# Nitin N. Bhatia, M.D.

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#### **CURRENT POSITION:**

Chairman, Orthopaedic Surgery Chief, Spine Service Co-Director, Spine Fellowship Professor of Clinical Orthopaedic Surgery and Neurosurgery University of California, Irvine

### **PREVIOUS POSITIONS:**

Residency Program Director, 2008-2017 Associate Professor of Clinical Orthopaedic Surgery, 2011-2018 Assistant Professor of Clinical Orthopaedic Surgery, 2004-2011

### **EDUCATION**:

Stanford University, Stanford, California Bachelor of Science in Biology, 1990-1994 Graduation with Honors

Baylor College of Medicine, Houston, Texas Doctor of Medicine with Highest Honors, 1994-1998 AOA, Elected Junior Year Michael E. DeBakey Scholar Award Class Valedictorian

- University of California, Los Angeles General Surgery Internship, 1998 - 1999 Orthopaedic Surgery Residency, 1999 - 2003
- University of Miami, Jackson Memorial Medical Center, Miami, Florida Combined Orthopaedic and Neurosurgical Spinal Surgery Fellowship (Dr. Frank J. Eismont, Director) July, 2003 – June, 2004

Miami Children's Hospital, Miami, Florida Spinal Deformity Fellowship (Dr. Harry L. Shufflebarger, Director) June, 2004 – August, 2004

#### **AWARDS AND HONORS:**

- Stanford University, Kappa Alpha Order Scholarship Award, 1993
- Stanford University, Graduation with Honors, 1994
- The Endocrine Society Student Research Award, 1994 Pathogenic Role of Stem Cell Factor in Infertile Men with Sertoli Cell Only Syndrome.
- Baylor College of Medicine-Karolinska Institute Research Fellowship Award, 1997 Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable Barriers: An Animal Model.

Baylor College of Medicine, Houston, Texas
Basic Science High Honors, 1995
Butler Award for Academic Excellence, 1995
Alumni Award for Academic Excellence, 1996
Alpha Omega Alpha, 1997 - 1998 (elected Junior year)
Graduation with Highest Honors, 1998
Most Outstanding Research by a Medical Student, 1998
Outstanding Student in Orthopaedic Surgery, 1998
Lange Medical Research Award, Baylor College of Medicine, 1998
Class Valedictorian, 1998
Michael E. DeBakey Scholar Award, 1998

- University of California, Los Angeles Physician of the Year nominee, 2001 Emergency Department Consultant of the Year nominee, 2001
- Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2005 Three-point versus Two-point fixation for Thoracolumbar Burst Fractures.
- Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2005 Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.
- Scoliosis Research Society Edgar Dawson Traveling Fellowship, 2005

Outstanding Paper Nominee, Cervical Spine Research Society, 2005

*Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury.* 

- University of California, Irvine Faculty Teaching Award, Orthopaedic Surgery, 2005
- American Orthopaedic Association Emerging Leaders, 2005-2009

American Orthopaedic Association - Japanese Orthopaedic Association Exchange Traveling Fellow, 2008

- Outstanding Paper Award Winner, Cervical Spine Research Society, 2008 The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an Animal Model.
- Best Paper Award Winner, American College of Spine Surgery, 2009 The Role of Durotomy and Duraplasty Following Cervical Spinal Cord Injury in an Animal Model.

The Harold and Nancy Willingham Award for Outstanding Research Paper, Western Orthopaedic Association, 2009

Biomechanical Evaluation of Short-Segment Posterior Instrumentation With Crosslinks In An Unstable Human Burst Fracture Model.

- Hibbs Award Nominee, Basic Science, Scoliosis Research Society, 2009 Early Surgical Decompression with Duraplasty in Acute Spinal Cord Injury Improves Functional Recovery in an Animal Model.
- Resident Research Award, Mentor, California Orthopaedic Association, 2010 Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry.

Triumvirate Grant Award, University of California, 2010 Quantitative MRI and MRA to Study Chronic Discogenic Low Back Pain.

- Orange County Medical Association, Physicians of Excellence, 2011-2024
- Southern California "SuperDoctors", Los Angeles Magazine, 2012-2024 Hall of Fame recognition for 10 consecutive years of recognition

Castle Connolly Top Doctors, 2015-2024

- Resident Research Award, Faculty Mentor, Western Orthopaedic Association, 2018 C1-C3 Construct with Short C2 Pedicle Screws versus Goel-Harms Fixation.
- Resident Research Award, Mentor, Faculty Mentor, California Orthopaedic Association, 2019, Selection Pressures of Vancomycin Powder Use in Spine Surgery: A Meta-Analysis.

- Endowed Resident Research Award, Faculty Mentor, Western Orthopaedic Association, 2023 A Temporal Analysis of Perioperative Complications following COVID-19 Infection in Patients Undergoing Spine Surgery.
- International Society for the Advancement of Spine Surgery, Faculty Mentor, Young Surgeon Research Award Grant, 2023.
- Resident/Fellow Research Award, Faculty Mentor, Cervical Spine Research Society, 2023, Cervical Spine Surgery following COVID-19 Infection: When is it Safe to Proceed?
- Resident Research Award, Faculty Mentor, California Orthopaedic Association, 2024, Laminectomy with Fusion for Degenerative Cervical Myelopathy is Associated with Higher Early Morbidity and Risk of Perioperative Complications Compared to Laminectomy Alone.

# **RESEARCH GRANTS:**

 Walter Lorenz Surgical Research Grant, 1998 - 1999
 Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable Barriers: an Animal Model
 Principal Investigator \$43,000 total costs

Stryker Biotech Spine Research Grant, 2005 - 2007 Spinal Cord Injury Research Grant Principal Investigator \$4000 total costs

EBI Spinal Cord Injury Research Grant, 2005 - 2007 Novel Transplantation of Preconditioned Schwann Cells Following Spinal Cord Contusion Injury Principal Investigator \$40,000 total costs

Spinewave Lumbar Sagittal Balance Research Grant, 2005 - 2008 *Role of Intradiscal Expansion of Interbody Implants in Improving Lumbar Sagittal Balance Principal Investigator \$72,450 total costs* 

Roman Reed Spinal Cord Injury Research Fund of California, 2007 - 2011 Carbohydrate Metabolism Impairments in Chronic Human Spinal Cord Injury Co-Investigator \$26,850 total costs Dept. of Defense, U.S. Army Medical Research and Material Command, Congressionally Directed Medical Research Programs, Breast Cancer Research Program, 2007 - 2012

Development and Evaluation of a Novel Radiation Therapy Technique for the Treatment of Vertebrae with Metastatic Lesions Co-Investigator \$499,434 total direct costs, \$761,637 total costs (direct + indirect)

University of California, Triumvirate Research Grant, 2010-2011 Quantitative MRI and MRA to Study Chronic Discogenic Low Back Pain Co-Principal Investigator \$15,000 total costs

# PEER REVIEWED PUBLICATIONS:

- Transcriptional and Posttranscriptional Regulation of Inhibin alpha-Subunit Gene Expression in Rat Sertoli Cells by 8-Bromo-3', 5'-Cyclic-Adenosine Monophosphate. Najmabadi H, Rosenberg LA, Yuan QX, <u>Bhatia N</u>, Albiston AL, Burger H, Bhasin S; <u>Molecular Endocrinology</u>, 7(4): 469-476, 1993.
- 2. Congenital Syndromes Associated with Nonmelanoma Skin Cancer. Gherardini G, Bhatia N, Stal S; Clinics of Plastic Surgery, 24(4):649-661, 1997.
- 3. Compartmentalized Bone Regeneration of Cranial Defects with Biodegradable Barriers: an Animal Model. Stal S, Tjelmeland K, Hicks J, <u>Bhatia N</u>, Eppley B, Hollier L; Journal of Craniofacial Surgery, 12(1):51-47, 2001.
- 4. *Current Information Regarding the Biochemical and Genetic Events Which Occur During Disc Degeneration*. <u>Bhatia N</u>, Wang J; <u>Current Opinion in Orthopaedics</u>, 14(3):153-158, 2003.
- Adjacent Segment Degeneration in the Lumbar Spine. Ghiselli G, Wang JC, <u>Bhatia</u> <u>NN</u>, Hsu WK, Dawson EG; <u>J Bone Joint Surg Am</u>, 86-A(7):1497-1503, 2004(July).
- 6. The Role of the Sternocleidomastoid Muscle Flap for Esophageal Fistula Repair in Anterior Cervical Spine Surgery. Navarro R, Javahery R, Eismont F, Arnold DJ, <u>Bhatia NN</u>, Vanni S, Levi AD; <u>Spine</u>, 30(20):E617-633, 2005(Oct).
- Body Mass Index in Patients with Slipped Capital Femoral Epiphysis: A Predictive Model. <u>Bhatia NN</u>, Pirpiris M, Otsuka N; <u>Journal of Pediatric Orthopaedics</u>, 26(2):197-9, 2006(March).
- Transplantation of Preconditioned Schwann Cells in Peripheral Nerve Grafts after Contusion in the Adult Spinal Cord: Improvement of Recovery in a Rat Model. Rasouli A, <u>Bhatia NN</u>, Suryadevara S, Cahill K, Gupta R; <u>J Bone Joint Surg Am</u>, 88(11):2400-10, 2006.

- 9. *Minimally Invasive Atlanto-Odontoid Joint Injection for Involvement in Rheumatoid Arthritis.* Kostanian VJ, Mathews MS, Westhout FD, <u>Bhatia NN;</u> <u>Interventional Radiology</u>, 12(4):359-363, 2006(Dec).
- Wound Complications from Idiopathic Clubfoot Surgery: a Comparison of the Modified Turco and the Cincinnati Treatment Methods. Hsu WK, <u>Bhatia NN</u>, Raskin A, Otsuka NY; <u>Journal of Pediatric Orthopaedics</u>, 27(3):329-332, 2007.
- 11. *Transplantation of Preconditioned Schwann cells following Hemisection Spinal Cord Injury.* Dinh P, <u>Bhatia NN</u>, Cahill K, Gupta R; <u>Spine</u>, 32(9):943-9, 2007.
- 12. A Prospective Evaluation of Diagnostic Modalities in Pediatric Back Pain. <u>Bhatia</u> <u>NN</u>, Chow G, Timon S, Watts HG; <u>Journal of Pediatric Orthopaedics</u>. 28(2):230-3, 2008(Mar).
- 13. Orthopaedic Surgeons and Spinal Cord Injury Patients. <u>Bhatia NN</u>, Gupta G; <u>AAOS Now</u>, 3(2): 27-31, 2009.
- 14. *Resection of Glial Scar Following Spinal Cord Injury*. Rasouli A, <u>Bhatia N</u>, Dinh P, Cahill K, Suryadevara S, Gupta R; <u>J Orthop Research</u>, 27(7):931-6, 2009.
- 15. Biomechanical Evaluation of Short-Segment Posterior Instrumentation With and Without Crosslinks in a Human Cadaveric Unstable Thoracolumbar Burst Fracture Model; Wahba G, <u>Bhatia N</u>, Bui C, Lee K, Lee TQ; <u>Spine</u>, 35(3):278-85, 2010.
- 16. *Advances in the Management of Spinal Cord Injury*. Gupta R, Bathen M, Smith J, Levi AD, <u>Bhatia NN</u>, Steward O; <u>J Am Acad Ortho Surg</u>, 18(4):210-22, 2010(Apr).
- 17. The Role of Early Surgical Decompression of the Intra-Dural Space Following Cervical Spinal Cord Injury in an Animal Model. Smith J, Anderson R, Pham T, Bhatia N, Steward O, Gupta R; J Bone Joint Surg Am, 92(5):1206-14, 2010.
- Modic Type I changes of the Lumbar Spine in Golfers. Mefford J, Sairyo K, Sakai T, Hopkins J, Inoue M, Amari R, <u>Bhatia N</u>, Dezawa A, Yasui N; <u>Skeletal</u> <u>Radiology</u>, 40(4):467-73, 2011(Apr).
- 19. *MRI Changes of the Spinal Subdural Space after Lumbar Spine Surgeries: Report of Two Cases.* Sakai T, Sairyo K, <u>Bhatia NN</u>, Miyagi R, Tamura T, Katoh S, Yasui N; <u>Asian Spine J</u>, 5(4):262-6, 2011(Dec).
- 20. Retrospective Study of Deep Surgical Site Infections Following Spinal Surgery and the Effectiveness of Continuous Irrigation. Chikawa T, Saka T, Bhatia NN, Sairyo K, Utsunomiya R, Nakamura M, Nakano S, Shimakawa T, Minato A; Br J Neurosurg, 25(5):621-4, 2011(Oct).

- 21. Anterior Thoracolumbar Reconstruction Surgery for Late Collapse Following Vertebroplasty: Report of Three Cases. Miyagi R, Ssakai T, <u>Bhatia NN</u>, Sairyo K, Katoh S, Chikawa T; <u>J Med Invest</u>. 58(1-2);148-53, 2011(Feb).
- 22. Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion. <u>Bhatia NN</u>, Lee KH, Bui CN, Luna M, Wahba GM, Lee TQ: <u>Spine</u>, 37(2):E79-85, 2012(Jan).
- 23. Flavokawain B, a Kava Chalcone, Induces Apoptosis in Synovial Sarcoma Cell Lines. Sakai t, Ramez E, Guo Y, Kim KJ, Mefford J, Hopkins J, <u>Bhatia NN</u>, Zi X, Hoang BH; <u>J of Orthop Res.</u> 30(7): 1045-50, 2012(July).
- 24. Drivers of Surgery for the Degenerative Hip, Knee, and Spine: A Systematic Review. Bederman SS, Rosen CD, <u>Bhatia NN</u>, Kiester PD, Gupta R; <u>Clin Orthop</u> Relat Res, 470(4):1090-105, 2012(Apr).
- 25. Analysis of Prognostic Factors in Patients With Chordoma Using the California Cancer Registry. Lee J, <u>Bhatia NN</u>, Hoang B, Ziogas A, Zell J; <u>J Bone Joint Surg</u> <u>Am</u>, 94(4):356-63, 2012.
- 26. Use of Lateral Access in the Treatment of the Revision Spine Patient. Bederman SS, Le VH, Pahlavan S, Kiester DP, <u>Bhatia NN</u>, Deviren V; <u>Scientific World J.</u> 308209, 2012.
- Endoscopic Excision of a Juxtafacet Cyst in an Adolescent Athlete: A Case Report. Hopkins J, Mefford J, Sakai T, <u>Bhatia N</u>, Sairyo K; <u>J Neurol Surg A Cent Eur</u> <u>Neurosurg.</u> 2013 Dec;74 Suppl 1:e66-9.
- 28. Clinical Outcomes of Spinal Surgery in Patients Treated with Hemodialysis. Chikawa T, Sakai T, <u>Bhatia NN</u>, Miyagi R, Sairyo K, Goda Y, Nakamura M, Nakano S, Shimakawa T, Minato A; <u>J Spinal Dis Tech</u>, 2013 Aug;26(6):321-4.
- 29. *Fixation Techniques for Complex Traumatic Sacral Fractures: A Systematic Review.* Bederman SS, Hassan JM, Shah KN, Kiester PD, <u>Bhatia NN.</u> Zamorano DP; <u>Spine, 2013 Jul 15;38(16):E1028-40.</u>
- 30. Diffusion-Weighted Imaging and Diffusion Tensor Imaging of Asymptomatic Lumbar Disc Herniation. Sakai, T, Miyagi, R, Yamabe, E, Fujinaga Y; <u>Bhatia NN</u>; Yoshioka, H; <u>J Med Invest</u>, 2014;61(1-2):197-203.
- 31. Surgical Techniques for Spinopelvic Reconstruction Following Total Sacrectomy: A Systematic Review. Bederman SS, Shah KN, Hassan JM, Hoang BH, Kiester PD, Bhatia NN; Eur Spine J, 2014 Feb;23(2):305-19.
- 32. Comparison of Two-Transsacral-Screw Fixation Versus Triangular Osteosynthesis Fixation for Transforaminal Sacral Fractures. Min KS, Zamorano DP, Wahba GM, Garcia I, <u>Bhatia N</u>, Lee TQ; <u>Orthopaedics</u>, 2014 Sept:37(9)e754-e760.

- 33. Posterior Cervical Laminoplasty in the North American Population: A Minimum of Two Year Follow-Up. <u>Bhatia NN</u>, Lopez G, Geck M, Gottlieb J, Eismont F: <u>Clin</u> <u>Neurol Neurosurg</u>, 138:165-168, 2015(Nov).
- 34. Reliability, Validity, and Responsiveness of the Western Ontario and McMaster Universities Osteoarthritis Index for Elderly Patients with a Femoral Neck Fracture. HEALTH and FAITH Trial Investigators (Bhatia NN, Collaborator), J Bone Joint Surg Am, 2015 May 6:97(9):751-7.
- 35. *A Trial of Wound Irrigation in the Initial Management of Open Fracture Wounds*. FLOW Investigators (Bhatia NN, Collaborator), <u>N Engl J Med</u>, 2015 Dec 31;373(27)2629-41.
- 36. The Influence of Insurance Status on the Surgical Treatment of Acute Spinal Fractures. Daly MC, Patel MS, <u>Bhatia NN</u>, Bederman SS; <u>Spine</u>, 2016 Jan;41(1):E37-45.
- Total Medical Costs of Treating Femoral Neck Fracture Patients with Hemi- or Total Hip Arthroplasty: A Cost Analysis of a Multicenter Prospective Study. HEALTH Trial Investigators (Bhatia NN, Collaborator), Osteoporosis Intl, 2016 Jun;27(6):1999-2008.
- 38. Biomechanical Analysis of an S1 Pedicle Screw Salvage Technique via a Superior Articulating Process Entry Point. Lee YP, Ihn HE, McGarry MH, Farhan SD, Bhatia N, Lee TQ; Spine, 2016 Jul 1;41(13):E778-84.
- The Reliability of Neuromonitoring to Detect Neurologic Injury During Lateral Interbody Fusion. Lee YP, Gertsch J, Taylor W, Allison D, Attenello J, Nepomuceno K, Nepomuceno M, <u>Bhatia N; Spine Research</u>, 2015 Oct;1(5):1-6.
- Patient Reported Outcome Measures: How Do Digital Tablets Stack Up to Paper Forms? A Randomized Controlled Study. Shah KN, Hoffman MR, Schwarzkopf R, Pourmand D, <u>Bhatia NN</u>, Rafijah G, Bederman SS. <u>Am J Ortho</u>, 2016 Nov/Dec;45(7):E451-457.
- 41. *Robotic Guidance for S2-Alar-Iliac Screws in Spinal Deformity Correction.* Bederman SS, Hahn P, Colin V, Kiester DP, <u>Bhatia NN</u>. <u>Clin Spine Surg</u>, 2017 Feb;30(1)E49-E53.
- 42. Biomechanical Evaluation of Unilateral versus Bilateral C1 Lateral Mass-C2 Intralaminar Fixation. <u>Bhatia N</u>, Rama A, Sievers B, Quigley, R, McGarry M, Lee YP, Lee TQ; <u>Global Spine J</u>, 2017 May;7(3):239-45.
- 43. *ICD 10 and Its Relevance to Spine Surgeons*. Doermann A; Massel D; Mayo B; Kiester D, <u>Bhatia N</u>, Lee YP; <u>J Contemp Spine Surg</u>, 2016 Sept, 17(9):1-5.

- 44. Variables Affecting Return to Work After Spine Surgery in a Non-Workman's Compensation Population: A Retrospective Cohort Study. J Am Acad Orthop Surg, 2017 Dec;25(12):e282-e288.
- 45. Proprionibacerium Acnes Biofilm is Present in Intervertebral Discs of Patients Undergoing Microdiscectomy. Capoor M, Ruzicka F, Schmitz J, et al incl <u>Bhatia N</u>, Slaby O; <u>PLoS One</u>, 2017; 12(4): e0174518.
- 46. *How to Reduce Radiation Exposure During Spine Surgery*. Covarrubias J, Say I, <u>Bhatia N</u>, Lee YP; <u>Cont Spine Surg</u>, 2017 July; 18(7):1-7.
- 47. *Wound Irrigation Does Not Affect Health*-Related Quality of Life After Open Fractures: Results of a Randomized Controlled Trial. FLOW Investigators (<u>Bhatia</u> <u>NN</u>, Collaborator); <u>Bone Joint J</u>, 2018 Jan 100-B(1):88-94.
- 48. *Are Large Clinical Trials in Orthopedic Trauma Justified*? FLOW Investigators (Bhatia NN, Collaborator), BMC Musculo Dis, 2018 Apr 20;19(1):124.
- 49. Does Addition of Tobramycin Powder Reduce Infection Rates After Spine Surgery. Lee YP, Farhan SA, Pendi A, Cunningham T, Kiester PD, Hahn P, Rosen CD, <u>Bhatia N; Global Spine J</u>, 2018 Dec;8(8):816–820.
- 50. Preferences of Spine Surgeons with Regard to Management of Intraoperative Durotomy: A Survey of Current Management. Pendi A, Wang JC, Bederman SS, Farhan SD, <u>Bhatia NN</u>, Lee YP, Ashraf J, Acosta FL; <u>Clin Spine Surg</u>, 2018 Oct; 31(8):E381-E385.
- 51. Biomechanical Comparison of C1 Lateral Mass C2 Short Pedicle Screw C3 Lateral Mass Screw Rod Construct Versus Goel-Harms Fixation for Atlantoaxial Instability. Lu Y, Lee YP, <u>Bhatia NN</u>, Lee TQ. <u>Spine</u>, 2019 Apr;44(7):E393-E399.
- 52. Complications Associated with Intrathecal Morphine in Spine Surgery: A Retrospective Study. Pendi A, Lee Y-P, Farhan S-A, Acosta FL, Bederman SS, Sahyouni R, Gerrick ER, <u>Bhatia NN; J Spine Surg</u>; 2018 Jun;4(2):387-294.
- 53. *Image Guidance in Spine Surgery*. Lee YP, Covarrubias J, Brown A, Valle Y, <u>Bhatia N</u>, Lee YP; <u>Cont Spine Surg</u>; 2018 Aug;19(8):1-7.
- 54. Outcomes and Complications After Spinal Fusion in Patients with Obstructive Sleep Apnea. Lin CC, Lu Y, Patel NA, Kiester PD, Rosen CD, <u>Bhatia NN</u>, Lee YP; <u>Global Spine J</u>, 2019 May 9(3);287-291.
- Selection Pressures of Vancomycin Powder Use in Spine Surgery; A Meta-Analysis. Gande A, Rosinski A, Cunningham T, Bhatia N, Lee YP; Spine J. 2019 Jun;19(6):1076-1084.

- 56. Impact of Sickle Cell Anemia on Inpatient Morbidity After Spinal Fusion. Lu Y, Lin CC, Doermann A, Patel N, <u>Bhatia NN</u>, Kiester PD, Rosen CD, Lee YP; <u>Clin Spine</u> <u>Surg</u>. 2019 Dec;32(10):439-443.
- 57. *Impact of Cirrhosis on Morbidity and Mortality After Spinal Fusion*. Lu Y, Lin CC, Stepanyan H, Alvarez AP <u>Bhatia NN</u>, Kiester PD, Rosen CD, Lee YP; <u>Global</u> <u>Spine J</u>. 2020 Oct;10(7):851-855.
- 58. Establishing Validity of the Fundamentals of Spinal Surgery (FOSS) Simulator as a Teaching Tool for Orthopaedic and Neurosurgical Trainees. <u>Bhatia N</u>, Palispis WA, Urakov T, Gruskay J, Haghverdian J, Yang DS, Uong J, Albert T, Vaccaro A, Levi AD, Gupta R; <u>Spine J</u>. 2020 Apr;20(4):580-589.
- 59. *Return to Recreational Sport Following Lumbar Fusion*. Jain NS, Lin CC, Halim A, Knight B, Bryne CT, Alluri R, <u>Bhatia NN</u>, Lee YP; <u>Clin Spine Surg</u>. 2020 May;33(4):E174-177.
- 60. *Titanium Mesh in Spinal Fusion: A Case Series.* Kiester PD, Farhan S, Musa A, Alvarez A, Byrne C, Lee YP, Bhatia NN; Hong Kong J Orthop Res. 2020 March;3(1):03-06.
- 61. *Charcot Disease of the Spine: Diagnosis and Treatment.* Lee YP, Farhan SA, Kiester PD, <u>Bhatia N; Contemp Spine Surg</u>. 2020 Feb;21(2):01-06.
- 62. *Major Orthopaedic Conference Abstract Publication: An Analysis of Abstracts Accepted for the AAOS Annual Meetings Between 2014-2017.* Le R, Anderson A, Chalmers CE, Scolaro JA, Lee YP, <u>Bhatia N; JAAOS</u>. 2021 June ;29(12):e601e608.
- 63. Comparison of Minimally Invasive Total versus Subtotal Resection of Spinal Tumors: A Systematic Review and Meta-Analysis. Choi E, Chan AY, Gong AD, Hsu Z, Chan AK, Limbo JN, Hong JD, Brown NJ, Lien BV, Davies J, Salyadev N, Acharya N, Yang CY, Lee YP, Golshani K, <u>Bhatia NN</u>, Hsu FPK, Oh MY; <u>World</u> <u>Neurosurg</u>. 2021 July;151:e343-e354.
- 64. *The Efficacy of Bactrim in Reducing Surgical Site Infections After Spine Surgery.* Choi, JH, Duong, HA, Williams, S, Lee, J, Oh, M, Rosen, C, Lee, Y-P, <u>Bhatia, N.</u> <u>NASSJ</u>. 2022, March; 9:100095. Published online 2021 Dec 6 – PMID: 35141659.
- 65. Preoperative Hypoalbuminemia and Dialysis Increase Morbity/Mortality After Spine Surgery for Primary Pyogenic Spinal Infections (ACS-NSQIP Study). Camino-Willhuber G, Franklin A, Rosecrance K, Oyadomari S, Chan J, Holc F, Hashmi S, Oh M, <u>Bhatia N</u>, Emmerich J, Lee YP; <u>Surg Neuro Intl.</u> 2022 May;13(193):01-04.

- 66. *Management of Lumbar Spondylolisthesis in the Adolescent Athlete: A Review of over 200 Cases.* Choi JH, Ochoa JK, Lubinus A, Timon S, Lee, Y-P, <u>Bhatia NN.</u> <u>Spine J.</u> 2022, April(22): 1-6 (Article in Press).
- 67. Does Conflict of Interest Affect the Reported Fusion Rates with Bone Graft Extenders? Chin G, Lee YP, Lee J, Zhang N, Oh M, Rosen C, <u>Bhatia NN</u>. NASSJ. 2022 Mar;(10): 1-10.
- Primary Spinal Infections in Patients with Solid Organ Transplant: A Systematic Literature Review and Illustrative Case. Hatter, MJ, Beyer, R, Camino-Willhuber, G, Franklin, A, Brown, N, Hashmi, S, Oh, MY, <u>Bhatia, N</u>, Lee, Y-P. <u>JNS Case</u> <u>Lessons</u>. 2022, June;27:3(26):1-8.
- 69. *Pyogenic Spinal Infections in a Patient with Chronic Liver Disease: Illustrative Case.* Hatter MJ, Beyer RS, Camino-Willhuber G, Franklin A, Brown NJ, Hashmi S, Oh M, <u>Bhatia N</u>, Lee Y-P. <u>JNS Case Lessons</u>. 2022 July; 4(4), CASE22222.
- 70. Surgical Treatment in Primary Spinal Infections in Pediatric Population: Illustrative Case. Beyer RS, Franklin A, Hatter MJ, Nguyen A, Brown NJ, Camino-Willhuber G, Davies NR, Hashmi S, Oh M, <u>Bhatia N</u>, Lee Y-P. <u>JNS Case</u> <u>Lessons</u>. 2022 Jul; 4(4): CASE22204.
- 71. Cost Analysis Comparison Between Anterior and Posterior Cervical Spine Approaches. Chan AY, Himstead AS, Choi EH, Hsu Z, Kurtz JS, Yang C, Lee YP, <u>Bhatia NN</u>, Lefteris CT, Wilson WC, Hsu FPK, Oh MY. <u>Surg Neurol Intl</u>. 2022 Jul 15;13:300.
- 72. The Impact of Stratified Hypoalbuminemia and Dialysis in Morbidity/Mortality in Posterior Spinal Fusion Surgery: ACS-NSQIP Study. Camino-Willhuber G, Oyadomari S, Ochoa J, Holc F, Guiroy A, Bow H, Hashmi S, Oh M, <u>Bhatia N</u>, Lee YP. <u>Surg Neurol Int</u>. 2022 Aug 12;13:359.
- Utility of the Modified 5-Items Frailty Index to Predict Complications and Mortality After Elective Cervical, Thoracic, and Lumbar Posterior Spine Fusion Surgery. Camino-Willhuber G, Choi J, Holc F, Oyadomari S, Guiroy A, Bow H, Hashmi S, Oh M, <u>Bhatia N</u>, Lee YP. <u>Global Spine J</u>. 2022 Sep; 1:21925682221124101.
- 74. The Utility of Flexion-Extension Radiographs in Degenerative Cervical Spondylolisthesis. Alvarez AP, Anderson A, Farhan, SD, Lu Y, Lee YP, Oh M, Rosen C, Kiester PD, <u>Bhatia N</u>. Clinical Spine Surgery. 2022 August;35(7):319-322.
- 75. *Management of lumbar spondylolysis in the adolescent athlete: a review of over 200 cases.* Choi JH, Ochoa JK, Lubinus A, Timon S, Lee YP, <u>Bhatia NN</u>. <u>Spine J</u>. 2022 Oct;22(10):1628-1633.

- 76. Intervertebral Vacuum phenomenon prevalence and severity CT-scan analysis in patients older than 50 years: a retrospective cohort study. Camino-Willhuber G, Vildoza S, Martinez E, Canestrari L, Holc F, Oh M, <u>Bhatia N</u>, Lee YP, Bianchi H, Bendersky M. <u>Acta Radiol.</u> 2022 Dec 26:2841851221146666.
- 77. Optimal Use of Advanced Practice Providers at an Academic Medical Center: A First-Year Retrospective Review. Kidd VD, Amin A, <u>Bhatia N</u>, Healey D, Fisher C, Rafiq M, E Gallegos MJA, Munoz K. <u>Cureus</u>. 2023 Jan 31;15(1):e34475.
- 78. Primary Spinal Infections in Patients with Hematologic Immunocompromising Conditions: A Systematic Literature Review. Marciano ND, Beyer RS, Nguyen A, Paladugu A, Hatter MH, Franklin A, Brown NJ, Willhuber GC, <u>Bhatia N</u>, Oh MY, Lee YP. J Am Acad Orthop Surg Glob Res Rev. 2023 May 8;7(5):e22.00178.
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- Biomechanical Evaluation of Short-Segment Posterior Instrumentation with Crosslinks in an Unstable Human Burst Fracture Model. Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion. Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Biomechanical Comparison of Trans-Sacral and Triangular Osteosynthesis in a Vertically Unstable Pelvic Fracture Model. Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- *The Role of Decompression with either Durotomy or Duraplasty Following Cervical Spinal Cord Injury.* Orthopaedic Research Society annual meeting, Las Vegas, NV, 2009.
- Posterior Cervical Instrumentation: Past, Present, and Future. Japanese Society for Spine Surgery and Related Research, 38<sup>th</sup> Annual Meeting, Kobe, Japan, 2009.
- Biomechanical Evaluation of Short-Segment Posterior Instrumentation with Crosslinks in an Unstable Human Burst Fracture Model. Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009.
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- Comparison of Trans-sacral and Triangular Osteosynthesis in an Unstable Pelvic Fracture. American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, 2010.
- Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry. California Orthopaedic Association, Annual Meeting, Lake Tahoe, CA, 2010.
- Prognostic Factors for Patients with Chordoma. Western Orthopaedic Association, Annual Meeting, Monterey, CA, 2010.
- Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry. North American Spine Society, Annual Meeting, Orlando, FL, 2010.
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- Analysis of Prognostic Factors in Chordoma Using the California Cancer Registry. American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011.
- Biomechanical Comparison of Unilateral versus Bilateral C1-C2 Fixation Following Odontoid Fracture. American College of Spine Surgery, Annual Meeting, Las Vegas, NV, 2011.
- Biomechanical Evaluation of Single Rod Versus Dual Rod Posterior Spinal Fixation for Adolescent Idiopathic Scoliosis in a Sawbone Model. Orthopaedic Research and Education Foundation Research Symposium, Irvine, CA, 2012.

- Biomechanical Evaluation of Unilateral and Bilateral C1 Lateram Mass C2 Intralaminar Screw Rod Fixation. Orthopaedic Research Society, Annual Meeting, San Francisco, CA 2012.
- *The Influence of Insurance Status on the Surgical Treatment of Acute Spine Fractures.* Cervical Spine Research Society, Annual Meeting, Phoenix, AZ, 2012.
- Biomechanical Study of Sublaminar Polyester Bands Versus Pedicle Screws In Adolescent Idiopathic Scoliosis Model. American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013.
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- Exploring the Efficacy of a Self-Sterilizing Orthobiologic PEEK as a Viable Biomaterial for Spinal Surgery. North American Spine Society, Annual Meeting, New Orleans, LA, 2013.
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- Does the Addition of Tobramycin Decrease Infection Risk in Patients Undergoing Lumbar Spinal Instrumented Fusions. North American Spine Society, Annual Meeting, Boston, MA, 2016.
- Infection Rates With Use of Adjunctive Intrathecal Morphine in Posterior Instrumented Spinal Fusion Surgery: Preliminary Findings of a Retrospective Study. Society for Technology in Anesthesia (STA), Annual Meeting San Diego, CA, 2017.
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- Biomechanical Comparison of C1 Lateral Mass C2 Pars and C3 Lateral Mass Screw-Rod Construct versus C1 Lateral Mass C2 Pedicle Screw Fixation for Type II Odontoid Fractures. North American Spine Society (NASS), Annual Meeting, Orlando, FL, 2017.
- Variables Affecting Return to Work After Spine Surgery in a Non-Workers' Compensation Population: A Retrospective Cohort Study. North American Spine Society (NASS), Annual Meeting, Orlando, FL, 2017.
- Pre-operative Employment Predicts Return to Work Among Patients Who Elect to Undergo Spine Surgery. Society for General Internal Medicine, Annual Meeting, Denver, CO, 2018.
- Variables Affecting Return to Work After Spine Surgery in a Non-Workers' Compensation Population: A Retrospective Cohort Study. Assoc Bone Joint Surgery, Annual Meeting, Lisbon, Portugal, 2018.
- C1-C3 Construct with Short C2 Pedicle Screws versus Goel-Harms Fixation. Western Orthopaedic Association, Annual Meeting, Snowmass, CO, 2018.
- Outcomes After Spinal Fusion in Patients with Obstructive Sleep Apnea. Western Orthopaedic Association, Annual Meeting, Snowmass, CO, 2018.
- Construct Validity of the Fundamentals of Spinal Surgery (FOSS) Simulator. Western Orthopaedic Association, Annual Meeting, Snowmass, CO, 2018.
- Impact of Cirrhosis on Morbidity and Mortality After Spinal Fusion. Western Orthopaedic Association, Annual Meeting, Snowmass, CO, 2018.
- Return to Recreational Sport Following Lumbar Fusion. North American Spine Society, Annual Meeting, Los Angeles, CA, 2018.
- Validity of the Fundamental of Spinal Surgery (FOSS) simulator as a Teaching Tool for Orthopaedic and Neurosurgical Trainees. North American Spine Society, Annual Meeting, Los Angeles, CA, 2018.
- Selection Pressures of Vancomycin Powder Use in Spine Surgery: A Meta-Analysis. California Orthopaedic Association, Annual Meeting, Dana Point, CA, 2019.
- Does Staging of Lumbar Spine Surgery Affect Patients Outcomes and Readmission Rates? ISASS, Annual Meeting, San Juan, Puerto Rico, 2020.
- Does Conflict of Interest Affect the Reported Fusion Rates with Bone Graft Extenders? The Spine J, Annual Meeting of the North American Spine Society, 2020.

- Conservative Treatment of Spondylolysis in Adolescent Athletes. Assoc Bone Joint Surgery, Annual Meeting, Chicago, IL, 2021.
- Risk factors for Readmission, Reoperation, and Prolonged Hospital Stay after Surgical Treatment in Patients with Primary Spinal Infections. An ACS-NSQIP Database Review. Korean American Spine Society, Annual Meeting, Austin, TX, 2022.
- Reporting on Postoperative Complications in Pyogenic Spinal Infections Using ACS-NSQIP. Western Orthopedic Association, Annual Meeting, Maui, HI, 2022.
- Management of Lumbar Spondylolisthesis in the Adolescent Athlete: A Review of over 200 Cases. Western Orthopedic Association, Annual Meeting, Maui, HI, 2022.
- Primary spinal infection in patients with solid organ transplant: systematic review and illustrative case. Pacific Spine and Pain Society, Annual Meeting, Las Vegas, NV 2022.
- Primary spinal infection in patients with hematologic disease: a systematic literature review. Pacific Spine and Pain Society, Annual Meeting, Las Vegas, NV 2022.
- Pyogenic spinal infections in patients with chronic liver disease. Pacific Spine and Pain Society, Annual Meeting, Las Vegas, NV 2022.
- Surgical Treatment of Primary Spinal Infections in the Pediatric Population. Pacific Spine and Pain Society, Annual Meeting, Las Vegas, NV 2022.
- Primary Spinal Infections in Patients with Hematologic Disease: A Systematic Literature Review. Congress of Neurological Surgeons, Annual Meeting, San Francisco, CA, 2022.
- Pyogenic Spinal Infections in Patients with Chronic Liver Disease: Illustrative Case and Literature Review. Congress of Neurological Surgeons, Annual Meeting, San Francisco, CA, 2022.
- Utility of Novel Dedicated Acute Spinal Cord MRI Protocol. Cervical Spine Research Society, Annual Meeting. San Diego, CA, 2022
- High Serum Alkaline Phosphatase is Associated with Increased Perioperative Complications after Lumbar Spinal Fusion. International Society for the Advancement of Spine Surgery, Annual Meeting. San Francisco, CA, 2023.
- Timing of Elective Lumbar Spinal Fusion after COVID-19 Infection: When is it Safe to Proceed? International Society for the Advancement of Spine Surgery, Annual Meeting. San Francisco, CA, 2023.
- Differential Interspinous Process Device Adoption and Utilization Across the United States. Global Spine Congress, Prague, CZ, 2023.

- Comparison of CT-Guided Needle Biopsy versus Percutaneous Endoscopic Debridement and Drainage in Pathogen Identification and Pain Outcomes for Spondylodiscitis Patients: A Systematic Review and Literature Review. American Association of Neurological Surgeons, Annual Meeting, Los Angeles, CA, 2023.
- High Serum Alkaline Phosphatase is Associated with Increased Perioperative Complications after Lumbar Spinal Fusion. Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- Differential Interspinous Process Device Adoption and Utilization Across the United States. Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- *Utility of a Novel Acute Spinal Cord MRI Protocol at a Level 1 Trauma Center.* Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- A Temporal Analysis of Perioperative Complications following COVID-19 Infection in Patients Undergoing Spine Surgery. Endowed Resident Research Award. Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- Noncontiguous Simultaneous Decompression for the Treatment of Tandem Cervical and Lumbar Spinal Stenosis. Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- Treatment of Lumbar Spinal Spondylolisthesis with Posterolateral Fusion versus Combined Posterolateral/Transforaminal or Anterior/Lateral Interbody Fusion. Western Orthopaedic Association, Annual Meeting. Coeur d'Alene, ID, 2023.
- Increased risk for venous thromboembolic events in patients undergoing lumbar spinal fusion within two weeks of COVID-19 infection. North American Spine Society, Annual Meeting, Los Angeles, CA, 2023.
- Rapid MRI protocol for acute spinal cord trauma and cord compression. North American Spine Society, Annual Meeting, Los Angeles, CA, 2023.
- Elevated serum alkaline phosphatase is an independent predictor of complications after lumbar spinal fusion. North American Spine Society, Annual Meeting, Los Angeles, CA, 2023.
- Cervical Spine Surgery following COVID-19 Infection: When is it Safe to Proceed? Cervical Spine Research Society, Annual Meeting, Las Vegas, NV, 2023.
- Preliminary Results and Technique of Primary Dual S1AI and S2AI screws for Spinopelvic Fixation: A Single Center Retrospective Study. International Society for the Advancement of Spine Surgery, Annual Meeting. Miami, FL, 2024.

Laminectomy with Fusion for Degenerative Cervical Myelopathy is Associated with Higher Early Morbidity and Risk of Perioperative Complications Compared to Laminectomy Alone. California Orthopaedic Association, Annual Meeting, San Diego, CA, 2024.

#### **INVITED LECTURES:**

- Kartagener's Syndrome in a Patient with Craniofacial Abnormalities. Plastic Surgery Grand Rounds, Baylor College of Medicine, 1996
- Posterior Cervical Surgery. Symposium for Minimally Invasive and Posterior Cervical Surgery, 2004
- New Technologies in Spine Surgery. Neurosurgery Grand Rounds, University of California, Irvine, 2005
- Low Back Pain and the Primary Care Physician. Family Practice Review Symposium, Long Beach Memorial Hospital, 2005
- Lumbar Spinal Stenosis and Back Pain. Grand Rounds, Kaiser Whittier Medical Center, 2005
- Spinal Cord Injury Complications. Grand Rounds, Torrance Memorial Medical Center, 2005
- Posterior Cervical Laminoplasty. Blackstone Instructional Meeting, 2005
- Spinal Cord Injury. Seaspine Users Meeting, 2005
- Adult Back Pain. Grand Rounds, Lakewood Regional Medical Center, 2005
- Diagnostic Techniques Used in Pediatric Back Pain. University of California, Irvine, Graduate Research Forum, 2005
- New Technologies in Spinal Surgery. Neurosurgery Grand Rounds, University of California, Irvine, 2005
- Spinal Cord Injury Complications, Grand Rounds, Torrance Memorial Hospital, Torrance, CA, 2005
- Techniques in Posterior Cervical Fixation. Current Concepts and Techniques for Spine Surgery Symposium, San Diego, CA, 2005
- Lumbar Spinal Stenosis and Back Pain. Grand Rounds, Kaiser Whittier Medical Center, Whittier, CA, 2005

Modern Techniques in Spinal Surgery. Western Orthopaedic Association, 2005

Laminoplasty in the North American Population. University of California, Irvine, Graduate Research Forum, 2005

Posterior Cervical Surgery and Instrumentation. AO North America, Chicago, IL, 2006

- Low Back Pain. Grand Rounds, South Coast Medical Center, 2006
- Lumbar Spinal Disorders and the Primary Care Physician. Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA, 2006
- Cervical Evaluation in the Multi-Trauma Patient. University of California, Irvine, Graduate Research Forum, 2007
- Anterior Cervical Surgery Advanced Techniques. Cervical and Lumbar Instructional Course, Santa Monica, CA, 2007
- Lumbar Spinal Stenosis, Back Pain, and Disc Herniations. Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA, 2007
- Complications of Posterior Cervical Surgery. Complex Cervical Surgery Symposium, Denver, CO, 2008
- Modern Techniques in Spinal Surgery. University of California, Irvine, Department of Biomechanical Engineering, BME 200, 2008
- Outcomes of Posterior Cervical Laminoplasty in Various American Population. Grand Rounds, Kyoto Prefectural University of Medicine, Kyoto, Japan, 2008
- The Efficacy of Posterior Cervical Laminoplasty in Elderly Myelopathic Patients. Grand Rounds, Dokkyo Medical University, Dokkyo, Japan, 2008
- Lost in Translation? Is Cervical Laminoplasty a Valid Technique in the North American Population? Grand Rounds, Department of Orthopaedic Surgery, Wakayama Medical University, Wakayama, Japan, 2008
- Lumbar Spinal Disorders. Grand Rounds, Lakewood Medical Group, Lakewood, CA, 2009
- Recent Updates in Spinal Surgery Techniques. University of California, Irvine, Department of Biomechanical Engineering, BME 200, 2009
- Modern Updates in American Orthopedics and Spine Surgery. Grand Rounds, Tokushima University, Tokushima, Japan, 2009

- Spinal Surgery and Implants. The American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009
- Biomechanical Evaluation of an Expandable Cage in Single Segment Posterior Lumbar Interbody Fusion. The American Society of Mechanical Engineering 4<sup>th</sup> Frontiers in Biomedical Devices Conference and Exhibition, Irvine, CA, 2009
- Metastatic Spine Disease: Surgical Management. Contemporary Concepts in Spine Surgery, American College of Spinal Surgery, Newport Beach, CA, 2009
- Cervical Laminoplasty versus Laminectomy and Fusion. Advanced Techniques in Spine Surgery, Boston, MA, 2009
- Techniques for Open and Minimally Invasive Transforaminal Lumbar Interbody Fusion (TLIF). Advanced Techniques in Spine Surgery, Boston, MA, 2009.
- Anterior Cervical Discectomy and Fusion versus Cervical Total Disc Arthroplasty. Advanced Techniques in Spine Surgery, Boston, MA, 2009
- Minimally Invasive Cervical Spine Surgery. Pain Management Grand Rounds, University of California, Irvine, 2010
- Posterior Minimally Invasive Approaches to the Cervical Spine. Instructional Course Lecture, American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, LA, 2010
- Spinal Surgery Implants: Development and Modern Approach. 5th Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010
- Internal Decapitation: Review of the Literature and Case Presentation. 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010
- The Anterior Approach for Treatment of Thoracolumbar Fractures and Dislocations. 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010
- Minimally Invasive Cervical Spine Surgery, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011
- Post-operative Anterior Cervical Hematoma and Cricothyroidotomy: How to Manage and Treat. 4<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2011
- *The Cervical Spine: "State of the Art".* 1<sup>st</sup> Annual UC Irvine Spine Symposium, Irvine, CA, 2011

- Diagnosis and Management of Cervical Spinal Disorders. 7th Annual Surgery for Primary Care Physicians Conference, Orange, CA, 2011
- *Emergent Cricothyroidotomy and Airway Management*. 16<sup>th</sup> Annual Cervical Spine Research Society Instructional Course, Phoenix, AX, 2011
- Difficult Patient-Physician Interactions, The Art of Doctoring, Orange, CA, 2012
- Minimally Invasive Posterior Cervical Spinal Surgery, Symposium in Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Francisco, CA, 2012
- Anterior Cervical Spine Surgery: Treatments and Complications. 5<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2012
- Unmet Needs in Spinal Surgery. Clinical Needs Symposium, Beckman Laser Institute, Irvine, CA, 2012
- Posterior Cervical Instrumentation and Fixation. The Art of Spine, Dana Point, CA, 2012
- Adult Spinal Deformity. MOC Review Course, American Academy of Orthopaedic Surgery, San Francisco, CA, 2012
- Infections of the Spine. MOC Review Course, American Academy of Orthopaedic Surgery, San Francisco, CA, 2012
- Difficult Patient-Physician Interactions, The Art of Doctoring, Orange, CA, 2013
- Minimally Invasive Posterior Cervical Spinal Surgery. Symposium in Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013
- *Tracheotomy and Crichothyroidotomy*. Instructional Course Lecture, Cervical Spine Research Society, Annual Meeting, Los Angeles, CA, 2013
- *Complex and Minimally Invasive Cervical Spine Surgery*. UC Irvine Spine Symposium: Current Treatment of Spinal and Other Orthopaedic Conditions: An Evidence-Based Approach from Childhood to Adults, Irvine, CA, 2014.
- Cervical Decompression: Anterior, Posterior, or Both? Harbor-UCLA Medical Center, Department of Orthopaedic Surgery, Grand Rounds, Torrance, CA, 2014
- What's New in Adult Spine Surgery: Cervical Spine. California Orthopaedic Association, Annual Meeting, Indian Wells, CA, 2015

- Post-Operative Pain Management: A Modern Approach. Western Orthopaedic Association, Annual Meeting, Coeur d'Alene, ID, 2015
- What's New in Adult Spine Surgery. California Orthopaedic Association, Annual Meeting, Dana Point, CA, 2016
- Updates in Cervical Spine Surgery. California Orthopaedic Association, Annual Meeting, Dana Point, CA, 2019
- *Cervical Spine Pathology and Decision Making*. West Coast Fellows Conference, San Diego, CA 2022.
- Spine Injury Management in Athletes on the Sideline. Sports Medicine and Joint Preservation Symposium, UC Irvine, Newport Beach, CA, 2022
- *Emergent Tracheotomy and Crichothyroidotomy.* Spine by the Sea Symposium, Newport Beach, CA, 2022.
- Cervical Spine Pathology and Treatment. UC Irvine Orthopedic Surgery Symposium: A Review of Surgeons and Non-Surgeons, Newport Beach, CA, 2023
- Surgical Intervention for Neck Pain and Pathology. Spine by the Sea Symposium, Long Beach, CA, 2023.
- Personalized Pre-Operative Care in Spine Surgery. Western Orthopaedic Association, Annual Meeting, Coeur d'Alene, ID, 2023.
- Diversity, Equity and Inclusion in Orthopedic Surgery; Presidential Symposium. Western Orthopaedic Association, Annual Meeting, Coeur d'Alene, ID, 2023.

#### **INVITED FACULTY:**

Symposium for Minimally Invasive and Posterior Cervical Surgery, San Diego, CA, 2004

Moderator, Basic Science, North American Spine Society, 2005

Advanced Surgical Techniques Meeting, Santa Monica, CA, 2005

Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA, 2005

Symposium for Lumbar and Cervical Surgery, New York, NY, 2005

Family Practice Review Symposium, UC Irvine-Long Beach Memorial Hospital, Long Beach, CA, 2005 Advanced Spinal Techniques, Dallas, Texas, 2006

19th Annual Disorders of the Spine, Whistler, Canada, 2007

Cervical and Lumbar Instructional Course, Santa Monica, CA, 2007

20th Annual Disorders of the Spine, Whistler, Canada, 2008

Complex Cervical Surgery Symposia, Denver, Colorado, 2008

Visiting Professor, Wakayama Medical University, Japan, 2008

Visiting Professor, Dokkyo Medical University, Japan, 2008

Visiting Professor, Keio University, Japan, 2008

Invited Guest Lecturer, Japanese Orthopaedic Association Annual Meeting, Sapporo, Japan, 2008

Visiting Professor, Shinshu University School of Medicine, Japan, 2008

Visiting Professor, Kyoto Prefectural University of Medicine, Japan, 2008

Visiting Professor, Tokushima Prefectural University, Japan, 2009

- Moderator, Posterior Cervical Surgery, Japanese Society for Spine Surgery and Related Research, 38<sup>th</sup> Annual Meeting, Kobe, Japan, 2009
- Moderator, Post-operative Complications, Contemporary Concepts in Spine Surgery, The American College of Spinal Surgery, Newport Beach, CA, 2009
- Moderator, Spinal Surgery and Implants, Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Irvine, CA, 2009
- Lecturer and Moderator, Advanced Techniques in Spine Surgery, Boston, MA, 2009
- Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, New Orleans, LA, 2010
- Lecturer, 5<sup>th</sup> Annual Conference of Spine Surgeons of Spain and Portugal, Lisbon, Portugal, 2010
- Program Chair and Moderator, Annual Meeting, Western Orthopaedic Association, Monterey, CA, 2010

- Moderator, Spinal Surgery and Implants, Frontiers in Biomedical Devices Conference, American Society of Mechanical Engineering, Newport Beach, CA, 2010
- Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Diego, CA, 2011
- Lecturer and Lab Instructor, 4<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2011
- Faculty Member, 16<sup>th</sup> Annual Instructional Course, Cervical Spine Research Society, Phoenix, AZ, 2011
- Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, San Francisco, CA, 2012
- Moderator and Lecturer, The Art of Spine, Annual Meeting, Dana Point, CA, 2012
- Lecturer and Lab Instructor, 5<sup>th</sup> Annual Cervical Spine Decompression and Stabilization Techniques, Cervical Spine Research Society, St. Louis, MO, 2012
- Moderator and Lecturer, Instructional Course Lectures, Advanced Techniques in Cervical Spine Surgery, American Academy of Orthopaedic Surgery, Annual Meeting, Chicago, IL, 2013
- Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2013
- Faculty Member, 18<sup>th</sup> Annual Instructional Course, Cervical Spine Research Society, Los Angeles, CA, 2013
- Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2014
- Moderator and Lecturer, UC Irvine Spine Symposium, Irvine, CA, 2014
- Moderator and Lecturer, Interactive Spine Summit: West, Dana Point, CA, 2014
- Visiting Professor, Harbor-UCLA Medical Center, Torrance, CA, 2014
- Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2015
- Moderator and Lecturer, California Orthopaedic Association Annual Meeting, Indian Wells, CA, 2015

- Moderator, Western Orthopaedic Association Annual Meeting. Coeur d'Alene, ID, 2015
- Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2016
- Moderator and Lecturer, California Orthopaedic Association Annual Meeting, Dana Point, CA, 2016
- Moderator and Lecturer, Spine Science and Art Study Group, Annual Meeting, Park City, UT, 2017
- Moderator, Western Orthopaedic Association, Annual Meeting, Kauai, HI, 2017
- Lecturer, California Orthopaedic Association, Annual Meeting, Dana Point, CA, 2018
- Moderator, Western Orthopaedic Association, Annual Meeting, Monterey, CA, 2019
- Moderator and Lecturer. UC Irvine Orthopedic Surgery Symposium, Newport Beach, CA, 2022
- Moderator and Lecturer, Spine by the Sea Symposium, Newport Beach, CA, 2022
- Moderator, Western Orthopaedic Association, Annual Meeting, Maui, HI, 2022
- Moderator and Lecturer. UC Irvine Orthopedic Surgery Symposium: A Review of Surgeons and Non-Surgeons, Newport Beach, CA, 2023
- Moderator and Lecturer, Spine by the Sea Symposium, Long Beach, CA, 2023
- Moderator and Lecturer, Western Orthopaedic Association, Annual Meeting, Coeur d'Alene, ID, 2023

#### **PROGRAM COMMITTEES:**

- Chairman, Regional Spinal Surgery Conference, University of California, Irvine, 2004 present
- Chairman, PediGuard Technique Symposium, University of California, Irvine, 2005 2010
- Program Committee, Western Orthopaedic Association, Annual Meeting, 2009 2011
- Chairman, Program Committee, Western Orthopaedic Association, Annual Meeting, Monterey, CA, 2010
   Program Chairman, UC Irvine Spine Symposium, 2011, Irvine, CA

- Director, Self-Assessment Examination Program, Western Orthopaedic Association, Portland, OR, Annual Meeting, 2012
- Course Chairman, Spinal Surgery Alumni Educational Course, University of California, Irvine, 2012
- Chairman, The Art of Spine, Annual Meeting, Dana Point, CA, 2012
- Symposium Director, Biologics, North American Spine Society, Annual Meeting, Dallas, TX, 2012
- Chairman, Spine Science and Art Study Group, Park City, UT, 2013
- Program Committee, International Society for the Advancement of Spine Surgery, Vancouver, Canada, 2013
- Chairman, Innovative Spine Summit, Annual Meeting, Dana Point, CA, 2013
- Chairman, Spine Science and Art Study Group, Park City, UT, 2014
- Chairman, UC Irvine Spine Symposium: Current Treatment of Spinal and Other Orthopaedic Conditions: An Evidence-Based Approach from Childhood to Adults, Irvine, CA, 2014
- Chairman, Interactive Spine Summit: West, Annual Meeting, Dana Point, CA, 2014
- Chairman, Spine Science and Art Study Group, Park City, UT, 2015
- Chairman, Interactive Spine Summit: Annual Meeting, Dana Point, CA, 2015
- Chairman, UC Irvine Orthopaedic Symposium: Modern Trends in Joint Arthroplasty, Irvine, CA, 2015
- Program Committee, Cervical Spine Research Society, San Diego, CA, 2015
- Chairman, Spine Science and Art Study Group, Park City, UT, 2016
- Chairman, UC Irvine Orthopaedic Symposium: Modern Trends in Orthopaedic Trauma, Newport Beach, CA, 2016
- Chairman, Interactive Spine Summit: Annual Meeting, Dana Point, CA, 2016
- Program Committee, Cervical Spine Research Society, Toronto, Canada, 2016
- Chairman, Spine Science and Art Study Group, Park City, UT, 2017
- Program Committee, Cervical Spine Research Society, Hollywood, FL, 2017

Program Committee, Cervical Spine Research Society, Scottsdale, AZ, 2018

Program Committee, Western Orthopedic Association, Virtual Meeting, 2021

- Program Committee, Co-Chair, UC Irvine Orthopedic Surgery Symposium, Newport Beach, CA, 2022
- Program Committee, Western Orthopedic Association, Annual Meeting, Maui, HI, 2022
- Program Committee, Co-Chair, UC Irvine Orthopedic Surgery Symposium: A Review of Surgeons and Non-Surgeons, Newport Beach, CA, 2023

Program Committee, Western Orthopedic Association, Coeur d'Alene, ID, 2023

#### **EDITORIAL POSITIONS:**

Editor, <u>Contemporary Spine Surgery</u>

Editor, Orthopaedic Knowledge Online

Contributor, SpineUniverse.com

Contributor, SpineFellows.com

Reviewer, The Spine Journal

Reviewer, Clinical Orthopaedic and Related Research

Reviewer, Journal of Applied Physiology

Faculty, OrthoCases.com

Editor, Spine Line, 2012-2015

# **PROFESSIONAL ORGANIZATIONS:**

American Academy of Orthopaedic Surgeons, Member

American Orthopaedic Association, Elected Member

Cervical Spine Research Society, Elected Member

North American Spine Society, Member

Scoliosis Research Society, Elected Member

California Orthopaedic Association, Member

Western Orthopaedic Association, Member

Alpha Omega Alpha Honor Society

# **PROFESSIONAL CERTIFICATION:**

Medical License, State of California Board of Medical Examiners, 2000

DEA Certification, 2000

Board Certification, American Board of Orthopaedic Surgery, 2006 Recertification passed 2024 (valid until 2036)

# **COMMITTEE POSITIONS HELD:**

UC Irvine School of Medicine, CELC Quality and Safety Executive Committee, 2024 - 2026

Board Member, Western Orthopaedic Association 2011- 2024 CME Committee, 2012-2014 and 2017-2019 Treasurer, 2013-2017 2<sup>nd</sup> Vice President, 2018-2019, 2021-2022 1<sup>st</sup> Vice President, 2019-2020 President 2020-2021, 2022-2023 Chair, Nominations Committee, 2023-2024

- Cervical Spine Research Society, Research Committee, 2018-2023 Chair, Resident/Fellow Grant Subcommittee, 2019-2023
- UC Irvine School of Medicine, Health Sciences Compensation Plan Advisory Committee, 2000 2023

California Medical Association, Orange County Alternative Delegate, 2018 - 2023

CME Committee, University of California, Irvine, School of Medicine, 2009 – 2021

UC Irvine School of Medicine Senate Assembly Orthopaedic Surgery Representative, 2010 - 2018

UC Irvine Program in Ethics, Medical Humanities, and Spiritual Care, Associate Faculty, 2013 - 2024

UC Irvine School of Medicine Conflict of Interest Committee, 2019-2020

North American Spine Society, Committee on Biologics and Basic Science, 2011-2015