INNOVATION, INVENTION and the FUTURE of PEDIATRIC NEUROSURGERY

44TH ANNUAL MEETING OF THE AANS | CNS SECTION ON PEDIATRIC NEUROLOGICAL SURGERY

2015 PRELIMINARY PROGRAM

DECEMBER 8–11, 2015
Sheraton Seattle Hotel
Seattle, Washington
YOU ARE INVITED

The AANS/CNS Section on Pediatric Neurological Surgery invites you to Seattle for the 44th Annual Meeting. The event will be held at the Sheraton Seattle Hotel, a contemporary urban retreat in the heart of downtown Seattle. Home to Fortune 500 companies, such as Costco, Microsoft, Amazon and Starbucks, Seattle is rated the “#1 Smartest City in North America” by the business magazine Fast Company. Seattle is the perfect city to explore the theme of Innovation, Invention and the Future of Pediatric Neurosurgery.

The goal of this year’s program is to inspire attendees to bring ideas to fruition through novel design and innovation, in order to ultimately enhance the daily practice of the pediatric neurosurgeon. We are excited to present a lecture on Leadership and Innovation by industry leader Rick R. Holley, CEO of Plum Creek Timber Company, whose innovative strategies for business success can be applied to any industry, including the medical profession. Wendy Sue Swanson, MD, MBE, executive director of Digital Health at Seattle Children’s Hospital and author of the Seattle Mama Doc Blog, will discuss bridging the gap between parents and providers in the era of social and digital media.

Leaders in the field of pediatric neurosurgery will address approaches to the treatment of hydrocephalus with ETV/CPC, concussion and advances in tumor technology. We will also honor A. Leland Albright, MD, FAANS(L), with the prestigious Ingraham Award for his outstanding contributions to our field.

This year, the Breakfast Seminars will address the legal implications of concussion and concepts on transforming your own ideas to products.

Advanced practice providers (APPs) will be able to attend both an all-day symposium and new Breakfast Seminars geared specifically toward APPs that highlight practical skills needed in neurosurgery.

The conference site, Sheraton Seattle Hotel, is located in Seattle’s safe, vibrant and compact downtown. This year’s metropolitan venue is centrally located near top-rated restaurants, bars and some of the best shopping in Seattle. We promise a thought-provoking scientific program and an unforgettable Washington experience.

Sarah J. Gaskill, MD, FAANS Pediatric Section Chair

Samuel R. Browd, MD, PhD, FAANS Scientific Program Co-chair

Amy Lee, MD Scientific Program Co-chair
Who Should Attend
The educational sessions will be directed toward pediatric neurological surgeons, residents, nurse clinicians and physician assistants, and will be directly applicable to their practices.

Continuing Medical Education Credit
This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint providership of the AANS and the AANS/CNS Section on Pediatric Neurological Surgery. The AANS is accredited by the ACCME to provide continuing medical education for physicians.

The AANS designates this live activity for a maximum of 24.5 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Nursing Contact Hours for the Advanced Practice Provider Seminar and Breakfast Seminars
This activity has been submitted to the Ohio Nurses Association (OBN-001-91) for approval to award contact hours. The Ohio Nurses Association is accredited as an approver of continuing nursing education by the American Nurses Credentialing Center’s Commission on Accreditation.

Please call the AANS at 888.566.2267 for more information about contact hours.

Annual Meeting Learning Objectives
Upon completion of this CME activity, participants should be able to:
- Examine current treatment controversies in pediatric neurosurgery, including hydrocephalus and concussion.
- Identify opportunities for innovation and invention in clinical practice and/or research in advancing the field of pediatric neurosurgery.
- Review the latest research in pediatric neurosurgery, including tumors, trauma, spinal disorders, vascular disease, hydrocephalus, spasticity and epilepsy.
- Discuss current evidence-based management of pediatric neurosurgical disorders.

Disclosures
Before the program, anyone in control of the educational content of this activity will disclose the existence of any financial interest and/or the relationship they or their significant other have with the manufacturer(s) of any commercial product(s) to be discussed during their presentation. Disclosures will be included in the Meeting App.
## 2015 PROGRAM AT-A-GLANCE

<table>
<thead>
<tr>
<th>TIME</th>
<th>EVENT</th>
<th>LOCATION</th>
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<tbody>
<tr>
<td><strong>TUESDAY, Dec. 8</strong></td>
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<tr>
<td>6:45 a.m.–7 p.m.</td>
<td>Registration</td>
<td>Grand Ballroom Foyer</td>
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<tr>
<td>8 a.m.–4:30 p.m.</td>
<td>Advanced Practice Provider (APP) Seminar</td>
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<td>6–7:30 p.m.</td>
<td>Opening Reception</td>
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<td><strong>WEDNESDAY, Dec. 9</strong></td>
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<td>6 a.m.–5 p.m.</td>
<td>Registration</td>
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<td>6:30–7:30 a.m.</td>
<td>Breakfast Seminar</td>
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<td>6:30–7:30 a.m.</td>
<td>APP Breakfast Seminar</td>
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<td>7:15–7:45 a.m.</td>
<td>Continental Breakfast in the Exhibit Hall</td>
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<td>7:45 a.m.–12 p.m.</td>
<td>Plenary and Scientific Sessions</td>
<td>Grand Ballroom D</td>
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<td>10–10:30 a.m.</td>
<td>Beverage Break in the Exhibit Hall</td>
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<td>12–1 p.m.</td>
<td>Lunch in the Exhibit Hall</td>
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<tr>
<td>1–4:30 p.m.</td>
<td>Plenary and Scientific Sessions</td>
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<td>2:45–3:15 p.m.</td>
<td>Beverage Break in the Exhibit Hall</td>
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<td>4:30–5:30 p.m.</td>
<td>Wine and Cheese Reception in the Exhibit Hall</td>
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<td><strong>THURSDAY, Dec. 10</strong></td>
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<td>2:45–3:15 p.m.</td>
<td>Beverage Break in the Exhibit Hall</td>
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<td>4:46–5:01 p.m.</td>
<td>Annual Business Meeting</td>
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<td><strong>FRIDAY, Dec. 11</strong></td>
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*Note: Time and location subject to change*
This year’s meeting theme, Innovation, Invention and the Future of Pediatric Neurosurgery, provides a valuable opportunity to hear leading experts discuss topics of interest to today’s pediatric neurosurgeon. The program features three clinical symposia that provide an in-depth look at the topics of hydrocephalus ETV and CPC, concussion and innovation in oncology. The scientific sessions expose participants to the latest knowledge and groundbreaking research.

**Featured Lecturers**

This year’s Raimondi Lecture is given by Rick R. Holley, CEO of Plum Creek Timber Company, Inc., who speaks on Leadership and Innovation. Hear how Plum Creek Timber Company, Inc. has innovated in the forest products industry and how innovation and technology can apply to the medical profession.

The American Academy of Pediatrics/Section on Neurological Surgeons (AAP/SONS) featured speaker is Wendy Sue Swanson, MD, MBE, executive director of Digital Health and author of the Seattle Mama Doc Blog for Seattle Children’s Hospital. Dr. Swanson discusses How 140 Characters Are Changing Healthcare. She speaks on how digital media bridges the gap between parents and doctors and is revolutionizing health communications.

**Franc D. Ingraham Award**

The AANS/CNS Section on Pediatric Neurological Surgery is pleased to recognize A. Leland Albright, MD, FAANS(L) as the recipient of 2015 Franc D. Ingraham Award for Distinguished Service and Achievement. Dr. Albright will be recognized for his contributions to pediatric neurosurgery on Thursday morning, followed by a special reception break in his honor.

**Abstract Awards**

Three oral presentations will be selected to receive awards at this year’s meeting.

**Awards Include:**

- Kenneth Shulman Award for best overall paper
- Hydrocephalus Association Award for best paper on the topic of hydrocephalus
- AAP/SONS Award for the best paper whose findings broadly impact and improve the health of children by influencing pediatric health care practice through the generalization of pediatric neurosurgical knowledge

Top poster awards for basic science research and for clinical research will also be selected.

**Optional Educational Activities**

There are optional learning activities available during the week, including Breakfast Seminars focusing on legal implications and on how to bring innovative ideas for products to the market.

**Advanced Practice Provider (APP) Education**

Back by popular demand, two APP Breakfast Seminars will cover the topics of spine clearance and concussion management. New in 2015, the APP Seminar will include abstracts submitted by APPs. Further information is available on page 13.

**Social and Networking Opportunities**

The 44th Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery is the perfect opportunity to network. Take advantage of the many opportunities provided during the week to catch up with colleagues and to conduct business with current and future partners in the exhibit hall.

Attendees have the opportunity to explore the exhibit hall while completing their exhibit map to be eligible to win one of two free registrations to the 2016 Pediatric Section Annual Meeting in Orlando, Fla., and two nights stay at Hilton Bonnet Creek Hotel. Attendees must be present to win. See page 15 for complete details.

**Meeting App**

The entire 44th Annual Meeting program will be accessible via the Meeting App — an easily accessible, convenient means of viewing your agenda, speaker information, abstracts and the exhibitor list. To enhance the use of the Meeting App, a printed Quick Planner will be available to all attendees at Registration. This printed option will serve as a program overview. Electronic posters will be available only on the Meeting App.
FEATURED SPEAKERS

Raimondi Lecture
Leadership and Innovation

Rick R. Holley, CEO, Plum Creek Timber Company, Inc.

Rick R. Holley is chief executive officer of Plum Creek. He was elected president and chief executive officer and a member of the board of directors of Plum Creek in 1994. Prior to assuming this role, he served as vice president and chief financial officer since 1985.

Holley began his career at General Electric Co. in 1974, where he served in a variety of financial management positions. In 1983, he joined Burlington Northern Inc. where he worked as assistant vice president, corporate audit. He held that position until joining Plum Creek in 1985.

He received a Bachelor of Science degree in accounting and business administration from San Jose State University. He also completed an advanced education program at Northwestern University.

In addition to serving on Plum Creek’s board, Holley serves on several private and not-for-profit boards, including the National Alliance of Forest Owners, National Association of Real Estate Investment Trusts, Resources for the Future and The Seattle Times and the Blethen Corp. He also serves on the Economic Advisory Council of the Federal Reserve Bank of San Francisco.

AAP/SONS Lecture
How 140 Characters Are Changing Healthcare

Wendy Sue Swanson, MD, MBE, Executive Director of Digital Health, Seattle Children’s Hospital

Pediatrician Wendy Sue Swanson, MD, MBE, executive director of Digital Health and author of the Seattle Mama Doc Blog for Seattle Children’s Hospital, is working to revolutionize health communications by using social and digital media to bridge the gap between parents and doctors. As one of the first pediatricians to blog for a leading children's hospital, she works diligently to offer patients and parents relevant, practical and timely health information in accessible, online formats. Dr. Swanson speaks nationally on physician use of social media, digital health and innovation and its role in advocacy and health.

Dr. Swanson founded Digital Health at Seattle Children’s in 2013, leading a team in innovation by testing and creating new digital tools to leverage the wisdom of patients, families and providers. She is also an executive committee member of the American Academy of Pediatrics Council on Communications and Media. Dr. Swanson is on the Board of Advisors for Parents magazine and is a platinum fellow on the board for the Mayo Clinic Center for Social Media. She is a weekly medical contributor for NBC affiliate KING 5 News in Seattle and is a practicing pediatrician with The Everett Clinic.

Dr. Swanson graduated with Honors in Psychology from Kenyon College. She earned her medical degree and master’s degree in bioethics at the University of Pennsylvania School of Medicine and then completed her residency at Seattle Children's Hospital.
Franc D. Ingraham Award for Distinguished Service and Achievement

A. Leland Albright, MD, FAANS(L)

A. Leland Albright, MD, FAANS(L), graduated from Louisiana State University (LSU) in 1965 and from the LSU School of Medicine in 1969. He pursued an internship in internal medicine at Vanderbilt University Hospital and a year of general surgery residency at Washington University in St. Louis. Dr. Albright then served for three years in the U.S. Public Health Service as a clinical associate in neurosurgery at the National Institutes of Health. In 1978, he completed his neurosurgical residency at the University of Pittsburgh Medical Center (UPMC) under the chairmanship of Peter J. Jannetta, MD, DSc, FAANS(L). After serving on the faculty of the University of Louisville for two years, Dr. Albright returned to UPMC and the Children’s Hospital of Pittsburgh (CHP) in 1981. He became chief of pediatric neurosurgery in 1992 and professor of neurosurgery in 1993. His clinical research interests in the initial years at CHP involved clinical trials for pediatric brain tumors through the Children’s Cancer Group. Dr. Albright then developed the use of intrathecal baclofen to treat children with spasticity and secondary dystonia, and established a multi-disciplinary spasticity and movement disorders center that drew referrals of children from throughout the United States. An endowed chair in pediatric neurosurgery was established in his honor in 2002.

He moved to the University of Wisconsin Health Center in 2006 where he developed a spasticity and movement disorders clinic. Leaving academic practice in the U.S. in 2010, he moved to Kijabe, Kenya, as a medical missionary to do and to teach pediatric neurosurgery. In Kenya, he taught two pediatric neurosurgery fellows and 15 neurosurgery residents from the University of Nairobi. Dr. Albright and his colleagues performed more than 5,000 operations before he returned to the United States in 2015.

The author of more than 200 refereed articles and book chapters, Dr. Albright was the senior editor of the first and subsequent editions of the textbook, Principles and Practice of Pediatric Neurosurgery, which has become the standard resource for the subspecialty worldwide. He has been a visiting professor at 30 academic centers in the United States and abroad. He was active in the AANS/CNS Section on Pediatric Neurological Surgery and in the American Board of Pediatric Neurosurgery. In 2012, he received the American Association of Neurological Surgeons (AANS) Humanitarian Award.

Ingraham Award Recipients

<table>
<thead>
<tr>
<th>Year</th>
<th>Recipient</th>
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<tbody>
<tr>
<td>1988</td>
<td>E. Bruce Hendrick, MD</td>
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<tr>
<td>2001</td>
<td>Luis Schut, MD, FAANS(L)</td>
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<tr>
<td>2004</td>
<td>Fred J. Epstein, MD</td>
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<td>2007</td>
<td>Robin P. Humphreys, MD, FAANS(L)</td>
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<td>2009</td>
<td>David G. McLone, MD, PhD, FAANS(L)</td>
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<td>2010</td>
<td>Robert A. Sanford, MD, FAANS(L)</td>
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<td>2011</td>
<td>R. Michael Scott, MD, FAANS(L)</td>
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<tr>
<td>2014</td>
<td>Marion L. Walker, MD, FAANS(L)</td>
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Tuesday, Dec. 8

6:45 a.m.–7 p.m.
Registration

8 a.m.–4:30 p.m.
Advance Practice Provider Seminar
(Additional fee for this activity. See agenda on page 12.)

12–4 p.m.
Executive Committee

4–4:30 p.m.
Education Committee

6–7:30 p.m.
Opening Reception
(Included in registration fee.)

Wednesday, Dec. 9

6 a.m.–5 p.m.
Registration

6:30–7:30 a.m.
Breakfast Seminar: Medical Legal Aspects of Concussion Management
(Additional fee. See page 11 for details.)
Moderator
Richard G. Ellenbogen, MD, FAANS
Panelists
Richard Adler, Esq.
Mike Neilson, Esq.

6:30–7:30 a.m.
APP Breakfast Seminar: Spine Clearance
(Additional fee. See page 13 for details.)
Presenter:
Richard C.E. Anderson, MD, FAANS

7:15–7:45 a.m.
Continental Breakfast in the Exhibit Hall
(Included in registration fee.)

7:45–7:50 a.m.
Welcome and Opening Remarks
Sarah J. Gaskill, MD, FAANS
Pediatric Section Chair

7:50–7:55 a.m.
Program Overview
Samuel R. Browd, MD, PhD, FAANS
Amy Lee, MD
2015 Annual Meeting Program Co-chairs

7:56–9 a.m.
Scientific Session I

9:01–9:59 a.m.
Clinical Symposia I: Hydrocephalus: Shunting vs. ETV
Moderator:
Abhaya V. Kulkarni, MD, FAANS
Panelists:
Jay K. Riva-Cambrin, MD, FAANS
Paul Klimo Jr., MD, FAANS

10–10:30 a.m.
Beverage Break in the Exhibit Hall

10:31–11:17 a.m.
Scientific Session II

11:18–11:59 a.m.
Raimondi Lecture
Leadership and Innovation
Rick R. Holley

12–1 p.m.
Lunch in the Exhibit Hall

1:01–1:11 p.m.
PediNSQIP Update
Liliana C. Goumnerova, MD, FAANS
1:12–2:16 p.m.
Scientific Session III

2:17–2:44 p.m.
Equipoise in Pediatric ICP Management: Current Management and Future Research Directions
Randall M. Chesnut, MD

2:45–3:15 p.m.
Beverage Break in the Exhibit Hall

3:16–4:29 p.m.
Scientific Session IV

4:30–5:30 p.m.
Wine and Cheese Reception in the Exhibit Hall
(Included in the registration fee for attendees and guests/spouses.)

Thursday, Dec. 10
6 a.m.–5 p.m.
Registration

6:30–7:30 a.m.
Breakfast Seminar:
Idea to Product: How to Commercialize Your Ideas in Neurosurgery
(Additional fee. See page 11 for details.)
Moderator:
Catherine A. Mazzola, MD, FAANS
Panelist:
Samuel R. Browd, MD, PhD, FAANS

6:30–7:30 a.m.
APP Breakfast Seminar:
Practical Concussion: Assessment, Management and Clearance
(Additional fee. See page 13 for details.)
Presenters:
John F. Bennett, ANRP
Thomas McNalley, MD, MA

7:15–7:45 a.m.
Continental Breakfast in the Exhibit Hall
(Included in registration fee.)

7:46–8:41 a.m.
Scientific Session V

8:42–9:42 a.m.
Clinical Symposia II:
Concussions: Controversies in Management
Moderator:
James M. Johnston Jr., MD, FAANS
Panelists:
Ann-Christine Duhaime, MD, FAANS
Richard G. Ellenbogen, MD, FAANS

9:43–9:59 a.m.
Franc D. Ingraham Award
Recipient:
A. Leland Albright, MD, FAANS(L)

10–10:30 a.m.
Special Break/Reception in the Exhibit Hall Honoring Dr. Albright

10:31 a.m.–12:02 p.m.
Scientific Session VI

12:03–1:03 p.m.
Lunch in the Exhibit Hall

1:04–1:09 p.m.
Section Research Award:
Comparison of Biological Differences Between Normal Osteoblasts and Osteoblasts Derived from Patients with Craniosynostosis
Ann M. Ritter, MD, FAANS

1:10–1:59 p.m.
Scientific Session VII

2–2:44 p.m.
AAP/SONS Special Lecture
How 140 Characters Are Changing Healthcare
Wendy Sue Swanson, MD, MBE

2:45–3:15 p.m.
Beverage Break in the Exhibit Hall
Drawing for 2016 Annual Meeting Prize
### 3:16–3:24 p.m.
**Poster Awards Announced**
*Samuel R. Browd, MD, PhD, FAANS*
*Amy Lee, MD*

### 3:25–4:29 p.m.
**Scientific Session VIII**

### 4:30–4:45 p.m.
**International Education Subcommittee Survey**
*Jogi V. Pattisapu, MD, FAANS(L)*

### 4:46–5:01 p.m.
**Annual Business Meeting**

### 5:02–5:17 p.m.
**AAP/SONS Business Meeting**

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### Friday, Dec. 11

#### 6–11 a.m.
**Registration**

#### 7:15–7:45 a.m.
**Continental Breakfast in the Exhibit Hall**
*(Included in registration fee.)*

#### 7:45–7:50 a.m.
**2016 Orlando Meeting Preview**
*Greg Olavarria, MD*
*Jogi V. Pattisapu, MD, FAANS(L)*

#### 7:51–8:59 a.m.
**Scientific Session IX**

#### 9–9:59 a.m.
**Clinical Symposia III: Advances in Tumor Technology**
*Moderator: TBD*
*Panelist: James Olson, MD*

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### 10–10:30 a.m.
**Beverage Break in the Exhibit Hall**
**Drawing for 2016 Annual Meeting Prize**

### 10:31–10:39 a.m.
**Hydrocephalus, Shulman and AAP/SONS Award Recipients Announced**

### 10:40–11:24 a.m.
**Scientific Session X**

### 11:25–11:30 a.m.
**Closing Remarks**
*Sarah J. Gaskill, MD, FAANS*
*Pediatric Section Chair*
Breakfast Seminars

Medical Legal Aspects of Concussion Management
Wednesday, Dec. 9
6:30–7:30 a.m.
Cost: (Additional fee. See page 20 for details.)

The medical legal environment around concussion management is evolving. Practitioners should be aware of their legal risk related to state laws and return-to-play legislation that has come forth in all 50 states. Proper evaluation and documentation is discussed, and case examples are utilized to demonstrate the pitfalls of concussion management.

Learning Objectives:
Upon completion of the educational activity, participants should be able to:
- Discuss the medicolegal aspects of concussion management in pediatric patients.
- Review the steps of “return to play.”
- Identify ways in which neurosurgeons may become active in the area of concussion legislation and management of mild traumatic brain injury.

Moderator:
Richard G. Ellenbogen, MD, FAANS

Panelists:
Richard Adler, Esq.
Mike Neilson, Esq.

Idea to Product—How to Commercialize Your Ideas in Neurosurgery
Thursday, Dec. 10
6:30–7:30 a.m.
Cost: (Additional fee. See page 20 for details.)

The course takes participants through the basic step of “biodesign” and highlights the critical steps necessary to move an idea forward to commercialization and ultimately to clinical use. Hear about the pros, cons and pitfalls of the process.

Learning Objectives:
Upon completion of the educational activity, participants should be able to:
- Educate pediatric neurosurgeons about the process of product development.
- Discuss the medicolegal aspects of product development, patent protection and intellectual property.
- Introduce the concept of biomedical start-ups and suggest ways to fund these projects.

Moderator:
Catherine A. Mazzola, MD, FAANS

Panelist:
Samuel R. Browd, MD, PhD, FAANS

The AANS designates each Breakfast Seminar for a maximum of 1 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
ADVANCED PRACTICE PROVIDER SEMINAR AGENDA

Tuesday, Dec. 8

6:45 a.m.
Registration Opens
Cost: (Additional fee. See page 20 for details.)

8–8:10 a.m.
Welcome and Introduction

8:10–8:50 a.m.
Transsphenoidal Approach/DI
Manuel Ferreira Jr., MD, PhD, FAANS

8:50–9:30 a.m.
Chiari Malformations
Richard G. Ellenbogen, MD, FAANS

9:30–10:10 a.m.
Epilepsy/Laser Ablation
Jeffrey G. Ojemann, MD, FAANS

10:10–10:30 a.m.
Beverage Break

10:30–11:10 a.m.
Brain Tumors
Corrine C. Hoeppner, MN, ARNP

11:10 a.m.–12:10 p.m.
Abstract Presentations by Advanced Practice Providers

12:10–1:10 p.m.
Lunch and Networking

1:10–1:50 p.m.
Newborn Exam/Muscle Strength/Tone
William O. Walker, MD

1:50–2:30 p.m.
Congenital Brain Anomalies—What Do They Mean?
Daniel A. Dougherty, MD, PhD

2:30–2:50 p.m.
Beverage Break

2:50–3:30 p.m.
Evolution of Care in Pediatric Neurosurgery/Role of the NP
Shannon Fitzgerald, ARNP, MSN
Nadine M. Nielsen, ARNP

3:30–4:10 p.m.
Advanced Practice Providers Involved in Research
Cathy Cartwright, ARNP, MSN, RN

4:10–4:25 p.m.
Group Discussion and Evaluation

4:25–4:30 p.m.
Closing Remarks

6–7:30 p.m.
Opening Reception

Note: For those attendees who have registered for the Advanced Practice Provider Seminar only, you have the option to attend the Annual Meeting Opening Reception at an additional charge of $100. For those registered for the full Annual Meeting, a ticket to the Opening Reception is included.
New in 2015: Abstracts Presented by Advanced Practice Providers (APP) During the APP Seminar
This year, there will be a full-day, dedicated educational track for the advanced practice provider (APP), focusing on the everyday challenges in patient care and health-care delivery. APPs now have the opportunity to submit abstracts and present their research during their seminar on Tuesday, Dec. 8. Two APP Breakfast Seminars offer attendees individualized, hands-on learning opportunities to refine clinical skills.

Advanced Practice Provider Seminar
Tuesday, Dec. 8
8 a.m.–4:30 p.m.
Cost: (Additional fee. See page 20 for details.) Lunch is provided.
To complement the meeting theme of Innovation, Invention and the Future of Pediatric Neurosurgery, a dedicated educational seminar for the advanced practice provider (APP) is offered. Topics include neurosurgical conditions, innovative approaches of transsphenoidal approach, Chiari malformation, epilepsy treatment with laser ablation and brain tumor treatment and diagnosis. A portion of the conference focuses on neurodevelopmental skills of newborn exam/muscle strength/tone and management of congenital brain anomalies. Additionally, there is a focus on the evolution of the APP role and how APPs can expand their practice.

Learning Objectives:
Upon completion of the educational activity, participants should be able to:
- Evaluate patients with a variety of pediatric neurosurgical disorders and initiate appropriate management strategies.
- Describe different congenital brain anomalies.
- Infer treatment outcomes for a variety of congenital brain anomalies.
- Evaluate assessment skills for newborn exam, muscle strength and tone.
- Discuss how to improve and expand the APP role in the neurosurgical field.
- Describe steps to increase neurosurgical APP’s ability to participate in research.

Breakfast Seminars for the Advanced Practice Provider
To register for an APP Breakfast Seminar, you must be registered for the full 44th Annual Meeting.

Spine Clearance
Wednesday, Dec. 9
6:30–7:30 a.m.
Presenter:
Richard C.E. Anderson, MD, FAANS
Cost: (Additional fee. See page 20 for details.)
- For all advanced practice providers — $75
This session focuses on spine at risk, spine restrictions and how to clear a spine. A neurosurgeon specializing in spine helps participants gain understanding of spine at-risk conditions, spine imaging and abnormalities, how to safely perform flexion/extension imaging, and when a spine can be cleared for certain conditions and anesthesia.

Learning Objectives:
Upon completion of the educational activity, participants should be able to:
- Describe when a spine is at risk.
- Differentiate which types of imaging should be performed.
- Identify next steps in spine clearance or restrictions.

Practical Concussion: Assessment, Management and Clearance
Thursday, Dec. 10
6:30–7:30 a.m.
Presenters:
Thomas McNalley, MD, MA
John F. Bennett, ARNP
Cost: (Additional fee. See page 20 for details.)
- For all advanced practice providers — $75
This session covers the topic of concussion, which is becoming more commonly evaluated by neurosurgical practitioners, given new play restrictions. In this hands-on seminar, participants practice performing concussion assessments. A discussion focuses on how to manage care, when to obtain imaging, when to restrict patients, and when to safely return a patient to play or retire a patient.

Learning Objectives:
Upon completion of the educational activity, participants should be able to:
- Perform a concussion assessment.
- Discuss concussion management options.
- Describe concussion clearance indications.
SOCIAL EVENTS

Opening Reception
Tuesday, Dec. 8
6–7:30 p.m.
Sheraton Seattle Hotel

Enjoy an evening with friends and colleagues over a wonderful assortment of hors d’oeuvres and an open bar. All registered attendees and registered guests/spouses receive one complimentary ticket to this event. Business casual attire is suggested.

Wine and Cheese Reception in the Exhibit Hall
Wednesday, Dec. 9
4:30–5:30 p.m.

This event is a perfect opportunity to meet and talk informally with key exhibitors and colleagues, while enjoying a beverage and light snacks at the end of the first day of this annual event. All registered attendees and guests/spouses receive one complimentary ticket to this event.

Neurosurgery Giving Back:
Supporting Seattle Families of Children with Neurosurgical Disorders

Neurosurgical disorders present problems with which children and their families should never have to cope. Children in the Seattle area are in need of your help this holiday season. Attendees will have an opportunity to participate in the inaugural Neurosurgery Giving Back event during the 44th Annual Meeting. You can contribute by sponsoring gifts for families with children who have a neurosurgical disorder. Look for the giving tree and make a child feel extra special this holiday season. Further details will be available at the Registration Desk.
EXHIBIT HIGHLIGHTS

Wednesday, Dec. 9–Friday, Dec. 11
Vendors and their exhibits afford meeting participants excellent opportunities to view highly specialized equipment and observe first-hand demonstrations of the latest technology available in pediatric neurosurgery.

Exhibit Hours
Wednesday, Dec. 9
7:15 a.m.–5:30 p.m.
Thursday, Dec. 10
7:15 a.m.–3:30 p.m.
Friday, Dec. 11
7:15–10:30 a.m.

Exhibit Map and Raffle
When you finish visiting the exhibit hall and submit your filled-out exhibit map, you are entered to win free registration and two night's hotel for the 2016 Annual Meeting in Orlando, Fla. Winner must be present to win, and the prize is non-transferable. Drawings will be Thursday, Dec. 10, 2015, at 2:45 p.m. and Friday, Dec. 11, 2015 at 10:15 a.m.

Wine and Cheese Reception in the Exhibit Hall
Attendees are invited to join exhibitors for a Wine and Cheese Reception in the exhibit hall on Wednesday, Dec. 9, 2015, at 4:30 p.m. This reception provides the perfect opportunity for you to mingle with colleagues in a relaxed environment, while browsing the latest advances in products and innovations from top industry vendors.

Continental Breakfast in the Exhibit Hall
Breakfast is the most important meal of the day. Join us for a continental breakfast in the exhibit hall Wednesday through Friday.

2015 List of Exhibitors
- Aesculap Inc.
- Codman Neuro, a Johnson & Johnson Company
- Hydrocephalus Association
- KLS - Martin, LP
- LeBonheur Children’s Hospital
- Medtronic
- Monteris Medical Inc.
- RosmanSearch, Inc.
- Seattle Children’s
- ShuntCheck Inc.
- Sophysa USA Inc.
- Surgical Theater, LLC

Beverage Breaks in the Exhibit Hall
Complimentary beverages offered throughout the exhibit hall during break times.

<table>
<thead>
<tr>
<th>Day</th>
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<tr>
<td>Wednesday</td>
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Lunch in the Exhibit Hall
Enjoy a complimentary lunch on Wednesday and Thursday while networking with colleagues and vendors.

Wednesday, Dec. 9, and Thursday, Dec. 10
12–1 p.m.
Hotel Reservations
Sheraton Seattle Hotel
1400 Sixth Avenue
Seattle, WA 98101

The AANS/CNS Section on Pediatric Neurological Surgery has negotiated special rates with the Sheraton Seattle Hotel for Annual Meeting attendees. The hotel reservation deadline is Monday, Nov. 16, 2015. Be sure to make your reservation on or before the cut-off date to receive the $159 group rate. To make your reservation at the Sheraton, please visit: https://www.starwoodmeeting.com/StarGroupsWeb/res?id=1504221349&key=1DABC35 or call 888.627.7056 and reference AANS/CNS Section on Pediatric Neurological Surgery upon calling. All meeting attendees will also have complimentary Wi-Fi in their guest rooms during their stay.

Discounted Airfare Information

The AANS/CNS Section on Pediatric Neurological Surgery is pleased to announce that Alaska Airlines is offering a 7 percent discount on published fares (except companion and other promotional fares) for this year’s Annual Meeting in Seattle.

To make a reservation:
- Online at www.alaskaair.com
- By phone contact the Meeting/Convention & Group Department at 800-445-4435

NOTE: A $15 ticketing fee will apply to any tickets issued by the Group Desk.

Meeting discount code is MW524

Restrictions:
- Departure City(s): Any Alaska Airlines/Horizon Air US or Canadian city or Mexico Meeting City
- Travel Dates between Dec. 5-Dec. 14, 2015; there are no blackout dates
- Any change or cancellation after ticketing is subject to a service charge
- All fare rules and additional blackout dates of the fare apply
- All tickets must be issued online or by the Alaska Airlines Group desk

Please verify all current baggage allowances and fees as well as travel policies on www.alaskaair.com prior to travel.

Meeting App and Quick Planner
Attendees will need a smartphone or tablet to access this Web-based application. Prior to the meeting, attendees will be provided with the URL to access the app and can look up sessions, abstract presentations, speakers or any other events. To supplement the Meeting App, a printed Quick Planner will be provided for all attendees at the Registration Desk upon check-in. This guide will provide a general meeting overview for attendees.

How to Register
Visit www.pedsneurosurgery.org. Click on the link to register for the meeting and make hotel reservations. The online registration process is the best method to use. If you prefer, you can complete and return the registration forms provided in this preliminary program. Save $100 by registering no later then Tuesday, Nov. 10, 2015. If you have any questions about registration, call 224.563.3167 or email aansped@compusystems.com.

Cancellations/Refunds
Requests for registration cancellation must be made in writing and sent to:
AANS/CNS Section on Pediatric Neurological Surgery
c/o CompuSystems
2651 Warrenville Road, Suite 400
Downers Grove, IL 60515
Or faxed to: 708.344.4444

All refunds will be processed and mailed following the Annual Meeting. Please allow four to six weeks for processing. Refunds will be made in accordance with the following schedule:
Cancellations received on or before Tuesday, Nov. 10, 2015, will receive a full refund, less a $50 processing fee. Cancellations received between Wednesday, Nov. 11, 2015, and Monday, Nov. 23, 2015, will receive a full refund, less a $100 processing fee. No refunds will be made for cancellations received on or after Tuesday, Nov. 24, 2015.

GENERAL INFORMATION
Transportation Options to and from the Sheraton Seattle Hotel

Centrally located in downtown Seattle, getting to Sheraton Seattle Hotel is simple with frequent airport shuttle service, taxi service, car rental companies or Seattle’s local transit system. Contact the hotel at 206.621.9000 for more information or to assist with making transportation arrangements.

Note: Estimated charges, fees and schedules are not guaranteed. Travel time may be affected by local conditions and traffic.

Parking Information

- Valet Parking — $50 per day, tax inclusive
- Self-Parking (off-site) — $30 per day, up to three exits per day

Downtown Airporter by Shuttle Express

- Downtown Airporter departs from Level 3 of the parking garage, island 2. Follow the signs to ground transportation, taxis, limos, hotel shuttles on the third floor of the parking garage. For additional information, please click here.
- Adults: One way ticket is $18 per person, and roundtrip is $31; children 17 and under ride free (one per paying adult); additional youth ride at adult price.
- Hours: Departures from SeaTac Airport and downtown Seattle 24 hours a day, every day. Leaves SeaTac Airport approximately every 30 minutes. Service on-demand during off-peak times; reservations are recommended.
- For more information or to make a reservation, call 855.566.3300.

Rental Car

The AANS is pleased to provide members the opportunity for car rental savings through Alamo Rent-a-Car in conjunction with the 44th Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery. At the time of reservation, don't forget to identify yourself as an AANS member and provide the identification information below.

For reservations, call Alamo Rent-a-Car at 800.462.5266 or visit www.alamo.com. Please mention or enter ID# 706768. You can potentially receive up to 10-percent off your car rental.

Americans with Disabilities Act

The AANS/CNS Section on Pediatric Neurological Surgery wishes to take those steps to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you require any of the auxiliary aids or services identified in the Americans with Disabilities Act in order to attend any program, please contact the Meeting Services Department at aansam@aans.org, or call 888.566.2267, ext. 529.
Seattle is an exciting metropolitan city surrounded by sky-mountain peaks and luscious evergreen forests. It was named the fastest-growing major city in the United States and home to a thriving tech industry with Microsoft and Amazon headquartered in its metropolitan area.

One of the most popular attractions is the famous Seattle Space Needle observation deck. No trip to Seattle is complete without a 360-degree panorama of the gorgeous Emerald City and mountain ranges for miles.

Then, explore Seattle’s piers on its beautiful waterfront, or the dozens of restaurants, shops and attractions — including the famous fish market and original Starbucks — within Pike Place Market.

Come experience beautiful Seattle and be sure to visit www.visitseattle.org to learn more about local attractions.

About the Sheraton Seattle Hotel

The Sheraton Seattle Hotel is conveniently located in the heart of downtown Seattle. Amenities include the Core Fitness Center, two restaurants and bars. Complimentary Wi-Fi is provided in all attendee guest rooms. Walk to top local attractions, such as Pike Place Market, the Seattle Waterfront, Seattle Center and Space Needle to name a few. Visit www.sheratonseattle.com for more information.
REGISTRATION FORM

44th Annual Meeting of the AANS/CNS Section on Pediatric Neurological Surgery
Dec. 8–11, 2015 | Sheraton Seattle Hotel | Seattle, Washington

To register online, visit www.pedsneurosurgery.org

Please PRINT or TYPE:

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**Method of Payment**

Check #

- MasterCard
- Visa
- American Express

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Print name as it appears on credit card

Signature (I agree to pay above total amount according to card issuer agreement.)

Date

If you are paying by credit card, please fax this form to 708.344.4444.

**Note:** A charge to your credit card statement will appear as “AANS and related organization.”

If paying by check, please make checks payable in U.S. dollars, drawn on a U.S. bank and mail to:

AANS/CNS Section on Pediatric Neurological Surgery
c/o CompuSystems
2651 Warrenville Road, Suite 400
Downers Grove, IL 60515

Advance Registration Deadline: Tuesday, Nov. 10, 2015

If you have questions, please contact the AANS/CNS Section on Pediatric Neurological Surgery Registration Department at 224.563.3167 or email aansped@compusystems.com.

**Included in Registration**

Meeting attendee registration includes ONE ticket to each of the following:

- Opening Reception on Tuesday.
- Lunch in the Exhibit Hall on Wednesday and Thursday.
- Wine and Cheese Reception in the Exhibit Hall on Wednesday.
- Continental Breakfast in the Exhibit Hall on Wednesday, Thursday and Friday.
- Beverage Breaks in the Exhibit Hall on Wednesday, Thursday and Friday.

Spouse/Guest registration includes ONE ticket to each of the following:

- Opening Reception in the Exhibit Hall on Tuesday.
- Wine and Cheese Reception in the Exhibit Hall on Wednesday.
- Continental Breakfast in the Exhibit Hall on Wednesday, Thursday and Friday.
REGISTRATION FEES

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<td>Non-Member (902)</td>
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<tr>
<td>Guest (951)</td>
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<td>$175</td>
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*908 Please send a letter from your training program director to AANS/CNS Section on Pediatric Neurological Surgery Registration Department c/o CompuSystems. Fax 708.344.4444
Email: aansped@compusystems.com

**971 Please send a copy of your medical student ID to AANS/CNS Section on Pediatric Neurological Surgery Registration Department c/o CompuSystems. Fax 708.344.4444
Email: aansped@compusystems.com

### Breakfast Seminars

**Medical Legal Aspects of Concussion Management**  
Wednesday, Dec. 9  
6:30–7:30 a.m.  
Member/Non-Member Physician $85  
Residents/Medical Student $65

**Idea to Product: How to Commercialize Your Ideas in Neurosurgery**  
Thursday, Dec. 10  
6:30–7:30 a.m.  
Member/Non-Member Physician $85  
Residents/Medical Student $65

### Special Events

**Opening Reception**  
Wednesday, Dec. 9 | 6:30–7:30 p.m.  
Quantities: ___________________ @ $100 each

**Wine and Cheese Reception**  
Wednesday, Dec. 9 | 4:30–5:30 p.m.  
Quantities: ___________________ @ $60 each

### Cancellation Policy

Requests for registration cancellation must be submitted in writing to: AANS/CNS Section on Pediatric Neurological Surgery  
c/o CompuSystems  
2651 Warrenville Road, Suite 400  
Downers Grove, IL 60515  
Email: aansped@compusystems.com

All refunds will be processed and mailed following the annual meeting. Refunds will be made in accordance with the following schedule. Cancellations received on or before Tuesday, Nov. 10, 2015, will receive a full refund less a $50 service fee. Cancellations received between Wednesday, Nov. 11, 2015, and Monday, Nov. 23, 2015, will receive a full refund less a $100 service fee. No refunds will be granted if received on or after Tuesday, Nov. 24, 2015.

Video capture, live streaming video and/or photography may be taken at the AANS/CNS Section on Pediatric Neurological Surgery Annual Meeting. By registering/attending the meeting, you grant the AANS the right to use captured image, video and biography in print, electronic or other media. All postings become the property of the AANS and may be displayed, distributed or used by the AANS for any purpose. Attendees are prohibited from live streaming, photography and video capture without the consent of the AANS. The AANS is not responsible for unauthorized media capture performed by meeting attendees.
44th Annual Meeting of the AANS/CNS
Section on Pediatric Neurological Surgery
Dec. 8–11, 2015
Sheraton Seattle Hotel
Seattle, Washington

Housing Deadline
Monday, Nov. 16, 2015
Special room rates are available for reservations made on or before Monday, Nov. 16, 2015.

To Make a Reservation
To make a reservation, please visit:
https://www.starwoodmeeting.com/StarGroupsWeb/res?id=1504221349&key=1DABC35
Phone: 888.627.7056
Reference AANS/CNS Section on Pediatric Neurological Surgery upon calling.
Mail: Complete and send housing form to:
Sheraton Seattle Hotel
1499 Sixth Avenue
Seattle, WA 98101

Cancellation Policy
Cancellations must be received at least 24 hours prior to guest arrival date. Any reservation that has not been cancelled, or for individuals who do not arrive, will automatically be billed for one night’s room and tax or forfeit the room deposit received.

Accommodations
Standard King: $159
Standard Double/Double: $159
Rates are available 3 days before and 3 days after meeting, based on availability. Guest room tax is 15.6 percent. Additional $2 per night tourism assessment fee.
Check-in time: 3 p.m.
Check-out time: 12 p.m.

Methods of Guarantee
Due to strict security, the Sheraton Seattle Hotel will only accept credit card reservations by phone or with online reservations. They will only accept mail-in reservation forms with a check payment.

Housing Confirmations will be sent within 48 hours.
Please PRINT or TYPE:

Last Name ___________________________ First Name ___________________________
Organization ____________________________________________
Address ____________________________________________ State ____________ Zip Code ____________ Country ____________
City ____________________________
Business Phone ____________________________ Home Phone ____________________________
Fax Number ____________________________ Email Address ____________________________

SHARED ROOM (list all occupants)
Occupant ____________________________
Occupant ____________________________
Occupant ____________________________

ROOM TYPE REQUESTED (based on availability at check-in)
❑ King   ❑ Double/Double

Special Needs
LOOKING FORWARD TO SEEING YOU IN DECEMBER IN SEATTLE!