

CURRICULUM VITAE

Sergey Neckrysh, MD

Chief of Spine Surgery
Fellowship Program Director
Assistant Professor, Department of Neurosurgery
University of Illinois at Chicago.

May 2018

Date of Birth	June 24, 1973
Place of Birth	Russian Federation
Citizenship	United States of America
Licensure	Illinois License No. 036113099, Active Indiana License 01074691A, Active New York License No. 255512, Inactive Controlled Substance License DEA No. BN***** (Illinois) NPI No. 1285736637
Board Certification	American Board of Neurological Surgery, 2009
Business Address	Department of Neurosurgery University of Illinois - Chicago 912 S. Wood Street MC799 Chicago, IL 60612 Work: (312) 996-4842
Mobile	+1 (312) 450-5880
Email	neckrysh@gmail.com

EDUCATION

Jun 2000 – Jul 2006

Residency in Neurological Surgery. University of Illinois at Chicago. Chicago, IL.

Sep 1997 – Sep 1998

Moscow Sechenov Medical Academy. Program in Public Health and Business Administration.

Sep 1993 – Jun 1997

Moscow Sechenov Medical Academy. Moscow, Russia.
Doctor of Medicine Degree, Diploma with Highest Honors.

Aug 1995 – Aug 1996

Columbia University College of Physicians and Surgeons. New York, NY.
Infolded 12 months advanced study in Neurological Surgery.

Sep 1990 – Sep 1993

Smolensk Medical Academy, Smolensk, Russia. Transferred to Moscow Sechenov Medical Academy to continue medical education.

ACADEMIC APPOINTMENTS & WORK EXPERIENCE

Apr 2010-Present

Chief of Spine Surgery, Assistant Professor,
Director, Spine Fellowship Program
Department of Neurosurgery
University of Illinois at Chicago

June 2010-Present

Neurosurgeon, St. Joseph Medical Center, Chicago, IL

Aug 2006-Apr 2010

Chief, Section of Neurosurgery, Syracuse VA Medical Center
Assistant Professor, Department of Neurosurgery
Syracuse, New York

Jun 2000-Jul 2006

Resident, Department of Neurosurgery
University of Illinois at Chicago

Jul 1999-Jun 2000

Residency Interview and move to the United States for residency training

Mar 1998-Jul 1999

Product Manager

Medical Research/Marketing Department, Bayer AG, Moscow, Russia

PROFESSIONAL EXAMINATIONS & CREDENTIALS

06/1996 USMLE Step 1, Passed

06/1997 Final Licensing and Graduate Examination, Russian Federation, Passed

06/1997 Doctor of Medicine Diploma with Highest Honors

08/1997 USMLE Step 2, Passed

02/1998 ECFMG Certification, Certificate No. 0-554-415-1, Valid Indefinitely

08/2004 USMLE Step 3, Passed

03/2006 Neurosurgery Written Board Examination (ABNS), Passed

11/2009 Neurosurgery Oral Board Examination (ABNS), Passed

AWARDS

1992 Smolensk Medical Academy Scholarship for academic achievements

1994 Mayor of Moscow Scholarship

1995 President of Russian Federation Prize and Scholarship

PROFESSIONAL MEMBERSHIPS

2000-Present American Association of Neurological Surgeons. Active Member

2000-Present Congress of Neurological Surgeons, Active Member

2009-Present International Society for the Advancement of Spine Surgery (ISASS), Active Member

2006-Present Russian American Medical Association

2013-Present Candidate Fellow of Scoliosis Research Society

National and Local Committees

2012-Present Director, Medical Service Plan Board, University of Illinois at Chicago

PUBLICATIONS

1. **Nekrysh SY.** Association between heritable connective tissue disorders and intracranial aneurysms. *Surg Neurol.* 2000 Jul;54(1):77-8. Review.
2. **Neckrysh S,** Lemole GM Jr, Charbel FT. Vascular lesions of the spinal cord, in Kim D, Henn JS, Dickman CA, Vacarro AR (ed): *Surgical Anatomy and Techniques to the Spine:* Philadelphia, Elsevier, 2006, pp 486-498.
3. **Neckrysh S,** Valyi-Nagy T, Charbel FT. Neuroenteric cyst of the anterior cranial fossa. *Surg Neurol.* 2006 Feb;65(2):142-8; discussion 148-9. Review.
4. Lemole GM Jr, Banerjee PP, Luciano C, **Neckrysh S,** Charbel FT. Virtual reality in neurosurgical education: part-task ventriculostomy simulation with dynamic visual and haptic feedback. *Neurosurgery.* 2007 Jul;61(1):142-8; discussion 148-9. Review.
5. Jho DH, **Neckrysh S,** Hardman J, Charbel FT, Amin-Hanjani S. Ethylene oxide gas sterilization: a simple technique for storing explanted skull bone. Technical note. *J Neurosurg.* 2007 Aug;107(2):440-5.
6. Yusupov IR, **Neckrysh S,** Fredrickson BE. Adult Low-Grade Spondylolisthesis. Conservative Treatment vs. Surgery. Vacarro AR (ed): *Controversies in Spine Surgery: Evidence-Based Treatment Recommendations.* Thieme 2010.
7. Herrera SR, Chan M, Alaraj AM, **Neckrysh S,** Lemole MG, Slavin KV, Charbel FT, Amin-Hanjani S. CT Ventriculography for diagnosis of occult ventricular cysticerci. *Surg Neurol Int* 2010;1:92
8. Siemionow KB, **Neckrysh S.** Anterior Approach for Complex Cervical Spondylotic Myelopathy. *Orthop Clin North Am.* 2012 Jan;43(1):41-52
9. **Neckrysh S,** Lemole GM Jr, Charbel FT. Vascular lesions of the spinal cord, in Kim D, Henn JS, Dickman CA, Vacarro AR (ed): *Second Edition. Surgical Anatomy and Techniques to the Spine:* Philadelphia, Elsevier. Aug 2013.
10. Munson T, Krishna PK, **Neckrysh S,** "Journal Club: Spine Patient Outcomes Research Trial: Do Outcomes Vary Across Centers for Surgery for Lumbar Disc Herniation?" *Neurosurgery* (In-press).
11. **Neckrysh S** et al. "T1 pedicle subtraction osteotomy for the treatment of rigid cervical kyphotic deformity: Clinical series of four patients and review of the literature". *Journal of Neurosurgery: Spine* (in print).
12. Tyracowski M, Siemionow KB, **Neckrysh S.** All-posterior vertebral column resection for treatment of metastatic tumors. *Journal of Neurological Surgery – Part A. Central European Neurosurgery* 2014 Sep;75(5):386-91. Epub 2014 May 12.
13. Siemionow K, Tyracowski M, Patel K, **Neckrysh S.** Comparison of perioperative complications following staged versus one day anterior and posterior cervical

decompression and fusion crossing the cervico-thoracic junction. *Neurol Neurochir Pol.* 2014;48(6):403-9. Epub 2014 Oct 22.

14. Patel KR, Szczodry M, **Neckrysh S**, Siemionow K. Anterior cervical corpectomy and fusion for blastomycosis causing destruction of C6 vertebra: a case report. *J Med Case Rep.* 2015 Nov 25;9(1):271.
15. **Neckrysh S**, Krotenkov P. Thoracic discogenic myelopathy: Single-surgeon experience with 27 surgical cases. *Russian Neurosurgical Journal named after Professor A.L. Polenov. Special Issue #1*, 2016.
16. Tobin MK, Birk DM, Rangwala SD, Siemionow K, Schizas C, **Neckrysh S**. T1 pedicle subtraction osteotomy for the treatment of rigid cervical kyphotic deformity: Clinical series of four patients and review of the literature. *J Neurosurg Spine.* 2017 Nov;27(5):487-493.
17. Yin D, Oh G, **Neckrysh S**. Axial and oblique C2 diameters and feasibility of C2 pedicle screw placement: Technical note. *Surg Neurol Int.* 2018 Feb 16;9:40.

PEER-REVIEWED ABSTRACTS & PROFESSIONAL MEETING PRESENTATIONS

1. **AANS 2006.** G. Michael Lemole, MD, Cristian Luciano, MS, P. Pat Banerjee, PhD, **Sergey Neckrysh, MD**, Fady T. Charbel, MD. Virtual Reality in Neurosurgical Education: Part-task Ventriculostomy Simulation with Visual and Haptic Feedback. Article ID: 36270
2. **CNS 2006.** David H. Jho, MD, PHD; **Sergey Y. Neckrysh, MD**; Julian Hardman, BA, BS; Fady T. Charbel, MD; Sepideh Amin-Hanjani, MD. Ethylene Oxide Gas Sterilization: A Simple Effective Technique for Storing Explanted Skull Bone.
3. Chicago Neurosurgery Review Dissection Course (Dr. Kranzler et al). Chicago, IL. June 2012. **Sergey Neckrysh, M.D.** Spinal Instrumentation.
4. 19th International Meeting on Advanced Spine Techniques (**IMAST**), July 18-21, 2012 Istanbul, Turkey. K. Siemionow, MD; **Sergey Neckrysh, MD**. Expandable versus Non-expandable Cage for Thoracic Vertebral Body Resection Performed through a Posterior Approach.
5. 19th International Meeting on Advanced Spine Techniques (**IMAST**), July 18-21, 2012 Istanbul, Turkey. K. Siemionow, MD; **Sergey Neckrysh, MD**. Direct Posterior Distraction for Irreducible Cranial Settling, Surgical Technique and Review of Case Series.
6. 19th International Meeting on Advanced Spine Techniques (**IMAST**), July 18-21, 2012 Istanbul, Turkey. Krzysztof Siemionow, MD; Anis Mekhail, MD; Yazeed Gussous, MD; David Elmashat, MD; **Sergey Neckrysh, MD**; Steven Mardjetko, MD. Use of Vancomycin Powder is Not Associated with Increased Systemic Vancomycin or Creatinine Levels in Patients with Adolescent Idiopathic Scoliosis.
7. Congress of Neurological Surgeons (**CNS**), October 6-12, 2012. Chicago, IL. Krzysztof Siemionow, MD; **Sergey Neckrysh, MD**. Direct Posterior Distraction for Unreducible Cranial Settling, Surgical Technique and Review of Case Series.

8. American Academy of Physical Medicine and Rehabilitation Annual Assembly. Atlanta, Georgia. November 15-18, 2012. Rathi L. Joseph, MD; Terry Nicola, MD; **Sergey Neckrysh, MD**. "C4 Radiculopathy, A Real Pain in the Neck: A Case Report"
9. VCU Pain management and Spine Symposium. October 21-22, 2012, Richmond, VA. **Sergey Neckrysh, M.D.** Update on Spine Surgery for Pain Physicians. How we can work together.
10. **Sergey Neckrysh, MD**, Usman T Siddiqui. "Spinal Glioblastoma: Case Report and review of the literature". European Association of Neurological Surgeons Annual Meeting (**EANS**). . Bratislava, Slovakia, 24-27 October, 2012.
11. **Sergey Neckrysh, MD**, Alexander Nagrebetsky, MD, Krzysztof Siemionow, MD, "Intraoperative image-guidance for odontoid screw fixation". European Association of Neurological Surgeons Annual Meeting (**EANS**). Bratislava, Slovakia, 24-27 October, 2012.
12. Krzysztof Siemionow, MD; **Sergey Neckrysh, MD**. Staged Versus Same Day Anterior Posterior Cervical Decompression and Fusion Crossing the Cervico-Thoracic Junction. 2013 **AAOS** Annual Meeting in Chicago, IL, March 19-23.
13. **Sergey Neckrysh, MD**, Alexander Nagrebetsky, MD; Daniel Birk, MD; Krzysztof Siemionow. "Modified vertebral column resection for calcified thoracic disc herniations. Global Spine Congress, Hong Kong, April 4-6, 2013.
14. **Sergey Neckrysh, MD**, Krzysztof Siemionow, MD, Daniel Birk, MD, Matthew Tobin, BS, Constantin Schizas, M.D. T1 pedicle subtraction osteotomy for the treatment of rigid cervical kyphotic deformity. 29th Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. Phoenix, AZ, Mar 6-9, 2013.
15. **Sergey Neckrysh, M.D.** Breakfast Seminar 206 "If I Could Do This Case Again" AANS Meeting, New Orleans, April 2013
16. Selner A, Ph.D., **Sergey Neckrysh, MD**. Assessment of distance between nerve and electrode in stimulus-evoked EMG during transpsoas approach for lumbar interbody fusion using a human finite element model. Society for Minimally Invasive Spine Surgery Annual Meeting, Las Vegas, NV. Nov 1-3, 2013.
17. **Sergey Neckrysh, MD**. Cervical kyphotic deformity and the role for cervical osteotomies. Selby Spine, Deer Valley, UT, January 29-February 1, 2014.
18. **Sergey Neckrysh, MD**. Cranial settling and C1-2 instability. Surgical strategy and correction techniques. Winter Clinics of North America, Snowmass, CO, February 2014.
19. **Sergey Neckrysh, MD**, Krzysztof Siemionow, MD, Daniel Birk, MD, Matthew Tobin, BS, Constantin Schizas, M.D. T1 pedicle subtraction osteotomy for the treatment of rigid cervical kyphotic deformity. AANS Annual Meeting, San Francisco, Apr 5-9, 2014.
20. **Sergey Neckrysh, MD**. Breakfast Seminar 206 "If I Could Do This Case Again" AANS Meeting, San Francisco, April 2014
21. **Sergey Neckrysh, MD**. Management of Adult Kyphotic Deformity. National Meeting of Spine Surgeons. Krasnodar, Russia. April 21-22, 2014.
22. **Sergey Neckrysh, MD**. Management of Primary and Metastatic Spine Tumors. National Meeting of Spine Surgeons. Krasnodar, Russia. April 21-22, 2014.

23. **Sergey Neckrysh, MD.** Minimally Invasive Spine Surgery. National Meeting of Spine Surgeons. Krasnodar, Russia. April 21-22, 2014.
24. **Sergey Neckrysh, MD.** VCR Technique and Surgical Nuances. National Meeting of Spine Surgeons. Krasnodar, Russia. April 21-22, 2014.
25. **Sergey Neckrysh, MD.** Posterior Cervical Instrumentation in Management of Cervical Deformity and Instability. National Meeting of Spine Surgeons. Krasnodar, Russia. April 21-22, 2014.
26. **Sergey Neckrysh, MD.** Robotically-assisted Thoracic and Lumbar Spine Surgery. Feasibility, Surgical Technique, and Early Experience. Abstract #1195. Congress of Neurological Surgeons 2014 Annual Meeting. Boston, MA, October 18-22, 2014.
27. **Sergey Neckrysh, MD.** Breakfast Seminar 206 "If I Could Do This Case Again" AANS Meeting, Washington, DC, April 2015.
28. **Sergey Neckrysh, MD,** Matthew Tobin, BS et al. Safety and Efficacy of Skipping C7 Instrumentation in Posterior Cervico-Thoracic Fusion. Podium Presentation. Global Spine Congress, Buenos Aires, Argentina May 20-22, 2015.
29. **Sergey Neckrysh, MD.** Cervical deformity correction techniques. Russian-American Neurosurgery Conference, Burdenko Neurosurgical Institute, Moscow, Russia Sep 14-15, 2015.
30. **Sergey Neckrysh, MD.** Surgical Management of the Spinal Cord Vascular Lesions Supplied by the Anterior Spinal Artery. Russian-American Neurosurgery Conference, Burdenko Neurosurgical Institute, Moscow, Russia Dec 10-11, 2015.
31. **Sergey Neckrysh, MD.** Neurosurgical Residency Education in the United States. Russian-American Neurosurgery Conference, Burdenko Neurosurgical Institute, Moscow, Russia Dec 10-11, 2015.
32. **Sergey Neckrysh, MD.** Surgical Management of Adult Cervical Kyphotic Deformity. Winter Clinics of North America. Snowmass, CO, Feb 2016.
33. **Sergey Neckrysh, MD,** Pavel Krotenkov, MD, Ph.D. Surgical Management of the Spinal Cord Vascular Lesions Supplied by the Anterior Spinal Artery. Global Spine Congress / World Forum for Spine Research April 13 - 16, 2016, Dubai, OAE.
34. **Sergey Neckrysh, MD,** Pavel Krotenkov, MD, Ph.D. Surgical Management of Thoracic Disc Herniations. Global Spine Congress / World Forum for Spine Research April 13 - 16, 2016, Dubai, OAE.
35. Shivani D. Rangwala BS, Matthew K. Tobin, BS, Daniel M. Birk, MD, **Sergey Neckrysh, MD.** Safety and Efficacy of Skipping C7 instrumentation in Posterior Cervicothoracic Fusion. Poster Presentation, AANS Annual Meeting, April 2016. Chicago, IL .
36. **Sergey Neckrysh, MD.** Breakfast Seminar 206 "If I Could Do This Case Again" AANS Meeting, Chicago, May 2016.
37. **Sergey Neckrysh, MD,** Constantin Schizas, MD. Cervical Kyphotic Deformity Managed with Upper Thoracic Pedicle Subtraction Osteotomy: Clinical Parameters and Outcome Analysis of 13 cases. Eurospine, Berlin, October 2016.

38. **Sergey Neckrysh, MD.** Surgical Management of Adult Cervical Kyphotic Deformity. Winter Clinics of North America. Snowmass, CO, Feb 2017.
39. Dali Yin, MD, Gerald Oh, MD, **Sergey Neckrysh, MD.** Axial and oblique C2 pedicle diameters and their application for screw placement. ISASS Annual Meeting, Boca Raton, FL, April 2017.
40. Dali Yin, MD, Gerald Oh, MD, **Sergey Neckrysh, MD.** Axial and oblique C2 pedicle widths and their application for screw placement. AANS Meeting, Los Angeles April 2017.
41. Dali Yin, MD, Gerald Oh, MD, **Sergey Neckrysh, MD.** Axial and Oblique C2 Pedicle Widths and Their Application for Screw Placement. Global Spine Congress, Milan, May 2017.
42. **Sergey Neckrysh, MD.** Management of Adult Cervical Deformity. Moscow, May 18-19, 2017. WFNS Symposium, Burdenko Neurosurgical Institute, Moscow, Russia.
43. **Sergey Neckrysh, MD.** Surgical Management of Adult Cervical Kyphotic Deformity. Winter Clinics of North America. Snowmass, CO, Feb 2018.
44. **Sergey Neckrysh, MD.** Surgery Selection and Indications for the Management of Cervical Deformity. Meeting of the Minds. Chicago, IL May 2018.

INVITED SPEAKER & COURSE FACULTY

1. Anterior Approaches to the Cervical Spine. University of Illinois-Chicago. July 2004.
2. Pterional and Orbitozygomatic Craniotomy. University of Illinois-Chicago. December 2004.
3. Surgical Techniques to Posterior Cervical Spine. University of Illinois-Chicago. September 2005.
4. Neurosurgery Bootcamp sponsored by AANS, Chicago, IL, July 2010.
5. University of Illinois Spine Surgery Course. NASS, Burr Ridge, IL. April 2011.
6. Neurosurgery Bootcamp sponsored by AANS, Chicago, IL, July 2011.
7. Neurosurgery Residents' Weekend. DePuy Institute, Raynham, MA. August 2011.
8. Spine + Science + Management. Resident Course. Las Vegas, NV. November 2011.
9. Panelist at East Coast Deformity Peer-to-Peer Meeting. Feb 16-18, 2012 Miami, FL.
10. Panelist at Medtronic Biologics Meeting, Apr 27-28, 2012 Chicago, IL.
11. University of Illinois Spine Course. Jun-Jul 2012. Chicago, IL.
12. Faculty for Chicago Board Review Course, Chicago, IL, June 1-10, 2012.
13. Course Chairman for Spine Future Leaders Workshop: Cervico-thoracic Spine Treatment Options. August 25, 2012. Evanston, IL.
14. Spine Surgery for a mid-level provider. University of Illinois. Aug 2012.

15. Skin to Skin MIS LLIF/TLIF MERC Educational Program for Globus Spine. NASS, October 2012.
16. Spine + Science + Management. Resident Course. New Orleans, LA. November 2012.
17. Panelist at East Coast Deformity Peer-to-Peer Meeting. Feb 21-22, 2013 Miami, FL
18. Multilevel Anterior Lumbar Corpectomy. K2M Neurosurgical Advisory Team Meeting, Boston, MA, April 2013.
19. Course Chairman for Midwest DePuy Synthes Sagittal Balance Symposium. Chicago, IL. Apr 2013
20. Chairman for Sagittal Balance and Advanced Osteotomy Course. Sponsored by Globus Medical. North American Spine Society Bio Skills lab, Chicago, IL. June 21st, 2013.
21. ACDF and Why does it make sense. Presentation for 2013 Midwest Arthroplasty Symposium sponsored by DePuy Synthes. Oct 3, 2013. Chicago, IL.
22. Speaker for 2013 DePuy Synthes Spine Future Leaders Workshop: Decision Making & Treatment Options for Spine Tumors. Houston, TX. October 4-5, 2013.
23. Speaker and Panelist for Chicago Orthobiologics and Cell Regeneration Summit. October 23, 2013. Chicago, IL. CLESF.
24. Speaker and Panelist for 2013 Midwest Deformity Peer-To-Peer. October 25-26, 2013. Chicago, IL.
25. Chairman and Faculty for the National Meeting of Spine Surgeons with Hands-On Course. Krasnodar, Russia. April 21-22, 2014.
26. Chairman for the Advanced Osteotomy Course. MERC Lab. Sponsored by Globus Medical. June 06, 2014.
27. Chairman for Chicago Orthobiologics & Cell Regeneration Summit. University of Illinois-Chicago. June 21, 2014
28. Upper thoracic osteotomies for the correction of cervical chin on chest deformity. Round table presentation. Istituto Ortopedico Rizolli. Bologna, Italy. November 25, 2014.
29. Adult Sagittal Plane Deformity Correction: Considerations & Pre-Operative Planning. K2M Workshop during Scoliosis Research Society Worldwide Course in Novosibirsk, Russia. November 28, 2014.
30. Speaker and Panelist at East Coast Deformity Peer-to-Peer Meeting. Apr 24-25, 2015 Miami, FL.
31. Adult Sagittal Plane Deformity Correction: Considerations & Pre-Operative Planning. K2M Workshop during Congress of Mexican Spine Society, Puerto Vallarta, Mexico, July 2-4, 2015.
32. Chairman for Adult Spinal Deformity Course. Miami, October 2015. Sponsored by Globus Medical.
33. Chairman for Adult Spinal Deformity Course. Miami, October 2016. Sponsored by Globus Medical.
34. Course faculty. Sagittal Plane Deformity. Globus Spine. Newport Beach, CA May 2018.

OTHER EDUCATIONAL EVENTS AND PRESENTATIONS

1. Cervical Disc Replacement. Diamond Mark Event. Nov 15, 2012 Oak Brook, IL.
2. Spine Surgery Update. Chicago Latino Network. EBC, Feb 06, 2013
3. Spine Surgery in a Challenging Worker's Compensation Environment. Diamond Mark Event. Feb 07, 2013 Oak Brook, IL.
4. Spine Surgery Update for Operating Room personnel. Chicago, IL. Mar 22, 2013
5. Spine Surgery Update for the Worker's Compensation Legal Teams. June 27, 2013. Chicago, IL .
6. Grand rounds for Union Health Services. "Update on new techniques in spine surgery". Chicago, IL, August 21, 2013.
7. Mock IME. Illinois Firefighter and Police Pension Board. Lake Geneva, WI Oct 2013.
8. IME Seminar. Amtrust North America. Chicago, IL, November 2013.
9. Spine Surgery Update. Allosource Headquarters. Denver, CO, Mar 7, 2014.
10. Keynote speaker for the 45th Annual Meeting of the Lithuanian American Medical Association Meeting, Jackson Hole, WY, Mar 2014.

CONTINUED MEDICAL EDUCATION

1. CNS Annual Meeting, San Francisco, CA October 2010.
2. AO Spine Advanced Spine Course. Davos, Switzerland. December 13-17, 2010.
3. Thomas G. Lowe Spine Symposium: The Surgical Management of Spinal Disorders, Beaver Creek, CO, Jan 14-17, 2011.
4. Neurosurgery Update 2011 in the Wine County, Silverado Resort, Napa, CA. Aug 4-6, 2011.
5. Thomas G. Lowe Spine Symposium: The Surgical Management of Spinal Disorders, Beaver Creek, CO, Jan 13-16, 2012.
6. Selby Spine Meeting, Deer Valley, CO, Feb 1-4, 2012.
7. AANS Annual Meeting, Miami, FL, Apr 2012.
8. Spine Week 2012, Amsterdam, Netherlands May 28 – Jun 01, 2012.
9. SANS Spine Module. March 2012.
10. Managing Coding and Reimbursement Challenges in Neurosurgery, Washington, DC, Sep 7-8, 2012.
11. CNS Annual Meeting, Oct 2012.

12. Thomas G. Lowe Spine Symposium: The Surgical Management of Spinal Disorders, Beaver Creek, CO, Jan 18-21, 2013.
13. Selby Spine Meeting, Deer Valley, CO, Jan 30-Feb 3, 2013.
14. Winter Clinics of North America, Snowmass, CO, Feb 24-Feb 28, 2013.
15. AMA Guides Sixth Edition Impairment Rating Course – General Evaluation. Chicago, IL. June 8th, 2013.
16. Adult Deformity Course. Chicago, IL. August 16, 2013.
17. BrainLAB Stereotactic Radiosurgery Course, August, 2013.
18. CLESS Meeting, Chicago, IL. Oct 2013.
19. Cervical Spine Research Society Annual Meeting, Los Angeles, CA, Dec 2013.
20. Selby Spine Meeting, Deer Valley, CO, Jan 30-Feb 1, 2014.
21. Winter Clinics of North America, Snowmass, CO, Feb 22-Feb 25, 2014.
22. AANS Annual Meeting, San Francisco, CA, Apr 2014.
23. AANS Annual Meeting, Washington, DC, Apr 2015.
24. Russian-American Neurosurgery Conference, Burdenko Neurosurgical Institute, Moscow, Russia Sep 14-15, 2015.
25. First International Spinal Deformity Symposium. Chicago, December 2015.
26. Russian-American Neurosurgery Conference, Burdenko Neurosurgical Institute, Moscow, Russia Dec 10-11, 2015.
27. Spine Base to the Summit Meeting. Beaver Creek, CO Jan 2016.
28. Winter Clinics of North America, Feb 2016.
29. IMAST 2016. Washington, DC July 2016.