  
Assistant Professor  
Department of Radiological Sciences  
University of California Irvine School of Medicine  
Orange, CA

### **(M) Asim F. Choudhri**

Assistant Professor and Assistant Chair of  
Research Affairs  
Department of Radiology  
The University of Tennessee Health Science Center  
Memphis, TN

### **(M) Rivka R. Colen, M.D.**

Assistant Professor (tenure-track)  
Department of Diagnostic Radiology  
MD Anderson Cancer Center  
Houston, TX

### **Dorin Comaniciu, Ph.D.**

Vice President of Medical Imaging Technologies  
Siemens Healthcare  
Princeton, New Jersey

### **John Conklin, M.D., Ph.D.**

University of Toronto  
Toronto, Ontario, CANADA

### **Christopher Conklin, Ph.D.**

Associate Director of MRI Physics  
Department of Radiology  
Thomas Jefferson University  
Philadelphia, PA

### **(M) Amish H. Doshi, M.D.**

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

### **T. Jason Druzgal, M.D., Ph.D.**

Associate Professor of Radiology  
University of Virginia Health System  
Department of Radiology and Medical Imaging  
Division of Neuroradiology  
Charlottesville, VA

### **(M) Scott H. Faro, M.D.**

Professor of Radiology, Electrical and Computer  
Engineering  
Vice Chair of Radiology  
Director of Neuroradiology, Clinical MRI,  
Functional Brain Imaging Center and the  
Temple University MRI Core (TUMRIC)  
Temple University School of Medicine  
Philadelphia, PA

### **Aaron S. Field, M.D., Ph.D.**

Professor and Chief of Neuroradiology  
Departments of Radiology and Biomedical  
Engineering  
University of Wisconsin School of Medicine  
and Public Health  
Madison, WI

### **Christopher G. Filippi, M.D.**

Vice Chairman of Biomedical Imaging and  
Translational Science  
Professor of Radiology  
Hofstra Northwell School of Medicine  
Lenox Hill Hospital  
New York, NY

### **(M) Robert K. Fulbright, M.D.**

Diagnostic Radiology  
Yale University Medical Center  
New Haven, CT

### **Hugh Garavan, Ph.D.**

Professor of Psychiatry  
University of Vermont  
Burlington, VT

### **(M) Ajay Gupta, M.D.**

Associate Professor of Radiology and Neuroscience  
Program Director, Neuroradiology Fellowship  
Medical Director, Citigroup Biomedical  
Imaging Center  
Weill Cornell Medicine / NewYork-Presbyterian  
Hospital  
New York, NY

### **(M) Saman Hazany, M.D.**

Assistant professor  
Department of Radiology  
University of Southern California  
Los Angeles, CA

### **Christopher P. Hess, M.D., Ph.D.**

Associate Professor, Neuroradiology  
Chief, Neuroradiology, San Francisco VA  
Medical Center  
Department of Radiology and Biomedical Imaging  
University of California, San Francisco  
San Francisco, CA

### **(M) Michael J. Hoch, M.D.**

Assistant Professor of Neuroradiology  
Emory University School of Medicine  
Atlanta, GA

### **Andrei I. Holodny, M.D.**

Chief of the Neuroradiology Service  
Director of the Functional MRI Laboratory  
Department of Radiology  
Memorial Sloan-Kettering Cancer Center  
Professor of Radiology  
Weill Medical College of Cornell University  
New York, NY

### **Jeffrey Iliff, Ph.D.**

Assistant Professor and Director of Basic  
Science Research  
Department of Anesthesiology and Perioperative  
Medicine  
Oregon Health & Science University  
Portland, OR

### **(M) Michael Iv, M.D.**

Clinical Assistant Professor  
Department of Radiology, Division of  
Neuroradiology  
Stanford University  
Stanford, CA

### **(M) Izlem Izbudak, M.D.**

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

### **Rajan Jain, M.D.**

Associate Professor, Radiology and Neurosurgery  
Clinical Co-Director, Center for Advanced Imaging  
Innovation and Research  
NYU School of Medicine  
New York, NY

### **(M) Nadja Kadom, M.D.**

Director of Pediatric Neuroradiology  
Department of Radiology and Imaging Sciences  
Emory University School of Medicine  
Atlanta, GA

### **(M) Andrew J. Kalnin, M.D.**

Director  
Functional and Advanced NeuroMRI  
Associate Professor  
Department of Radiology  
The Ohio State University College of Medicine  
Columbus, OH

### **Sasan Karimi, M.D.**

Director, Neuroradiology Fellowship Program  
Memorial Sloan-Kettering Cancer Center  
New York, NY

### **(M) Timothy J. Kaufmann, M.D.**

Associate Professor of Radiology  
Mayo Clinic  
Rochester, NY

### **(M) Mehmet Kocak, M.D.**

Associate Professor  
Department of Diagnostic Radiology  
Rush University Medical Center.  
Chicago, IL

### **Mykol Larvie, M.D., Ph.D.**

Instructor in Radiology  
Harvard Medical School  
Staff Neuroradiologist  
Massachusetts General Hospital

### **(M) Doris D.M. Lin, M.D., Ph.D.**

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

### **(M) Benjamin P. Liu, M.D.**

Neuroradiology  
Northwestern Memorial Hospital  
Chicago, IL

### **Yvonne W. Lui, M.D.**

Associate Professor of Radiology  
Section Chief of Neuroradiology  
NYU School of Medicine

### **Joseph A. Maldjian, M.D.**

Professor and Chief of Neuroradiology  
Director, Advanced Neuroscience Imaging  
Research Lab  
Department of Radiology  
University of Texas Southwestern Medical Center  
Dallas, TX

### **(M) Atul K. Mallik, M.D.**

University of Utah School of Medicine  
Salt Lake City, UT

### **(M) Eric H. Middlebrooks, M.D.**

Assistant Professor  
Department of Radiology  
University of Alabama at Birmingham School  
of Medicine  
Birmingham, AL

### **David J. Mikulis, M.D.**

Professor and Director of Functional Neuroimaging  
The Joint Department of Medical Imaging  
Department of Medical Imaging  
The University of Toronto  
The University Health Network  
The Toronto Western Hospital  
Toronto, Ontario, CANADA

### **Vesselin Miloushev, M.D., Ph.D.**

Assistant Attending Radiologist  
Division of Neuroradiology  
Department of Radiology  
Memorial Sloan Kettering Cancer Center  
New York, NY

### **Feroze B. Mohamed, Ph.D.**

Professor of Radiology  
Director, Jefferson Integrated MR Imaging Center  
Thomas Jefferson University  
Adjunct Professor, College of Engineering, Temple  
University  
Philadelphia, PA

### **(M) William Moore, M.D.**

Assistant Professor  
UT Southwestern Medical Center  
Dallas, TX

### **(M) Mahmud Mossa-Bosha, M.D.**

Associate Professor  
Department of Radiology, Division of  
Neuroradiology  
Director of Cross-Sectional Neurovascular Imaging  
Co-Director of Intravenous Contrast Policy  
University of Washington School of Medicine  
Seattle, WA

### **Pratik Mukherjee, M.D., Ph.D.**

Professor of Radiology and Bioengineering  
Attending Neuroradiologist  
University of California, San Francisco  
Director, Center for Imaging of  
Neurodegenerative Diseases  
San Francisco, CA

**Sriraam Natarajan, Ph.D.**

Associate Professor  
Department of Computer Science  
University of Texas at Dallas  
Dallas, TX

**Edward Neuwelt, M.D.**

Director of Blood Brain Barrier Program  
Administrator of Head and Spinal Cord Injury Prevention Program  
Oregon Health & Science University  
Portland, OR

**(M) Joshua P. Nickerson, M.D.**

Director, Department of Radiology  
Residency Program  
University of Vermont College of Medicine  
Burlington, VT

**(M) Thomas J. O'Neill, M.D.**

Assistant Professor, Neuroradiology  
Department of Radiology  
UT Southwestern Medical Center  
Director of Radiology Informatics  
Parkland Health and Hospital System  
Dallas, TX

**Susan Palasis, M.D.**

Pediatric Neurologist, Children's Healthcare of Atlanta  
Adjunct Professor of Radiology  
Emory University School of Medicine  
Atlanta, GA

**(M) David R. Pettersson, M.D.**

Assistant Professor of Radiology  
Diagnostic Radiology/Neuroradiology  
Oregon Health & Science University  
Portland, OR

**Jay J. Pillai, M.D.**

Director of Functional MRI  
Associate Professor of Radiology and Radiological Science  
Johns Hopkins Univ. School of Medicine  
Baltimore, MD

**(M) Marco Da Cunha Pinho, M.D.**

Assistant Professor  
The University of Texas Southwestern Medical Center  
Dallas, TX

**James G. Pipe, Ph.D.**

Professor and Director, Imaging Research  
Barrow Neurological Institute  
Keller Center for Imaging Innovation  
Phoenix, AZ

**Jeffrey M. Pollock, M.D.**

Associate Professor of Neuroradiology  
Director of MRI and Functional MRI  
Neuroradiology Fellowship Director  
Oregon Health and Science University  
Portland, OR

**Whitney B. Pope, M.D., Ph.D.**

Professor of Radiology  
Section of Neuroradiology  
Director, Brain Tumor Imaging  
David Geffen School of Medicine at UCLA  
Los Angeles, CA

**John D. Port, M.D., Ph.D.**

Professor of Radiology  
Assistant Professor of Psychiatry  
Department of Radiology  
Mayo Clinic  
Rochester, MN

**Timothy P.L. Roberts, Ph.D.**

Professor of Radiology, Affiliated with the Perelman School of Medicine at the University of Pennsylvania  
Vice Chair of Research, Oberkircher Family Chair in Pediatric Radiology  
The Children's Hospital of Philadelphia  
Philadelphia, PA

**Gustavo Rohde, Ph.D.**

Associate Professor  
Department of Biomedical Engineering  
Department of Electrical and Computer Engineering  
University of Virginia,  
Charlottesville, VA

**Haris Sair, M.D.**

Assistant Professor  
Division of Neuroradiology  
The Russell H. Morgan Department of Radiology and Radiological Science  
Johns Hopkins University School of Medicine  
Baltimore, MD

**J. Eric Schmitt, M.D.**

Assistant Professor  
Departments of Radiology and Psychiatry  
Division of Neuroradiology  
University of Pennsylvania  
Philadelphia, PA  
Assistant Professor  
Department of Bioinformatics and Healthcare Informatics  
Children's Hospital of Pennsylvania  
Philadelphia, PA

**(M) Gaurang V. Shah, M.D., FRCR**

Associate Professor  
Department of Radiology  
University of Michigan Health System  
Ann Arbor, MI

**Timothy M. Shepherd, M.D., Ph.D.**

Assistant Professor of Neuroradiology  
Director of Brain Mapping  
Department of Radiology  
New York University  
New York, NY

**Joshua S. Shimony, M.D., Ph.D.**

Associate Professor of Radiology  
Mallinckrodt Institute of Radiology  
Neuroradiology Section  
Washington University School of Medicine  
St. Louis, MO

**(M) Mark S. Shiroishi, M.D.**

Assistant Professor  
Division of Neuroradiology  
Department of Radiology  
Keck School of Medicine  
University of Southern California  
Los Angeles, CA

**Jennifer Soun, M.D.**

Neuroradiology Fellow  
Massachusetts General Hospital  
Boston, MA

**Steven Stufflebeam, M.D.**

Instructor in Radiology, Harvard Medical School  
Assistant Radiologist, Massachusetts General Hospital  
Director of Clinical MEG, Martinos Center  
Charlestown, MA

**Leo Sugrue, M.D., Ph.D.**

Assistant Professor  
UCSF School of Medicine  
San Francisco, CA

**Jody Tanabe, M.D.**

Professor of Radiology  
Chief of Neuroradiology  
University of Colorado School of Medicine  
Denver, CO

**Keith R. Thulborn, M.D., Ph.D.**

Professor of Radiology, Physiology and Biophysics  
Director, Center for Magnetic Resonance Research  
University of Illinois  
Chicago, IL

**Arastoo Vossough, Ph.D., M.D.**

Associate Professor of Radiology  
Children's Hospital of Philadelphia  
University of Pennsylvania  
Philadelphia, PA

**(M) Richard Watts, D.Phil.**

Associate Professor of Physics in Radiology  
Director of Radiology Research  
UVM MRI Center for Biomedical Imaging  
MacClure  
Burlington, VT

**Kirk M. Welker, M.D.**

Consultant  
Division of Neuroradiology  
Assistant Professor of Radiology  
College of Medicine  
Mayo Clinic  
Rochester, MN

**(M) Christopher T. Whitlow, M.D., Ph.D., MHA**

Associate Professor and Chief of Neuroradiology  
Vice Chair of Faculty Development  
Director, Combined MD/PhD Program  
Associate Leader, CTSI Translational Imaging Program  
Departments of Radiology and Biomedical Engineering  
Wake Forest School of Medicine  
Winston-Salem, NC

**Max Wintermark, M.D., MAS, M.B.A.**

Professor of Radiology  
Chief of Neuroradiology  
Department of Radiology, Neuroradiology Division  
Stanford University  
Stanford, CA

**John-Paul J. Yu, M.D., Ph.D.**

Assistant Professor of Radiology, Psychiatry, and Biomedical Engineering  
University of Wisconsin School of Medicine and Public Health  
Madison, WI

**Gregory G. Zaharchuk, M.D., Ph.D.**

Associate Professor of Radiology  
Stanford University  
Stanford, California

**Michael Zeineh, M.D., Ph.D.**

Assistant Professor of Radiology,  
Neuroradiology Section  
Stanford University Medical Center  
Stanford, CA

## Faculty & Lab Personnel

**Scott H. Faro, M.D.**

Professor of Radiology, Electrical and Computer Engineering  
Vice Chair of Radiology  
Director of Neuroradiology, Clinical MRI, Functional Brain Imaging Center and the Temple University MRI Core (TUMRIC)  
Temple University School of Medicine  
Philadelphia, PA

**Feroze B. Mohamed, Ph.D.**

Professor of Radiology  
Director, Jefferson Integrated MR Imaging Center  
Thomas Jefferson University  
Adjunct Professor, College of Engineering,  
Temple University  
Philadelphia, PA

**Christopher Conklin, Ph.D.**

Associate Director of MRI Physics  
Department of Radiology  
Thomas Jefferson University  
Philadelphia, PA

### Temple Functional Brain Imaging Center - BOLD Lab Personnel

**Mahdi Alizadeh, Ph.D.**

Research Associate  
Department of Radiology  
Thomas Jefferson University  
Philadelphia, PA

**Anup K. Bhattacharya, B.A.**

Research Associate  
Department of Radiology  
Thomas Jefferson University  
Philadelphia, PA

**Joshua Fisher, B.S.**

Research Associate  
Department of Radiology  
Thomas Jefferson University  
Philadelphia, PA

**Devon Middleton, Ph.D.**

Research Associate  
Department of Radiology  
Temple University  
Philadelphia, PA



# the Nines, a Luxury Collection Hotel, Portland, Oregon

525 SW Morrison  
Portland, OR 97204

Phone: (877) 229-9995



## Make Reservations

### Online at:

<https://www.starwoodmeeting.com/events/start.action?id=1701255898&key=6B63DBB>

or call (888) 627-7208 or Fax (503) 222-9997 and mention that you are attending the **ASFNR 11th Annual Meeting** to receive the group discount.

Located next to Pioneer Square and the central business district in one of the country's premier walking cities, this luxury hotel in Portland is an ideal spot for launching all of your adventures.

Browse nearby boutiques, dine in the trendy Pearl District, or use the eco-friendly MAX light rail to explore the beautiful gardens, museum grounds, and chic neighborhoods that pepper the lively city of Portland. The gracious Portland hotel concierge team is happy to arrange day trips to the mountains, wine country, and beyond.

Two distinct restaurants offer the perfect setting for any occasion. Urban Farmer is a modern steakhouse, offering sustainable ingredients and an expansive wine list. Departure offers Asian cuisine in a sleek, cosmopolitan setting, with two outdoor decks boasting beautiful views of the city and mountains. An in-room dining menu is also available.

Original art pieces and an elegant staircase add to the grandeur of The Nines Hotel's spectacular Portland meeting rooms, which easily lend themselves to a variety of Portland meetings and special events. A creative design concept and floor plan allows the highly skilled staff to offer a personalized experience for the guests - one that suits their style and needs. Unrivalled attention to detail is guaranteed from the sales, catering and culinary teams that work with the Portland meeting rooms at the Nines.

### Special Discounted Group Room Rate

**\$259.00**

Single and Double Occupancy

### Parking:

Valet: \$38/overnight, \$20/daily

**RESERVATIONS MUST BE MADE BEFORE THURSDAY, SEPTEMBER 7, 2017.** After this date, reservations will be accepted at the discretion of the hotel, on a space and rate available basis.

Hotel room rates are subject to applicable state and local taxes (currently 14.5%) in effect at the time of check-out. Group rate available 3 days pre-and post-meeting (based on hotel availability). Check-in is 3:00 pm; Check-out is 12:00 pm.

**DEPOSIT:** Hotel requires a credit card to guarantee accommodations.

**CANCELLATION:** All cancellations, arrival and departure date changes must be made 24 hours or more prior to scheduled arrival date/time to avoid penalties. Any guest that cancels a reservation after such time will have a charge of one night's room and tax applied to their account.



# Join ASFNR

## American Society of Functional Neuroradiology Membership Information/Membership Application

### Membership Categories:

**Member:** radiologist, neuroradiologist, physicist, or scientist who practices or has a special interest in functional neuroradiology

**Associate:** physician, scientist, or radiologic technologist (M.D., D.O., Ph.D., R.T.) with a special interest in functional neuroradiology but who does not fulfill the criteria for *Member* status

**Student:** medical, undergraduate, or graduate student, resident or fellow. Postdoctoral fellows will be considered, if they are within four years of their doctoral degree

### Membership Benefits:

- Reduced Registration Fee to attend the *ASFNR Annual Meeting\**
- Reduced Registration Fee to attend the *American Society of Neuroradiology (ASNR) Annual Meeting*
- Membership Certificate (*Member and Associate* only)
- Subscription to the *American Journal of Neuroradiology* at the ASNR member rate (*Member and Associate* only)- Optional
- Opportunity to join ASFNR Study Groups
- Opportunity to participate in the Scientific and Business Meetings, and activities of the Society
- Serve on standing committees, propose candidates for nomination, vote and hold elected office (*Members* only)

### Applying For Membership:

If you are a current member of ASNR or:

American Society of Head and Neck Radiology (ASHNR)  
American Society of Pediatric Neuroradiology (ASPNR)  
American Society of Spine Radiology (ASSR)  
Eastern Neuroradiological Society (ENRS)  
Southeastern Neuroradiological Society (SENRS)  
Western Neuroradiological Society (WNRS)

1. Complete #1, 2, 3, and 8 of the membership application
2. Include prorated dues

If you are not a current member of the above societies, and are applying for *Member* or *Associate* status, you must include the following:

1. Completed membership application
2. One sponsor letter. Sponsor must currently hold ASFNR *Member* status, or the equivalent from the ASNR, ASHNR, ASPNR, ASSR, ENRS, SENRS, or WNRS, and be familiar with the reputation and qualifications of the applicant and applicant's involvement and/or interest in functional neuroradiology.
3. Current curriculum vitae
4. Copy of Radiology Board or Subspecialty Certification (formerly CAQ) certificate
5. Prorated dues

If you are not a current member of the above societies, and are applying for *Student* status, you must include the following:

1. Completed membership application
2. One sponsor letter. Sponsor must currently hold ASFNR *Member* status, or the equivalent from the ASNR, ASHNR, ASPNR, ASSR, ENRS, SENRS or WNRS, and be familiar with the applicant's reputation, qualifications and involvement and/or interest in functional neuroradiology.
3. Letter from your Department Chairman verifying current status and expected date of graduation (*Student* applicants only)
4. Current curriculum vitae
5. Prorated dues

### Prorated Membership Dues

A S F N R (prorated dues include application fee)		1 <sup>st</sup> Qtr.	2 <sup>nd</sup> Qtr.	3 <sup>rd</sup> Qtr.	4 <sup>th</sup> Qtr. **
Membership Category	Annual Membership Dues	Jan-March	Apr-June	July-Sept	Oct-Dec
<i>Member</i>	\$125 + \$25 application fee	\$150	\$112	\$88	\$150
<i>Associate</i>	\$50 + \$25 application fee	\$75	\$63	\$50	\$75
<i>Student</i>	\$25	\$25	\$19	\$13	\$25

Each Study Group's dues are \$10 (not prorated) – add \$10 for each group membership and indicate your selected group(s) with an "X". Your Study Group membership(s) will begin upon your acceptance into Society membership.

\_\_\_\_\_ BOLD fMRI      \_\_\_\_\_ Diffusion/Perfusion Imaging

\*\*When dues are paid in the 4<sup>th</sup> Quarter, membership is valid through the end of the following calendar year.

**\*Deadline to Submit Membership Application:** If you wish to register for the *ASFNR 11<sup>th</sup> Annual Meeting* at the discounted member rate, your completed application (and any required documentation and dues) must be received **30 days prior to the Meeting**. You will receive an email confirming receipt of your application, after which you may register as an ASFNR member.

# ASFNR Membership Application

(Please type or print legibly)

Return completed membership application, any required documentation, and dues payment to:

ASFNR Membership Dept. ♦ 800 Enterprise Drive, Suite 205 ♦ Oak Brook, IL 60523-4216

Membership category applied for: ☐ *Member* ☐ *Associate* ☐ *Student*

1. Name      
First Middle Initial Last Name Degree

2. List *both* home and office (if applicable) addresses:

**Home**

Address

City/State/Province

Zip

Phone (  )

E-Mail Address

(E-mail address is *required*)

**Office**

Institution

Department

Address

City/State/Province

Zip

Phone (  )

FAX (  )

3. Indicate with an "X" all the societies of which you are a member: ☐ ASNR ☐ ASHNR ☐ ASPNR  
☐ ASSR ☐ ENRS ☐ SENRS ☐ WNRS

**IMPORTANT:** If you **ARE a member** of any of the societies listed above, proceed to #8 ... sign and date the application, and provide the appropriate amount of prorated dues -- you do not need to complete the other sections of the application.

If you **ARE NOT a member** of any of the societies listed above, complete the entire application, and provide required documentation and prorated membership dues.

4. Indicate with an "X" if you belong to the following societies: ☐ ISMRM ☐ OHBM

5. If you **DO NOT** belong to any of the societies listed in #3, you must include one sponsor letter with your application.

Refer to *Membership Information* on reverse side to determine qualified sponsors.

Sponsor's Name:

Institution:

Phone: (  )  E-mail

6. **Certification:** Board:  Date   
Subspecialty Certification (formerly CAQ)  Date

7. **Fellowships:** Institution (1):  Dates   
Institution (2):  Dates

8. I agree to abide by the ASFNR Constitution and any revisions thereof:

Applicant's Signature

Date

**Please note:** **U.S.-based applicants** may pay prorated membership dues by check (made payable to ASFNR), or credit card.  
**Non U.S.-based applicants** must pay prorated membership dues by credit card. Payment must accompany application.

## Complete the following information for credit card payment

**Billing address**, if different from #2 above: Check one: ☐ *Home* ☐ *Institution* ☐ *Business Office*

Name of Institution/Affiliation:

Address:

City:  State/Province:  Zip/Postal Code:

Country (if other than U.S.):

Indicate amount of prorated membership dues: \$

Credit Card: ☐ American Express ☐ MasterCard ☐ Visa

Card Number:  Expiration Date:

Name as it appears on the card:

Signature:

ASFNR ♦ 800 Enterprise Drive, Suite 205 ♦ Oak Brook, IL 60523-4126 ♦ Phone: 630/574-0220, ext. 234 or 226 ♦ Fax: 630/574-0661

Email: [kkulpaka@asnr.org](mailto:kkulpaka@asnr.org) or [kcammarata@asnr.org](mailto:kcammarata@asnr.org) ♦ Website [www.asfnr.org](http://www.asfnr.org)

# Meeting Registration Form:



11<sup>th</sup> Annual Meeting of the

American Society of

# Functional Neuroradiology

October 9-11, 2017 • the Nines • Portland, OR

**Optional BOLD Functional MRI Hands-On Workshop • October 8, 2017**

Attendance limited to the first 20 Registrants.

ASFNR17

REGISTRATION FEES	ASFNR 11 <sup>TH</sup> ANNUAL MEETING Mon. - Wed.	BOLD fMRI Workshop
<input type="checkbox"/> ASFNR Member	<input type="checkbox"/> \$395	<input type="checkbox"/> \$225
<input type="checkbox"/> Non-Member	<input type="checkbox"/> \$495	<input type="checkbox"/> \$225
<input type="checkbox"/> Fellow*, Resident*, Full-Time Military*, Technologist, Retired Physician	<input type="checkbox"/> \$195	<input type="checkbox"/> \$225

**Includes Electronic Color Syllabus** ☐ Add Printed Color Syllabus \$95 (Advanced Purchase Only)

**Subtotal \$** \_\_\_\_\_

**I am: (please check one)** \*Must enclose letter from Director verifying status.

☐ ASFNR Member ☐ Non-Member ☐ Fellow\* ☐ Resident\* ☐ Full-Time Military\* ☐ Technologist ☐ Retired Physician

Name \_\_\_\_\_ Degree ☐ M.D. ☐ D.O. ☐ Ph.D. ☐ P.A. ☐ R.T. ☐ Other

Company / Institution \_\_\_\_\_ Specialty \_\_\_\_\_

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

Phone \_\_\_\_\_ Email (REQUIRED FOR ELECTRONIC SYLLABUS) \_\_\_\_\_

Card Number / Card Type: ☐ Master Card ☐ Visa ☐ American Express ☐ Discover \_\_\_\_\_ Exp. Date \_\_\_\_\_ Security Code \_\_\_\_\_

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

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

## 4 Easy Ways To Register

## We Accept



**INTERNET**  
ASFNR.edusymp.com or  
www.ASFNR.org

**MAIL**  
Check payable to ASFNR:  
ASFNR  
c/o Educational Symposia  
5620 West Sligh Avenue  
Tampa, Florida  
33634-4490

**FAX**  
(800) 344-0668  
(U.S. & Canada)  
(813) 806-1001  
**PHONE**  
(800) 338-5901  
(U.S. & Canada)  
(813) 806-1000

**Disclaimer:** Educational Symposia (ESI) and ASFNR as planners and presenters of this meeting, and Professional Travel as the official travel agency for these meetings, 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.



**Special Note for the Disabled:** Educational Symposia (ESI) and ASFNR 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 our office at (800) 338-5901 or (813) 806-1000.

**CANCELLATIONS:** Request for refund of registration fees, less a \$75.00 processing fee, will be made to those providing written notification of cancellation by **September 29, 2017**. After that date, there will be no refunds given for cancellations. Please email notice of cancellation to: [lessa@edusymp.com](mailto:lessa@edusymp.com) or fax to 800-344-0668.



**American Society of  
Functional Neuroradiology**

c/o Educational Symposia  
5620 West Sligh Avenue  
Tampa, FL 33634-4490

17DG6BC-BCPU21

PRSRT STD  
U.S. POSTAGE PAID  
TAMPA, FL  
PERMIT NO. 3800



*11<sup>th</sup> Annual Meeting of the*  
American Society of

# **FUNCTIONAL NEURORADIOLOGY**

**October 9-11, 2017**  
the Nines • Portland, Oregon

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

## **Optional BOLD Functional MRI Hands-On Workshop**

October 8, 2017

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

Workshop attendance is limited to the first 20 Registrants