

# venu M. NEMANI, MD, PHD

Raleigh Orthopaedic Clinic  
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## EDUCATION / TRAINING

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- 2002                      **B.S. Chemistry**  
Duke University  
Durham, North Carolina
- 2008                      **Ph.D. Neuroscience**  
University of California, San Francisco (UCSF)  
San Francisco, California
- 2010                      **M.D.**  
University of California, San Francisco (UCSF)  
San Francisco, California
- 2010 – 2015              **Orthopaedic Surgery Residency**  
Hospital for Special Surgery  
New York, New York  
Residency Director: Mathias Bostrom, MD
- July – Aug 2014        **Traveling Fellowship - Spinal Deformity Surgery**  
Keio Medical Center (Tokyo, Japan): Dr. Kota Watanabe  
Muruyama Medical Center (Tokyo, Japan): Dr. Mitsuru  
Yagi, Dr. Musafumi Machida  
Kobe Medical Center (Kobe, Japan): Dr. Koki Uno
- 2015 – 2016              **Adult & Pediatric Spine Surgery Fellowship**  
Washington University School of Medicine  
St. Louis, Missouri  
Fellowship Director: Keith Bridwell, MD
- Columbia University / Allen Spine Hospital  
New York, New York  
Fellowship Directors: Lawrence G. Lenke, MD &  
K. Daniel Riew, MD

## **WORK EXPERIENCE / ACADEMIC APPOINTMENTS**

- 2011 – 2014                      **Clinical Associate in Orthopaedic Surgery**  
Weill Cornell Medical College  
New York Presbyterian Hospital - Cornell
- 2014 – 2015                      **Senior Clinical Associate in Orthopaedic Surgery**  
Weill Cornell Medical College  
New York Presbyterian Hospital – Cornell
- Aug 2015 – Aug 2016            **Instructor**  
Department of Orthopaedic Surgery  
Washington University in St. Louis School of Medicine
- Nov 2015 – Jan 2016            **Assistant Professor in Clinical Orthopaedic Surgery**  
**Postdoctoral Clinical Fellow**  
Adult and Pediatric Comprehensive Spine Fellowship  
Department of Orthopaedic Surgery  
Columbia University Medical Center
- Assistant Attending Physician**  
Department of Orthopaedic Surgery  
New York Presbyterian Hospital – Columbia
- Aug 2016 – present              **Orthopaedic Spine Surgeon**  
Raleigh Orthopaedic Clinic  
Raleigh, NC

## **BASIC SCIENCE RESEARCH EXPERIENCE**

- Summer 1999, 2000              **Summer Research Intern – Mayo Clinic**  
Structure-function relationship of calcium binding to  
parvalbumin – advisor: Franklyn Prendergast, MD, PhD
- Summer 2001                      **Summer Research Intern – University of Hawaii**  
Trace metal effects on growth of the microalgae  
*Pinguicoccus pyrenoidosa* – advisor: Edward Laws, PhD
- 2000 – 2002                      **Honors Thesis Research - Duke University**  
Binding of calcium-calmodulin dependent protein kinase  
IV to the nuclear matrix – advisor: Anthony Means, PhD
- 2004 – 2008                      **Ph.D. Dissertation Research - UCSF**

Regulation of the synaptic vesicle cycle and mitochondrial morphology by  $\alpha$ -synuclein – advisor: Robert Edwards, MD

2012 – 2015

**Mineralized Tissue Laboratory – HSS**

MicroCT analysis of bone tissue properties and bone microarchitecture in patients with bisphosphonate-associated atypical femur fractures – advisors: Adele Boskey, PhD and Joseph Lane, MD

**AWARDS / HONORS**

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- 2001                    **Summer Undergraduate Research Fellowship**, Marine Bioproducts Engineering Center, University of Hawaii, Manoa
- 2002                    **Magna cum laude**, Duke University
- 2002                    **Graduation with Distinction**, Department of Chemistry, Duke University
- 2002                    **Medical Scientist Training Program Grant**, National Institutes of Health and UCSF School of Medicine
- 2004                    **Dean’s Prize for Research**, UCSF School of Medicine  
Awarded for research on the “Binding of  $\alpha$ -synuclein to lipid rafts *in vitro*”
- 2005                    **Hillblom Predoctoral Fellowship**, Hillblom Center for the Biology of Aging, UCSF (could not accept due to concurrent MSTP funding)
- 2006                    **Hillblom Predoctoral Fellowship**, Hillblom Center for the Biology of Aging, UCSF
- 2009                    **Alpha Omega Alpha Honor Medical Society**  
UCSF School of Medicine
- 2013                    **Andrew Swanson Alumni Traveling Fellowship**  
Hospital for Special Surgery
- 2014                    **OREF/Depuy Resident Research Project Grant**  
Project: MicroCT Analysis of Bone Tissue Properties and Microarchitecture in Patients with Bisphosphonate-Associated Atypical Femur Fractures

2015	<b>Scoliosis Research Society OrthoPediatrics Scholarship</b>
2015	<b>Thomas P. Sculco Award, Hospital for Special Surgery</b>
2015	<b>AAOS/OREF/ORS Clinician Scholar Development Program</b>

## **PEER REVIEWED JOURNAL ARTICLES**

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1. **Nemani, V.M.**, Binder, D.K. (2005) Emerging Role of Gap Junctions in Epilepsy. *Histology and Histopathology*. 20(1): 253-259.
2. Ware, M.L., **Nemani, V.M.**, Meeker, M., Lee, C., Morabito, D.J., Manley G.T. (2005) Effects of 23.4% Sodium Chloride Solution in Reducing Intracranial Pressure in Patients with Traumatic Brain Injury: A Preliminary Study. *Neurosurgery*. 57(4): 727-736.
3. Kubo, S., **Nemani, V.M.**, Chalkley, R.J., Anthony, M.D., Hattori, N., Mizuno, Y., Edwards, R.H., Fortin, D.L. (2005) A combinatorial code for the interaction of  $\alpha$ -synuclein with membranes. *Journal of Biological Chemistry*. 280(36): 31664-72.
4. Fortin, D.L., **Nemani, V.M.**, Voglmaier, S.M., Anthony, M.D., Ryan, T.A., Edwards, R.H. (2005) Neural activity controls the synaptic accumulation of  $\alpha$ -synuclein. *Journal of Neuroscience*. 25: 10913-10921.
5. Larsen, K.E., Schmitz, Y., Troyer, M.D., Mosharov, E., Dietrich, P., Quazi, A.Z., Savalle, M., **Nemani, V.**, Chaudhry, F.A., Edwards, R.H., Stefanis, L., Sulzer, D. (2006)  $\alpha$ -Synuclein Overexpression in PC12 and Chromaffin Cells Impairs Catecholamine Release by Interfering with a Late Step in Exocytosis. *Journal of Neuroscience*. 26: 11915-11922.
6. Nakamura, K., **Nemani, V.M.**, Wallender, E.K., Kaehlcke, K., Ott, M., Edwards, R.H. (2008) Optical reporters for the conformation of  $\alpha$ -synuclein reveal a specific interaction with mitochondria. *Journal of Neuroscience*. 28: 12305-12317.
7. **Nemani, V.M.**, Lu, W., Berge, V., Nakamura, K., Onoa, B., Lee, M.K., Chaudhry, F.A., Nicoll, R.A., Edwards, R.H. (2010) Increased expression of  $\alpha$ -synuclein reduces neurotransmitter release by inhibiting synaptic vesicle reclustering after endocytosis. *Neuron*. 65: 66-79. Preview by Surmeier, D.J. (2010) *Neuron*, 65: 3-4.
8. Fortin, D.L., **Nemani, V.M.**, Nakamura, K., Edwards, R.H. (2010) The behavior of alpha-synuclein in neurons. *Movement Disorders*. 25: S21-S26.
9. Nakamura, K., **Nemani, V.M.**, Azarbal, F., Skibinski, G., Levy, J.M., Egami, K., Munishkina, L., Zhang, J., Gardner, B., Wakabayashi, J., Sesaki, H., Cheng, Y.,

Finkbeiner, S., Nussbaum, R.L., Masliah, E., Edwards, R.H. (2011) Direct membrane association drives mitochondrial fission by the Parkinson's disease-associated protein alpha-synuclein. *Journal of Biological Chemistry*. 286 (23): 20710-20726. \*Selected by JBC editors as one of the 20 "Best of 2011", top paper from Neurobiology in 2011\*

10. **Nemani, V.M.**, Frank, R.M., Reinhardt, K.R., Pascual-Garrido, C., Yanke, A.B., Drakos, M., Warren, R.F. (2012) Popliteal venotomy during posterior cruciate ligament reconstruction in the setting of a popliteal artery bypass graft: a case report. *Arthroscopy*. 28(2): 294-299.

11. **Nemani, V.M.**, Aichmair, A., Taher, F., Lebl, D.R., Hughes, A.P., Sama, A.A., Cammisa, F.P., Girardi, F.P. (2014) Rate of Revision Surgery Following Standalone Lateral Lumbar Interbody Fusion for Lumbar Spinal Stenosis. *Spine*. 39(5): E326 - E331.

12. Boachie-Adjei, O., Yagi, M., **Nemani, V.M.**, Sacramento-Dominguez, C., Akoto, H., Cunningham, M.E., Gupta, M., Hess, W.F., Lonner, B.S., Mendelow, M.J., Papadopoulos, E., Sanchez-Perez-Grueso, F., Pelise, F., Paonesa, K., Wright, B., Wulff, I., Kim, H.J. (2015) Incidence and Risk Factors for Major Surgical Complications in Patients with Complex Spinal Deformity: A Report From an SRS GOP Site. *Spine Deformity*. 3(1): 57-64.

13. **Nemani, V.M.**, Kim, H.J., Piyaskulkaew, C., Nguyen, J.T., Riew, K.D. (2015) Correlation of Cord Signal Change With Physical Exam Findings in Patients With Cervical Myelopathy. *Spine*. 40(1): 6-10.

14. Kim, H.J., **Nemani, V.M.**, Riew, K.D. (2015) Cervical Osteotomies for Neurological Deformities. *European Spine Journal*. 24 Suppl 1: 16-22.

15. **Nemani, V.M.**, Kim, H.J., Bjerke-Kroll, B.T., Yagi, M., Sacramento-Dominguez, C., Akoto, H., Papadopoulos, E.C., Perez-Grueso, F.J., Pellise, F., Nguyen, J.T., Wulff, I., Ayamga, J., Mahmud, R., Hodes, R.M., Boachie-Adjei, O., FOCOS Spine Study Group. (2015) Pre-Operative Halo-Gravity Traction for Severe Spinal Deformities at an SRS-GOP Site in West Africa: Protocols, Complications and Results. *Spine*. 40(3): 153-161.

16. Fu, M.C., **Nemani, V.M.**, Albert, T.J. (2015) Operative Treatment of Thoracolumbar Burst Fractures: Is Fusion Necessary? *HSS Journal*. 11(2): 187-189.

17. Sacramento-Dominguez, C., Yagi, M., Ayamga, J., **Nemani, V.M.**, Akoto, H., Mahmud, R., Wulff, I.A., Gupta, M., Papadopoulos, E.C., Pellise, F., Sanchez-Perez-Grueso, F., Hess, W.F., Kim, H.J., Hodes, R., Boachie-Adjei, O. (2015) Apex of Deformity For 3-Column Osteotomy. Does It Matter In The Occurrence of Complications? *The Spine Journal*. 15 (11): 2351-2359.

18. **Nemani, V.M.**, Derman, P.B., Kim, H.J. (2016) Osteotomies in the Cervical Spine. *Asian Spine Journal*. 10(1): 184-195.

19. Kim, H.J., **Nemani, V.M.**, Piyaskulkaew, C., Vargas, S.R., Riew, K.D. (2016) Cervical Radiculopathy: Incidence and Treatment of 1420 Consecutive Cases. *Asian Spine Journal*. 10(2): 231-237.
20. Iyer, S., **Nemani, V.M.**, Nguyen, J., Elysee, J., Burapachaisri, A., Ames, C.P., Kim, H.J. (2016) The Impact of Cervical Sagittal Alignment Parameters On Neck Disability. *Spine*. 41(5): 371-377.
21. Iyer, S., **Nemani, V.M.**, Kim, H.J. (2016) A Review of Complications and Outcomes Following Vertebral Column Resection in Adults. *Asian Spine Journal*. 10(3): 601-609.
22. Jo, J.E., Miller, A.O., Cohn, M.R., **Nemani, V.M.**, Schneider, R., Lebl, D. (2016) Evaluating the Diagnostic Yield of Computed Tomography-Guided Aspirations in Suspected Post-Operative Spine Infections. *HSS Journal*. 12(2): 119-124.
23. Iyer, S., Lenke, L.G., **Nemani, V.M.**, Albert, T.J., Sides, B.A., Metz, L.N., Cunningham, M.E., Kim, H.J. (2016) Variations in Sagittal Alignment Parameters Based on Age: A Prospective Study of Asymptomatic Volunteers Using Full-Body Radiographs. *Spine*. Epub ahead of print.
24. Iyer, S., Lenke, L.G., **Nemani, V.M.**, Fu, M., Shifflett, G.D., Albert, T.J., Sides, B.A., Metz, L.N., Cunningham, M.E., Kim H.J. (2016) Variations in Occipitocervical and Cervicothoracic Alignment Parameters Based on Age: A Prospective Study of Asymptomatic Volunteers Using Full-Body Radiographs. *Spine*. Epub ahead of print.

## **BOOK CHAPTERS / THESES / INVITED ARTICLES**

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1. Chi, J.H., **Nemani, V.**, Manley, G.T. (2003) Pre-Hospital Treatment of Traumatic Brain Injury. *Seminars in Neurosurgery*. 14(2): 71-78.
2. **Nemani, V.M.**, Manley, G.T. (2004) Brain Tissue Oxygen Monitoring: Physiologic Principles and Clinical Application. *Operative Techniques in Neurosurgery*. 7(1): 2-9.
3. **Nemani, Venu Maadhav**. Regulation of the synaptic vesicle cycle and mitochondrial morphology by alpha-synuclein [Ph.D. dissertation]. United States -- California: University of California, San Francisco; 2008. Available from: Dissertations & Theses @ University of California. Publication Number: AAT 3311344.
4. Fortin, D.L., **Nemani, V.M.**, Edwards, R.H. (2008) The Dynamics of  $\alpha$ -Synuclein at the Nerve Terminal. In "Parkinson's Disease: Molecular and Therapeutic Insights from Model Systems." Editors: Richard Nass and Serge Przedborski. Academic Press. 686 pages.

5. Maak T.G., **Nemani V.**, Wickiewicz T.L., Rodeo S.A. (2014) Meniscus Allograft Transplantation in Revision ACL Reconstruction. In "Revision ACL Reconstruction: Indications and Technique." Editor: Robert Marx. Springer. 300 pages.
6. **Nemani, V.M.**, Kim, H.J. (2014) The Management of Unstable Cervical Spine Injuries. *Clinical Medicine Insights: Trauma and Intensive Medicine*. 5: 7-13.
7. **Nemani, V.M.** and Rawlins, B.A. (2014) Anterior/Posterior Surgery for Spinal Deformity. In "Spinal Deformities: The Essentials" Editor: Robert F. Heary. 2<sup>nd</sup> edition. Thieme Publishers. 261 pages.
8. **Nemani, V.M.**, Kim, H.J., Riew, K.W. (2013) Cervical Spine Injuries in the Athlete: Return to Play Criteria. In "The Spine" Editor: Alexander Vaccaro. In Press.
9. **Nemani, V.M.**, Kim, H.J., Cunningham, M.E. (2015) Anatomy and Biomechanics Relevant to Spondylolisthesis. In "Spondylolisthesis: Diagnosis, Non-Surgical Management, and Surgical Techniques" Editors: Adam Wollowick & Vishal Sarwahi. Springer. 361 pages.
10. **Nemani, V.M.**, Boachie-Adjei, O., Rawlins, B.A. (2013) Posterior Rib Osteotomy For Rigid Coronal Spinal Deformities. In "Spine Surgery: Tricks of the Trade." 3<sup>rd</sup> edition. Editors: Alexander Vaccaro & Todd Albert. In Press.
11. **Nemani, V.M.**, Park, C., Nawabi, D.H. (2014) What Makes a "Great Resident": The Resident Perspective. *Current Reviews in Musculoskeletal Medicine*. 7(2): 164-167.
12. Koerner, J.D., **Nemani, V.M.**, Albert, T.J., Boachie-Adjei, O. (2013) Is AxiaLIF Comparable to Open Fusion With ALIF and Posterolateral 360° Fusion at L5-S1? In "Controversies in Spine Surgery: Best Evidence Recommendations, MIS versus Open." Editors: Alexander R. Vaccaro, Richard G. Fessler, Jason C. Eck, Faheem Sandhu, Jean Marc Voyadzis, Christopher K. Kepler. In Press.
13. Kim, H.J., **Nemani, V.M.**, Riew, K.D., Brasington, R. (2015) Cervical Spine Disease in Rheumatoid Arthritis: Incidence, Manifestations and Therapy. *Current Rheumatology Reports*. 17(2): 9.
14. **Nemani, V.M.** and Cunningham, M.E. (2015) Biological Aspects of Spine Fusion – Methods to Enhance Fusion Rates. In "Rigid Spine Deformities – Management and Correction." Editors: Leon Kaplan and Lawrence Lenke. Thieme Publishing. In Press.
15. **Nemani, V.M.** and Kim, H.J. (2015) Cervical Amyotrophy. In "Cervical Myelopathy." Editor: PG Passias. Jaypee Medical Inc. In Press.
16. **Nemani, V.M.**, Derman, P.B., Kim, H.J. (2015) Corrective Osteotomies in the Cervical Spine. In "Rigid Spine Deformities – Management and Correction." Editors: Leon Kaplan and Lawrence Lenke. Thieme Publishing. In Press.

17. **Nemani, V.M.** and Albert, T.J. (2015) Cervical Deformity – Diagnosis and Management. In “Current Progress in Orthopaedics, Volume 2.” Editors: Ashok Johari, Keith DK Luk, James P Waddell. Tree Life Media. In Press.

18. **Nemani, V.M.**, Blakemore, L., Karol, L., Green, D., Widmann, R.F. (2016) Adolescent Idiopathic Scoliosis: Update on Bracing, Surgical Techniques, and Patient Safety. Instructional Course Lecture. In Press.

## **PODIUM PRESENTATIONS**

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1. **Nemani V.M.**, Kubo, S., Edwards, R.H. Binding of alpha-synuclein to lipid rafts *in vitro*. 2004 UCSF School of Medicine Dean’s Prize Awards Ceremony Presentation.

2. **Nemani, V.M.**, Garner, M., McLawhorn, A. Exercises for Older Adults with Osteoarthritis. Hospital for Special Surgery Greenberg Academy for Successful Aging. Spring 2013.

3. **Nemani, V.M.**, Taher, F., Aichmair, A., Lebl, D.R., Sama, A.A., Cammisa, F.P., Girardi, F.P. Rate of revision surgery following standalone lateral transposas interbody fusion for lumbar spinal stenosis. 2013 AO Spine Global Spine Congress Meeting. Hong Kong. Podium presentation.

4. **Nemani, V.M.**, Kim, H.J., Piyaskulkaew, C., Riew, K.D. Correlation of Cord Signal Change With Physical Exam Findings in 61 Consecutive Patients With Cervical Myelopathy. 2014 American Academy of Orthopaedic Surgeons Annual Meeting. New Orleans, LA. Podium presentation.

5. **Nemani, V.M.**, Mina, C.A., Kim, H.J., Ross, T., Cunningham, M.E., Rawlins, B.A., Boachie-Adjei, O. Post-Operative Blood Salvage and Autotransfusion Following Surgery for Adult Spinal Deformity: A Randomized Controlled Trial. 2014 North American Spine Society Annual Meeting. San Francisco, CA. Podium Presentation.

6. Boachie-Adjei, O., Bjerke-Kroll, B., Zuchelli, D., **Nemani, V.M.**, Ayamga, J., Emerson, R., FOCOS Research Associates. Prognosis for Intraoperative Spinal Cord Injury in Severe Spinal Deformity Surgery in the Developing World. 2014 International Meeting on Advanced Spine Techniques (IMAST). Valencia, Spain. Podium Presentation.

7. Zuchelli, D., Bjerke-Kroll, B., **Nemani, V.M.**, Emerson, R., Ayamga, J., Boachie-Adjei, O., FOCOS Research Associates. Characterization of Significant Neurophysiologic Intraoperative Monitoring Events in Severe Spinal Deformity Surgery. 2014 International Meeting on Advanced Spine Techniques (IMAST). Valencia, Spain. Podium Presentation.



8. Bjerke-Kroll, B., Zuchelli, D., **Nemani, V.M.**, Emerson, R., Ayamga, J., Boachie-Adjei, O., FOCOS Research associates. A Prospective Study of a Decision-Making Algorithm for Significant Neurophysiologic Intraoperative Monitoring Events in Severe Spinal Deformity Surgery. 2014 Scoliosis Research Society Annual Meeting. Anchorage, AK. Podium Presentation.
9. Kim, H.J., **Nemani, V.M.**, O'Neill, K.R., Neuman, B., Boachie-Adjei, O., Cunningham, M.E., Lenke, L.G. Distal Fusion Level Selection in Scheuermann's Kyphosis – A Comparison of Lordotic Disc Segment Versus the Stable Sagittal Vertebrae. 2014 Scoliosis Research Society Annual Meeting. Anchorage, AK. Podium Presentation.
10. **Nemani, V.M.**, Kim, H.J., Bjerke-Kroll, B.T., Yagi, M., Sacramento-Dominguez, C., Akoto, H., Gupta, M.C., Hess, W.F., Papadopoulos, E.C., Perez-Grueso, F.J., Pellise, F., Wright, B., Wulff, I., Ayamga, J., Mahmud, R., Boachie-Adjei, O. Pre-Operative Halo-Gravity Traction for Severe Spinal Deformities at an SRS-GOP Site in West Africa: Protocols, Complications and Results. 2014 Scoliosis Research Society Annual Meeting. Anchorage, AK. Podium Presentation.
11. **Nemani, V.M.**, Mina, C.A., Kim, H.J., Ross, T., Cunningham, M.E., Rawlins, B.A., Boachie-Adjei, O. Post-Operative Blood Salvage and Autotransfusion Following Surgery for Adult Spinal Deformity: A Randomized Controlled Trial. 2014 Scoliosis Research Society Annual Meeting. Anchorage, AK. Podium Presentation.
12. Bjerke-Kroll, B., Zuchelli, D., **Nemani, V.M.**, Emerson, R., Boachie-Adjei, O. Prognosis of Significant Intraoperative Neurophysiologic Monitoring Events in Severe Spinal Deformity Surgery. 2015 American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. Podium Presentation.
13. **Nemani, V.M.**, Kim, H.J., Mina, C.A., Derman, P.B., Ross, T., Cunningham, M.E., Rawlins, B.A., Boachie-Adjei, O. Post-Operative Blood Salvage and Autotransfusion for Adult Spinal Deformity: A Randomized Controlled Trial. 2015 American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. Podium presentation.
14. Widmann, R.F. and **Nemani, V.M.** AIS Classification and Choosing Fusion Levels in Adolescent Idiopathic Scoliosis. Instructional Course Lecture: Management of Adolescent Idiopathic Scoliosis: State of the Art and Best Practices for 2015. 2015 American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. Podium presentation.
15. Widmann, R.F. **Nemani, V.M.**, McHugh, B. Principles of Thoracic Pedicle Screw Placement. Instructional Course Lecture: Management of Adolescent Idiopathic Scoliosis: State of the Art and Best Practices for 2015. 2015 American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, NV. Podium presentation.
16. Kim, H.J., Iyer, S., Theologis, A., **Nemani, V.M.**, Albert, T.J., Lenke, L.G., Burch, S., Boachie-Adjei, O., Deviren, V., Protopsaltis, T.S., Smith, J.S., Scheer, J.K., Mizutani, J.,

Klineberg, E.O., Ames, C.P. Outcomes and Complications of Fusions from the Cervical Spine to the Pelvis: Series of 46 Cases With Average 2.7 year Follow Up. 2015 International Meeting on Advanced Spine Techniques (IMAST). Kuala Lumpur, Malaysia. Podium Presentation.

17. Iyer, S., Lenke, L.G., **Nemani, V.M.**, Albert, T.J., Sides, B.A., Metz, L.N., Cunningham, M.E., Kim, H.J. Variations in Sagittal Alignment Parameters Based on Age: A Prospective Study of Normal Patients Using EOS Imaging. 2015 International Meeting on Advanced Spine Techniques (IMAST). Kuala Lumpur, Malaysia. Point Presentation.

18. Kim, H.J., Iyer, S., Theologis, A., **Nemani, V.M.**, Albert, T.J., Lenke, L.G., Burch, S., Boachie-Adjei, O., Deviren, V., Protosaltis, T.S., Smith, J.S., Scheer, J.K., Mizutani, J., Klineberg, E.O., Ames, C.P. Extent of Proximal Fusion Correlates With Worse Clinical Outcomes in Cervical to Pelvis Fusions. 2015 Scoliosis Research Society Annual Meeting. Minneapolis, Minnesota. Podium Presentation.

19. Iyer, S., Lenke, L.G., **Nemani, V.M.**, Fu, M., Albert, T.J., Sides, B.A., Metz, L.N., Cunningham, M.E., Kim, H.J. Variations In Sagittal Alignment Parameters Based On Age: A Prospective Study Of Normal Patients Using EOS Imaging. 2015 Cervical Spine Research Society Meeting. San Diego, CA. Podium Presentation.

20. Iyer, S., Kim, H.J., Theologis, A., **Nemani, V.M.**, Albert, T.J., Lenke, L.G., Burch, S., Boachie-Adjei, O., Deviren, V., Protosaltis, T.S., Smith, J.S., Scheer, J.K., Mizutani, J., Klineberg, E.O., Ames, C.P. Outcomes And Complications Of Fusions From The Cervical Spine To The Pelvis: Series Of 46 Cases With Average 2.7 Year Follow Up. 2015 Cervical Spine Research Society Meeting. San Diego, CA. Podium Presentation.

21. Widmann, R.F. and **Nemani, V.M.** AIS Classification and Choosing Fusion Levels in Adolescent Idiopathic Scoliosis. Instructional Course Lecture: Management of Adolescent Idiopathic Scoliosis: State of the Art and Best Practices for 2016. 2016 American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, FL. Podium presentation.

22. Widmann, R.F. **Nemani, V.M.** Principles of Thoracic Pedicle Screw Placement. Instructional Course Lecture: Management of Adolescent Idiopathic Scoliosis: State of the Art and Best Practices for 2016. 2016 American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, FL. Podium presentation.

## **POSTER PRESENTATIONS**

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1. Ware, M.L., **Nemani, V.M.**, Meeker, M., Lee, C., Manley, G.T. Effects of 23.4% Sodium Chloride in Acute Traumatic Brain Injury for Patients with Intracranial Hypertension. 2004 American Association of Neurological Surgeons Annual Meeting. Orlando, FL. Poster presentation.

2. Kubo, S., Fortin, D.L., **Nemani, V.M.**, Hattori, N., Mizuno, Y., Edwards, R.H. Alpha-synuclein associates with lipid rafts in vitro. 2006 International Congress of Parkinson's Disease and Movement Disorders. Movement Disorder Society. Kyoto, Japan. Poster presentation.
3. Nakamura, K., **Nemani, V.**, Nussbaum, R.L., Edwards, R.H. Membranes shift  $\alpha$ -synuclein from a closed to open conformation. 2007 Meeting of the Society for Neuroscience. Abstract.
4. **Nemani, V.M.**, Taher, F., Aichmair, A., Lebl, D.R., Sama, A.A., Cammisa, F.P., Girardi, F.P. Rate of revision surgery following standalone lateral transposas interbody fusion for lumbar spinal stenosis. 2013 Lumbar Spine Research Society Meeting. Chicago, IL. Electronic poster presentation.
5. Kim, H.J., **Nemani, V.M.**, Piyaskulkaew, C., Vargas, S.R., Riew, K.D. Cervical Radiculopathy: Incidence and Treatment of 1420 Consecutive Cases. 2014 American Academy of Orthopaedic Surgeons Annual Meeting. New Orleans, LA. Poster presentation.
6. Bjerke-Kroll, B.T., Zuchelli, D., **Nemani, V.M.**, Ayamga, J., Boachie-Adjei, O., Emerson, R.G. Characterization of Significant Neurophysiologic Intraoperative Monitoring Events in Severe Spinal Deformity Surgery. 2014 North American Spine Society Annual Meeting. San Francisco, CA. Electronic Poster Presentation.
7. **Nemani, V.M.**, Bjerke-Kroll, B.T., Yagi, M., Sacramento-Dominguez, C., Akoto, H., Gupta, M.C., Hess, W.F., Papadopoulos, E.C., Perez-Grueso, F.J., Pellise, F., Wright, B., Wulff, I., Kim, H.J., Ayamga, J., Mahmud, R., Boachie-Adjei, O. Pre-Operative Halo-Gravity Traction for Severe Spinal Deformities at an SRS-GOP Site in West Africa: Protocols, Complications and Results. 2014 North American Spine Society Annual Meeting. San Francisco, CA. Electronic Poster Presentation.
8. Bjerke-Kroll, B., Zuchelli, D., **Nemani, V.M.**, Emerson, R., Ayamga, A., Kim, H.J., Wulff, I., Boachie-Adjei, O. Prognosis for Intraoperative Spinal Cord Injury in Severe Spinal Deformity Surgery. 2015 NASS Evidence and Technology Spine Summit. Snowbird, UT. Poster Presentation.
9. Shifflett, G., Bjerke-Kroll, B., **Nemani, V.M.**, Nguyen, J., Huang, R. Postoperative Pain Following Posterior Iliac Crest Bone Graft Harvesting in Spine Surgery: A Randomized Trial. 2015 NASS Evidence and Technology Spine Summit. Snowbird, UT. Poster Presentation.
10. Kim, H.J., Iyer, S., Theologis, A., **Nemani, V.M.**, Albert, T.J., Lenke, L.G., Burch, S., Boachie-Adjei, O., Deviren, V., Protopsaltis, T.S., Smith, J.S., Scheer, J.K., Mizutani, J., Klineberg, E.O., Ames, C.P. Outcomes and Complications of Fusions from the Cervical Spine to the Pelvis: Series of 46 Cases With Average 2.7 year Follow Up. 2015 Cervical Spine Research Society European Section Annual Meeting. London, England. E-Poster Presentation.

11. Kim, H.J., Iyer, S., Theologis, A., **Nemani, V.M.**, Albert, T.J., Lenke, L.G., Burch, S., Boachie-Adjei, O., Deviren, V., Protopsaltis, T.S., Smith, J.S., Scheer, J.K., Mizutani, J., Klineberg, E.O., Ames, C.P. Extent of Proximal Fusion Correlates With Worse Clinical Outcomes in Cervical to Pelvis Fusions. 2015 Cervical Spine Research Society European Section Annual Meeting. London, England. E-Poster Presentation.

12. **Nemani, V.M.**, Bjerke-Kroll, B., Kim, H.J., Akoto, H., Wulff, I., Mahmud, R., Ayamga, J., Yirerong, T., Boachie-Adjei, O., FOCOS Spine Research Group. Pre-Operative Halo Gravity Traction, Posterior Column Osteotomies, and Rib Resections – Are Three-Column Osteotomies Always Needed for Severe Rigid Deformities? A Prospective Analysis. 2015 North American Spine Society Annual Meeting. Chicago, IL. E-Poster Presentation.

13. Kim, H.J., Iyer, S., Theologis, A., Albert, T.J., Lenke, L.G., Deviren, V., **Nemani, V.M.**, Boachie-Adjei, O., Burch, S., Mizutani, J., Klineberg, E.O., Protopsaltis, T.S., Smith, J.S., Scheer, J.K., Ames, C.P. Extent of Proximal Fusion Correlates With Worse Clinical Outcomes In Cervical To Pelvis Fusions. 2015 Cervical Spine Research Society Meeting. San Diego, CA. E-Poster Presentation.

## **COURSES / SYMPOSIA**

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Jan 2012	AO Basic Principles and Techniques of Operative Fracture Management Course for Residents. New Orleans, LA. Attendee.
Jan 2015	AO Spine Principles and Treatment of Spinal Disorders for Residents. Las Vegas, NV. Attendee.
Aug 2015	Innovative and Advanced Surgery of the Degenerative and Deformed Lumbar Spine. St. Louis, MO. Course directors: Lawrence Lenke, MD and Ronald Lehman, MD. Attendee.
Sept 2015	Advanced Techniques in Cervical Spine Decompression and Stabilization. St. Louis, MO. Course director: K. Daniel Riew, MD. Attendee.
Dec 2015	1 <sup>st</sup> Annual International Spinal Deformity Symposium (ISDS). Chicago, IL. Course directors: Larry Lenke, MD and Chris Shaffrey, MD. Attendee.
Feb 2016	Cervical Spine Research Society Hands-On Cadaver Course: Cervical Spine Decompression & Stabilization Techniques. Course directors: Ronald Lehman, MD and Jeremy Fogelson, MD. Attendee.

## **TEACHING / COMMITTEES / SERVICE**

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2002 – 2004	<b>School of Medicine Student Representative</b> Student Health Advisory Committee, UCSF
2005	<b>Neuroanatomy Instructor</b> Brain, Mind, & Behavior Block UCSF School of Medicine
2005	<b>Small Group Instructor</b> Advances in Medical Sciences, Intersession Block UCSF School of Medicine
2006	<b>Small Group Instructor</b> Brain, Mind, & Behavior Block UCSF School of Medicine
2009	<b>Lecturer / Student Mentor</b> George Washington High School San Francisco, CA
2011 – 2015	<b>Curriculum Committee</b> Orthopaedic Surgery Residency Program Hospital for Special Surgery
November 2013	<b>Foundation of Orthopaedics and Complex Spine (FOCOS)</b> Volunteer surgeon in Accra, Ghana caring for pediatric patients with complex spinal deformities at FOCOS Orthopaedic Hospital with Dr. Oheneba Boachie-Adjei

## **LICENSURES**

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2010 – present	New York State Medical License #262334
2015 – present	Missouri State Medical License #2015004584
2016 – present	North Carolina State Medical License #2016-00653

## **BOARD CERTIFICATIONS**

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2015 Passed - American Board of Orthopaedic Surgery Part I  
(Board Eligible)

## **JOURNAL REVIEWER**

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2013 – present Hospital for Special Surgery Journal

2014 – present Bone and Joint Journal (formerly JBJS British)

## **TEAM COVERAGE**

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2012 – 2014 Team Physician – Kipp High School Football  
Bronx, NY

## **ORGANIZATIONS**

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American Academy of Orthopaedic Surgeons (AAOS)  
North American Spine Society (NASS)  
AO Spine  
Alpha Omega Alpha (AOA) Honor Medical Society  
North Carolina Medical Society  
North Carolina Spine Society