

MICHAEL E. JANSSEN, D.O.
Curriculum Vitae
(Updated 06/2017)

**Office Address
And Telephone:**

Center for Spine & Orthopedics, P.C.
9005 Grant Street, Suite 200
Denver, Colorado 80229
Ph: 303-287-2800
Fax: 303-287-7357
Website: www.centerforspineandortho.com

The Spine Education & Research Foundation
9005 Grant Street, Suite 100
Denver, Colorado 80229
Ph: 720-540-7374
Fax: 720-540-7379
Website: www.spine-education.org

*The Scientific Education and Research Inst.
Musculoskeletal Learning Center*
9005 Grant Street, Suite 100
Denver, Colorado 80229
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Fax: 720-540-7379
Website: www.theseri.com

PERSONAL DATA:

Year of Birth: 1958
City of Birth: Des Moines
State of Birth: Iowa
Citizenship: United States

LICENSURE:

Colorado: 30753 valid through 4/30/19
Georgia: 032108 valid through 12/31/17
Missouri: 2004016670 valid through 1/31/18
Wyoming: 8321A valid through 6/30/17

EDUCATIONAL BACKGROUND:

Secondary School: Dowling High School
Des Moines, Iowa – 1977

Undergraduate School: University of Iowa
Iowa City, Iowa
B.S. in General Science
1977-1982

Medical School: University of Health Sciences
2105 Independence Boulevard
Kansas City, Missouri 64124-2395
Doctor of Osteopathic Medicine
1982-1986

SPECIAL TRAINING:

Internship: Medical College of Georgia
1120 15th Street
Augusta, Georgia 30912
General Surgery: Trauma
1986-1987

Residency: Medical College of Georgia
Orthopaedic Surgery
1987-1991

FELLOWSHIP:

AO ASIF Fellowship (1990) Klinik for Orthopedic Chirurgie Kantonsspital, St. Gallen, Switzerland PD Dr. Fritz Magerl	Lakewood Orthopaedic Clinic Center for Spine Surgery July 1991 – July 1992 Spine Surgery
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The Spine Education and Research Institute

Spine Fellowship Director

Past Trained Spine Surgery Residents:

Jason Sparks – United States of America

Past Trained Spine Surgery Fellows: (58)

Enzo Mantelli – Chile
Mac Sims – United States of America
Manoj Khatri – England
Tan Jun – China
Marcos Schugurenksy – Argentina
Jianwei Xu – China
Pablo Vela – Columbia
Xiaojian Ye – China
Xin Ma – China
Fengshan Zhang – China
Tienshang Sun – China
Yang Chen – China
Guangyu Hu – China
Haitao Zhou – China
Hao Liu – China
Joseph Borg – England
Tao Li – China
Peng Cao – China
Bing Li – China
Li Zhang – China
Ji Wu – China
Xinwei Wang – China
Xingkai Zhang – China
Jose Fleiderman Valenzuela – Chile

Jinyu Zhu – China
Jason Datta – United States of America
Xinsheng Peng – China
Goichi Watanabe – Japan
Vivek Panikkar – England
Javier Gutierrez – Chile
Feizhou Lu – China
Rongbiao Lin – China
Douglas B. Kasow – United States of America
Bradley Daly – United States of America
Virender Sahni – India
Ajay Kumar Sharma – Malaysia
Franciso Illabaca – Chile
Qingjun Su – China
Hamed Reihanikermani – Iran
Tianwei Sun – China
Xuesong Zhang – China
Nicholas Grisoni – United States of America
Feng Xue – China
Hazem Magableh – Jordan
Takahiro Ishii – Japan
Khaldoun ElAbed – Saudi Arabia
Chen Yu – China
Navin Karn – Nepal
Bassem Awad – Egypt
Hazem Magableh – Jordan
Chen Yu – China
Narvin Kumar Karn – Nepal
Qingquan Kong – China
Stravros Stavridis – Greece
Hemanth Kumar – India
Lingjie Fu – China
Mario Bran Garcia – Guatemala
Suhail Afzal – India
Shibao Lu – China
Lixiang Ding – China
Zhicheng Zhang – China
Lugue Marvin – Philippines
Bitao Lv – China
Bailling Chen – China
Mo Li – China
Feifei Zhou – China
Feng Yuan – China
Lei Kuang – China
Alejandro Peiro Garcia – Spain
Ankur Goswami – India
Beiyu Wang – China
Jian Kuang – China
Lei Kuang – China
Marvin Lugue – Philippines
Nicola Marengo – Italy
Feng Yuan – China
Hua-Dong Yang – China
Zhicheng Zhang – Beijing
Stefano Carlucci- Italy
Vijay Kumar Krishnappa – Ukrain

Dr. Keichi Fujimoto - Japan

PROFESSIONAL APPOINTMENTS:

University of Colorado, Assistant Clinical Professor
Orthopedic Surgery
June 2003 – present

Spine Education and Research Institute: Chairman
Denver, Colorado
October 2001 – Present

AOSpine International Executive: Chairman
Zurich, Switzerland
January 1, 2005 – April 19, 2009

AOSpine International Board: Chairman
Zurich, Switzerland
January 1, 2006 - April 19, 2009

AOSpine International Board: Past-Chairman
Zurich, Switzerland
May 1, 2009 – April 20, 2012

Rocky Vista University, Clinic Adjunct Faculty
College of Osteopathic Medicine
Denver, Colorado
June 2011 – present

Kansas City University (KCUMB): Clinical Assistant Professor of Spine Surgery
Department of Specialty Medicine
Kansas City, Missouri
November 21, 2014 – present

Xuanwu Hospital Capital Medical University
Emeritus Professor
March 4, 2016

MEDICAL JOURNAL EDITOR

InSpine Journal
The International Journal for Spine Care Professionals
Editor-In-Chief
Spine Editor

NEWSPAPER PUBLICATIONS

St. Anthony Hospital Systems, Health Scene, State of the Art Capabilities,

New treatments provide relief for spinal problems. Spring, 1993.

AWARDS:

Best Moderator Award, AO ASIF International Advanced Spine Course, Davos Switzerland, December 1998

Best Lecture Award, AO ASIF International Comprehensive Spine Course, Davos, Switzerland, December 1998

Outstanding Physician 2003 Award, Presented by the DHHA Medical Staff Denver, Colorado, September 2003

Honorary Professor, Awarded by The General Hospital of the Air Force, Beijing, China, April 2006

Honorary Chairman, Awarded by The Beijing Army General Hospital, Beijing, China, June 2007

Leon L. Wiltse Award for Best Overall Paper, Awarded by the Spine Arthroplasty Society, Miami, Florida, May 2008

SAS Leon Wiltse Award for Best Overall Paper Award sponsored by Dr. and Mrs. Hansen A. Yuan for "5 year Results of the Prospective, Randomized, Multicenter FDA Investigational Device Exemption Prodisc-C Clinical Trial." (Delamarter, Janssen, Zigler and Murrey, Tay), Presented at the SAS10 Annual Global Symposium On Motion Preservation Technology, New Orleans, Louisiana, April 2010

Awarded: Golden Eagle Award 2013, Highest Level of Professionalism in Powerboat Racing

"Doing it Right" award, Saratoga/Platte Valley Chamber of Commerce for Lifetime Achievement Award and Support to the Community. February, 2014

Inaugural German Ochoa Traveling Fellowship Award, Awarded by AOSpine, 2015.

International Society for the Advancement of Spine Surgery
Paper #366

"The Positive Effect of Continued Motion of a Cervical Artificial Disc Replacement on Radiographic Adjacent Level Degeneration at Long Term Follow-Up". Best Paper Award. ISASS16, Las Vegas, NV. April 2016.

BOARD CERTIFICATION:

American Board of Orthopaedic Surgery
(Incorporated 1934)
Current through December 31, 2024

American Board of Spine Surgery
October 1998-Present
Current through December 31, 2024

ACCREDITATION:

Level II Accreditation Test for Workmen's Compensation,
Accredited through 2018

EMPLOYMENT HISTORY:

Lakewood Orthopaedic Clinic
1805 Kipling Street
Lakewood, Colorado 80215
July 1992 – February 1994

Center for Spinal Disorders, P.C.
9005 Grant Street, Suite 200
Thornton, Colorado 80229
February 1994 – Present
President

The Spine Education and Research
Institute
9005 Grant Street, Suite 100
Thornton, Colorado 80229
July 2001 – Present
Chairman – Board of Directors

The Scientific Education and Research
Institute (formally, Musculoskeletal
Learning Center, LLC)
9005 Grant Street, Suite 100
Thornton, Colorado 80229
January 2005 – Present
President

BUSINESS OWNERSHIPS:

Saratoga Resort and Spa
International Resort Properties
Snowy Mountain Brewery
Cutting Edge Marine

HOSPITAL AFFILIATIONS:

Saint Anthony North Hospital
St Anthony North Health Campus
14300 Orchard Parkway
Westminster, CO 80023
(Active)

Saint Anthony Central Hospital
4231 West 16th Avenue
Denver, Colorado 80204
(Active)

The Children's Hospital
1056 East 19th Avenue
Denver, Colorado 80218
(Courtesy)

Lutheran Medical Center
8300 West 38th Avenue
Wheat Ridge, Colorado 80033
(Affiliated)

North Suburban Medical Center
9191 Grant Street
Thornton, Colorado 80229
(Active)

Denver Health Medical Center
777 Bannock Street
Denver, Colorado 80204
(Active)

University Hospital/UCHSC
4200 East 9th Avenue
Denver, Colorado 80262
**(Associated Clinical Professor in
the Department of Orthopaedics**

North Valley Rehab Hospital
8451 Pearl Street
Thornton, Colorado 80403
(Active)

School of Medicine)

Good Samaritan Medical Center
200 Exempla Circle
Lafayette, Colorado 80026
(Active)

Sterling Regional Medical Center
615 Fairhurst Street
Sterling, Colorado 80751
(Consultant)

Platte Valley Medical Center
1600 Prairie Center Parkway
Brighton, CO 80601
(Active)

HOSPITAL COMMITTEES:

Quality Assurance Committee
Orthopaedics Department
Provenant St. Anthony's Hospital
1993-1996

Medical Records Committee
North Suburban Medical Center
1994-1996

Credentials Committee
North Suburban Medical Center
1994-1996
Dept. Chair: Orthopaedic Surgery
North Suburban Medical Center
1996

O.R. Function Committee
North Suburban Medical Center
1995-1996
Executive Committee
North Suburban Medical Center
1996

Search Committee
North Suburban Medical Center
Administrator (Surgical Services)
1996

Search Committee
North Suburban Medical Center
Medical Director
1996

Physician Health Partners
Quality Assurance Committee
1997-Present

Musculoskeletal Surgery Center,
Denver. Chairman- Medical Executive
Governing Board 2001-present

North Colorado Rehabilitation Center
Board of Directors
2013 - present

COMMITTEES Active

1. Colorado Division of Workers Compensation Cervical Spine Task Force
2. AO North America Spine Board
3. AO International Board of Trustees
4. AO International Spine Board
5. AO International Spine Executive Committee
6. AO International TK (Technical Commission) (Co-chairman)

7. Examination Committee for the American Board of Spine Surgery
8. Advisory Panel to the Division of Workers' Compensation task force on Spine/Lower Extremity Medical Treatment Guidelines, 2000
9. Advisory Panel to the Division of Workers' Compensation Task Force on Cervical Spine Treatment Guidelines, 2001
10. Clear Creek Valley Medical Society Scholarship Committee (Chairman)
11. HealthONE Alliance Institutional Review Board
12. Sloan's Lake Credentialing Committee
13. AO Non-Fusion Task Force (Chairman)
14. AO Cervical Spine Task Force
15. The Spine Education and Research Institute Scholarship Committee
16. The Spine Education and Research Institute Fellowship Committee (Chairman)
17. The Spine Education and Research Institute International Fellowship Program (Director)
18. Colorado Society of Osteopathic Medicine Continuing Medical Education Committee, 2005-2006
19. Steering Committee of the National Research Programme "Musculoskeletal Health – Chronic Pain" of the Swiss National Science Foundation
20. Centura Institutional Review Board
21. Education Committee for the ProDisc® Technology
22. Spine Arthroplasty Society Education Committee
23. American Osteopathic Academy of Orthopedics Spinal Surgery Division 3rd Vice President
24. North American Spine Society, 2006 Spine Across the Sea Scientific Program Reviewer, 2006
25. Spine Arthroplasty Society Continuing Medical Education Committee
26. Colorado Society of Osteopathic Medicine Continuing Medical Education Committee, 2006-2008
27. Spine Arthroplasty Society Industry Relations Committee
28. Colorado Society of Osteopathic Medicine Legislative Committee, 2008
29. Colorado Society of Osteopathic Medicine Membership Committee, 2008
30. AOSpine Non Fusion International Registry Executive Committee, 2008
31. AOF Board of Directors
32. American Orthopaedic Association member
33. AOVA Member
34. AOCID Committee Member, 2010-2013

SOCIETY MEMBERSHIPS:

American Medical Association	Cervical Spine Research Society
AOSpine International	Colorado Osteopathic Society
Colorado Medical Society	Clear Creek Medical Society
Denver Osteopathic Foundation	North American Spine Society
American Osteopathic Academy of Orthopedics	American Academy of Orthopedic Surgeons (Fellow)
American Academy of Osteopathy	Spine Arthroplasty Society
ONE Spine	Lumbar Spine Research Society
American Orthopaedic Association (AOA)	

PROFESSIONAL MEMBERSHIPS:

PADI Dive Instructor
Superboat International
Offshore Super Series

PROFESSIONAL HOBBIES:

Competitive chess
PADI Dive Instructor
Offshore Powerboat Racing
Back Country Snowmobile Guide
Skiing
International Motorcycle Tours

RESEARCH EXPERIENCE:

Zoology:	Circadian Rhythms
Biomechanics:	Biomechanics of Human Motion
Orthopedic:	Ultra Structure Changes in Growth Plates and Chondrodystrophies
Research Director:	Lakewood Orthopaedic Clinic (7/91 - 2/94)
Research Director:	Spine Education and Research Institute

CURRENT RESEARCH:

Feasibility study of "Contact Fusion Cage" for posterior lumbar interbody stabilization **(Completed)**
A safer Posterior Lumbar Interbody Fusion Contact Fusion Cage - Randomized, prospective study **(Completed)**

Titanium Interbody Spacer - Randomized prospective study **(Completed)**

Femoral Ring Allograft - Clinic experience with custom femoral ring allograft for anterior column support in the lumbar spine **(Completed)**
Cervical Ring Allograft - Clinic experience with custom cervical ring allograft for anterior cervical spine fusion **(Completed)**

Cervical Spine Locking Plate - Clinic experience with five-year follow-up on survivorship analysis of anterior cervical spine plating with use of the cervical spine locking plate **(Completed)**

Posterior Cervical Screw and Rod Construct for Reconstruction of the Cervical Spine
Multi-center prospective randomized controlled clinical trial comparing the safety and effectiveness of ProDisc-C® for anterior cervical discectomy and fusion (ACDF) surgery in the treatment of symptomatic cervical disc disease **(Principal Investigator)**

Randomized, Third-party Blinded, Multi-center, Clinical Trial to Determine the Safety and Effectiveness of Oxiplax®/SP Gel for the Reduction of Pain and Symptoms Following Lumbar Disc Surgery **(Completed)**

A Multi-Center, Prospective, Randomized, Controlled Clinical Trial Comparing the Safety and Effectiveness of ProDisc® total disc replacement to spinal fusion surgery in the treatment of discogenic pain associated with degenerative disc disease (DDD) in the lumbosacral spine **(Principal Investigator)**

A Multi-Center, Prospective, Randomized, Clinical Trial comparing stabilization with CoFlex verses pedicle screw fixation and fusion after decompression for at least moderate lumbar spinal stenosis **(Principal Investigator)**

Clinical Study comparing posterior flexile stabilization of the lumbar spine with the Stabilimax NZth Dynamic Stabilization system to posterior lateral instrumented fusion **(Principal Investigator)**

An Assessment of P-15 Bone Putty in Anterior Cervical Fusion with Instrumentation
(Principal Investigator)

An Assessment of Surgical Techniques for Treating Cervical Spondylotic Myelopathy
(Principal Investigator)

Simplify Disc clinical trial for one and two levels. **(Principal Investigator)**

PUBLICATIONS/CURRENT PROJECTS:

1. Congenital Absence of Pericardium: An Unusual Cause of Atypical Angina. Ann. Thoracic Surgery, 45:91-93, 1988.
2. Lumbar Herniated Disk Disease: Comparison of MRI, Myelography, and Post-Myelogram CT with Surgical Findings Orthopaedics, Volume. 17 #2 Pages 121-128 February 1994.
3. Sexual Functions Following Spinal Arthrodesis, Orthopaedics Today, Volume. 13, #12 December 1993.
4. A Correlation of Cervical Magnetic Resonance Imaging and Discography / Computed Tomographic Discograms; Spine, December 15, 1994 Volume 19, Number 24.
5. Epidural Abscess Following Cervical Discography; Complications in Orthopaedics Summer, 1994.
6. Treatment of Subtrochanteric Fractures of the femur: reduction on the traction table and fixation with dynamic condylar screw; Arch Orthopaedic Trauma Surgery, 1994, 113(3): 138-141.
7. Primary Femoral Shortening Osteosynthesis in the Management of Comminuted Supracondylar Femoral Fractures, Arch Orthopaedic Trauma Surgery, 1994 113(3) 134-137.
8. Early Complications of a Posterior Cervical Screw and Rod Construct. Ruggiero, Sasso, Janssen, Submitted to Cervical Spine Research Society and Spine, 1999.
9. Biological Cages: Specific Tools and Implants in Minimally Invasive Spine Surgery; European Spine Journal, 2000, 9(1): S102-109
10. A Safer Posterior Lumbar Interbody Fusion: Abstract. Submitted for Publication.
11. Biomechanics of machined femoral allograft bone for anterior lumbar fusions, Journal of Biomechanics, September 2001. Volume 34 Supplement 1, page S6.
12. Stability of posterior cervical fixation with screw/rod constructs. Journal of Biomechanics, September 2001. Volume 34 Supplement 1, page S61.
13. Biomechanics of variable angle screw fixation in anterior plating of the cervical spine. Journal of Biomechanics, September 2001. Volume 34 Supplement 1, page S61.
14. Outcomes of allogenic cages anterior and posterior lumbar interbody fusion. European Spine Journal, Oct. 2001. Volume 10: S158 - S168.
15. Rectangular PLIF cage helps restore lordosis, prevent migration. Orthopedics Today, November 2001. Volume 21, Number 10, page 17.

16. Outcomes of allogenic cages in anterior and posterior lumbar interbody fusion. The Use of Bone Substitutes in Spine Surgery: A State of the Art Review, November 2002, 74-84.
17. Fusion versus disc replacement for discogenic pain. AO Dialogue, Volume. 16, Issue I, June 2003, 22-24.
18. Cervical Disc Replacement vs ACDF, Spine Line, January/February 2005, 17-21.
19. Anterior Lumbar Interbody Fusion Using Femoral Ring Allograft for Treatment of Degenerative Disc Disease. Seminars in Spine Surgery, December 2005.
20. The Value of CT Angiography for Anterior Lumbar Spine Procedures, Spine, December 2005.
21. The Use of Computed Tomography Angiography to Define the Prevertebral Vascular Anatomy Prior to Anterior Lumbar Procedures, Spine, January 2007.
22. The Comparison of the Pedicle Internal Structure between the Adjacent Segments in the Chinese People, April 2007.
23. New Spine Products, AODevelopment, New Trauma Products from AODevelopment, April 2007, 38-40.
24. The Use of Computed Tomography Angiography to Define the Prevertebral Vascular Anatomy Prior to Anterior Lumbar Procedures, Spine, Volume 32, Number 1, 113-119.
25. Heterotopic Ossification with C ProDisc, J Neuro Spine, Fall 2008
26. Clinical IDE of Cervical ProDisc, The Spine Journal, Fall 2008
27. A Multi-Center Prospective Non-randomized Controlled Study Assessing the Efficacy of Surgery in Patients with Differing Severity of Cervical Spondylotic Myelopathy: Results of AOSpine North America CSM Study in 300 Subjects. In Press. Spring 2009.
28. Results from the Prospective, Randomized Multi-Center Food and Drug Administration Investigation Device Exemption Study of Pro-Disc®-C Total Disc Replacement vs. Anterior Discectomy and Fusion for the Treatment of 1-level Symptomatic Cervical Disease. Spine Journal. 2009 Apr;9(4):275-86. Epub 2008 Sep 6.
29. The ProDisc-C Total Disc Replacement System Was Effective for Symptomatic Cervical Disc Disease, The Journal of Bone & Joint Surgery, Volume 91-A, Number 11, November 2009
30. Vascular Injury in Elective Anterior Lumbosacral Surgery. Spine, Volume 35, Number 9S, April 20, 2010 supplement. (Senior Author and Editor)
31. Surgical Decompression in Patients with Cervical Spondylotic Myelopathy: Results of the AOSpine North America Multi-Center Prospective CSM Study. The New England Journal of Medicine.
32. Results at 24 months from the prospective, randomized, multicenter Investigational Device Exemption trial of ProDisc-C versus anterior cervical discectomy and fusion with 4-year follow-up and continued access patients. SAS Journal: The International Society for the Advancement of Spine Surgery, Journal 4, 122-128, 2010.
33. Is surgical decompression in patients with mild cervical spondylotic myelopathy effective? Results of the prospective, controlled, multicenter AOSpine North America CSM study. JAMA

34. Positive Discography Highly Predictive of Clinical Outcomes After Surgery. Spinal News International, February 4, 2011 Issue.
35. Perioperative and Delayed Complications Associated with the Surgical Treatment of Cervical Spondylotic Myelopathy Based on 302 Patients from the AOSpine North America Cervical Spondylotic Myelopathy Study – Submitted for Publication Summer of 2011
36. AOSpine North America Cervical Spondylotic Myelopathy Study: Perioperative Complication Rates Associated with Surgical Treatment Based on a Prospective Multicenter
37. Efficacy and Safety of Surgical Decompression in Patients with Cervical Spondylotic Myelopathy: Results of the AOSpine North America Multi-Centre Study - JBJS
38. Five-Year Results of the ProDisc-C Multicenter Randomized Clinical Trial
39. Impact of Diabetes on Symptoms and Treatment Outcomes in Patients with Cervical Spondylotic Myelopathy: The Results of the AOSpine North America Multicenter Prospective Study – The Spine Journal
40. Seven-Year Results of the ProDisc-C Multi-Center Randomized Clinical Trial
41. 7- Year Reoperation Rates: Results of a Prospective, Randomized Clinical Trial: Cervical Total Disc Replacement vs. Fusion
42. Adjacent Level Radiographic Degenerative Changes Following Single Level Artificial Disc Replacement or ACDF at 5-7 Year Follow-Up
43. Five Year Adjacent Level Degenerative Changes Comparing Lumbar Total Disc Replacement to Circumferential Fusion in Patients with Single-Level Disease in a Prospective Randomized Cohort Analysis
44. Does 360° Lumbar Spinal Fusion Improve Long-Term Clinical Outcomes After Failure of Conservative Treatment in Patients With Functionally Disabling Single-Level Degenerative Lumbar Disc Disease? Results of 5 Year Postoperative Follow-Up of 75 Patients
45. Does Two-Level 360° Lumbar Spinal Fusion Improve Long-Term Clinical Outcomes After Failure of Conservative Treatment in Patients With Functionally Disabling Two-Level Degenerative Lumbar Disc Disease? Results of 5 Year Follow-Up in Fifty-two Randomized Postoperative Patients
46. Zigler, J. E., Delamarter, R., Murrey D., Spivak, J., Janssen, M. (2013). ProDisc-C and Anterior Cervical Discectomy and Fusion as Surgical Treatment for Single-Level Cervical Symptomatic Degenerative Disc Disease: Five-Year Results of a Food and Drug Administration Study. *Spine*, 38 (3), 203-209.
47. Barry, S., Fehlings, M.G., Kopjar, B., et al. (2013). Anterior vs Posterior surgical approaches to treat cervical spondylotic myelopathy: Outcomes of the prospective multicenter AOSpine North America CSM Study in 264 patients.
48. Fehlings, M.G., Wilson, J.R., Kopjar, B., et al. (2013). Efficacy and Safety of Surgical Decompression in Patients with Cervical Spondylotic Myelopathy: Results of the AOSpine North America Prospective Multi-Center Study. *JBJS*, 95, 1651-1658.

49. Arnold, P.M., Fehlings, M.G., Kopjar, B., et al. (2013). Impact of Diabetes on Outcomes of Surgical Decompression for Cervical Spondylotic Myelopathy: Results of the AOSpine North America Multi-Center Prospective Study (CSM). *The Spine Journal*.
50. Coronal Plane Fracture of L5 Vertebral Body Followed L5-S1 ProDisc-L arthroplasty: Report of Two Cases and Periprosthetic Fracture Classification. Submitted for publication.
51. Seven-Year Follow-up of the Prospective Randomized Food and Drug Administration Investigational Device Exemption Study of the ProDisc-C Total Disc Replacement versus Anterior Cervical Discectomy and Fusion for Single Level Symptomatic Cervical Disc Disease. JBJS-D-14-01186.
52. Geographical Variations in Clinical Presentation and Outcomes of Decompressive Surgery in Patients with Symptomatic Degenerative Cervical Myelopathy: Analysis of a Prospective, International Multicenter Cohort Study of 757 Patients. Submitted for publication.
53. The Spine Journal, Volume 15, Number 10S, October 2015. "The Benefit of Continued Motion of a Cervical Artificial Disc Replacement on Radiographic Adjacent Level Degeneration at 7-Year Follow Up". Jeffery Spivak, Jack Zigler and Michael Janssen.
54. The Spine Journal, Volume 15, Number 10S, October 2015. "Efficacy of a Novel Synthetic Small Peptide in Anterior Cervical Arthrodesis: A Randomized, Controlled, Multicenter Study with 24 Month Follow Up". Rick Sasso, Alex Vacarro, Michael Fehlings, and Michael Janssen.
55. "Efficacy of i-Factor Bone Graft versus Autograft in Anterior Cervical Discectomy and Fusion: Results of the Prospective Randomized Single-blinded Food and Drug Administration Investigational Device Exemption Study". Spine (Phila Pa 1976)
56. THE JOURNAL OF BONE & JOINT SURGERY, Volume 97-A, Number 21. November 4, 2015. "ProDisc-C Total Disc Replacement Versus Anterior Cervical Discectomy and Fusion for Single-Level Symptomatic Cervical Disc Disease.
57. "Five-Year Reoperation Rates of Two Level Lumbar Total Disc Replacement Versus Fusion: Results of a Prospective, Randomized Clinical Trial" Clinical Spine Surgery, 2016.
58. International Journal of Spine Surgery, "Bone substitutes and expanders in Spine Surgery: A review of their fusion efficacies" published. IJSSURGERY-D-15-00097R1. Volume 10 Article 33. September 22, 2016.

BOOK PUBLICATIONS:

1. The Spine in Sports, Copyright 1996, Chapter 51, Skiing, pg. 541
2. Languages of the Spine, Editor, Copyright 1995
3. Spine Surgery Tricks of the Trade, Copyright 2003, Chapter 81, Anterior Lumbar Interbody Fusion (ALIF) Grafting – Femoral Ring, pg. 194.
4. Spinal Instrumentation - Surgical Techniques, Copyright 2005, Chapter 59, Posterior Stabilization Techniques for the Cervicothoracic Junction, pg. 402; Chapter 150, Synthes/MTF Allografts: ACF/ALIF/PLIF/T-PLIF
5. AOSpine Manual Part I: Techniques and Principles, Copyright 2005
Chapter 7.2.1.1, Craniocervical Junction

Chapter 7.2.1.2, Upper Cervical Spine
Chapter 7.2.1.3, Middle/Lower Cervical Spine

6. AO Manual Part II: Clinical Case Studies in Spine, Copyright 2005
Chapter 7.1.6, Degenerative lumbar spine disease: treatment by arthroplasty
Chapter 7.2.4, Degenerative cervical spine disease: treatment by arthroplasty
Chapter 7.2.1, Cervical spondylosis and neck pain
7. Spinal Surgery Tricks of the Trade. 2nd Edition, Copyright 2005, Chapter 52, Posterior and anterior fibular strut graft for high grade spondylolisthesis
8. Spinal Instrumentation. 1st Edition, Copyright 2005, Chapter 59, Posterior stabilization techniques for the cervicothoracic junction, Chapter 150, Synthes/MTF Allografts: ACF/A;OF/PLIF/TPLIF
9. AOSpine Manual: Principles and Techniques, Volume 1, Copyright 2007
Chapter 7.2.1, Modularity and evolution of instrumentation for the cervical spine
Chapter 7.2.3, Middle and lower cervical spine
Chapter 7.2.4, Craniocervical junction
10. AOSpine Manual: Clinical Applications, Volume 2, Copyright 2007
Chapter 7.1.6, Degenerative disease of the lumbar spine – treatment by motion-sparing technology
Chapter 7.2.4, Degenerative disease of the cervical spine – treatment by disc arthroplasty
Chapter 9.7, Complications of lumbar total disc Arthroplasty
11. Spine Surgery Tricks of the Trade. 2nd Edition, Copyright 2009, Chapter 52, Lumbosacral Interbody Fibular Strut Placement for High-Grade Spondylolisthesis: Anterior Speed's Procedure and Posterior Procedure
12. Spine Surgery Tricks of the Trade. 3rd Edition. Thieme Publishing, 60, Lumbosacral Interbody Fibular Strut Placement for High-Grade Spondylolisthesis: Anterior Speed's Procedure and Posterior Procedure.
13. The Positive Predictive Value of Provocative Discography in Artificial Disc Replacement. (Co-Author)

JOURNAL EDITOR POSITIONS

InSpine Journal
The International Journal for Spine Care Professionals
Editor-In-Chief
Global Spine Journal

SCIENTIFIC EXHIBITS:

- American Academy of Orthopedic Surgeons
Annual Meeting - New Orleans, Louisiana, February 1990
- Lumbar Spinal Stenosis: Diagnosis with MRI/Myelography, or CT Scan?
 - Lumbar Herniated Disc Disease: comparison of MRI/myelography, and post-myelographic CT with surgical findings.
- American Academy of Orthopaedic Surgeons
Annual Meeting - New Orleans, Louisiana, February 1994
- Sexual Functions following Lumbar Spinal Arthrodesis

- Cost Analysis of Pedicle Screw Instrumentation for Lumbosacral Arthrodesis
- Cervical Discogenic Pain: A correlation of MRI with Discography and CT/Discograms.

American Academy of Orthopaedic Surgeons
Annual Meeting - Anaheim, California, February 1991

- Post Traumatic Kyphosis of the Lower Cervical Spine in Children, Post Exhibit
- Physiologic Amputation with the Ice Boot, Poster Exhibit.
- Primary Femoral Shortening Osteosynthesis in the Management of Comminuted Supracondylar Femur Fractures, Poster Exhibit.
- Isokinetic Evaluation of Patellectomy, Following Comminuted Fractures, Poster Exhibit.

North American Spine Society
Annual Meeting - New Orleans, Louisiana, October 2000

- Lumbar Interbody Fusion Devices: A Comparative Study

Biomechanical Symposium
Davos, Switzerland, September 2001

- Stability of Posterior Cervical Fixation With Screw/Rod Constructs
- Biomechanics of Variable Angle Screw Fixation in Anterior Plating of the Cervical Spine

Cervical Spine Research Society
Barcelona, Spain, June 2003

- The cost-effectiveness of ACDF in a hospital vs. day surgery center

AO Spine European Region, Excellence in Spine: The Lumbar Intervertebral Disc
Davos, Switzerland, March 17-21, 2005

- Cervical Disc Arthroplasty: Preliminary Results of a Randomized Prospective Study of Single Level ACDF versus ProDisc-C® for the Management of Cervical Spondylosis
- The Value of Preoperative CT Angiography for Anterior Lumbar Arthroplasty and Arthrodesis of the Lumbar Spine

Spine Arthroplasty Society
5th Annual Meeting - New York, New York, May 4-7, 2005

- The Value of Preoperative CT Angiography for Anterior Lumbar Arthroplasty and Arthrodesis of the Lumbar Spine
- Cervical Disc Arthroplasty: Preliminary Results of a Randomized Prospective Study of Single Level ACDF versus ProDisc-C® for the Management of Cervical Spondylosis

12th International Meeting on Advanced Spine Techniques
Banff, Alberta, Canada, July 7-9 2005

- Cervical Disc Arthroplasty: Preliminary Results of a Randomized Prospective Study of Single Level ACDF versus ProDisc-C® for the Management of Cervical Spondylosis
- The Value of Preoperative CT Angiography for Anterior Lumbar Arthroplasty and Arthrodesis of the Lumbar Spine

Cervical Spine Research Society
San Diego, California, 2005

- Early Results of a Randomized Controlled Clinical Trial Comparing ProDisc-C® and ACDF for Cervical Radiculopathy

North American Spine Society
20th Annual Meeting, Philadelphia, Pennsylvania, September 27, 2005

- The Value of Preoperative CT Angiography for Anterior Lumbar Arthroplasty and Arthrodesis of the Lumbar Spine
- Cervical Disc Arthroplasty: Preliminary Results of a Randomized Prospective Study of Single Level ACDF versus ProDisc-C® for the Management of Cervical Spondylosis

Spine Arthroplasty Society

6th Annual Meeting - Montreal, Quebec, Canada, May 9-13, 2006

- Incidence of dysphagia comparing cervical arthroplasty and ACDF with internal fixation
- Cervical disc arthroplasty: preliminary results of a randomized prospective study of ACDF versus ProDisc-C® for the management of cervical spondylosis
- Sagittal split fractures in multilevel cervical arthroplasty using a keel prosthesis
- CT angiography: The role of surgical planning for lumbar arthroplasty
- Multilevel cervical arthroplasty: Rationale and early clinical outcomes
- Clinical outcome of lumbar arthroplasty in patients with prior lumbar surgery using ProDisc-L®

North American Spine Society

21st Annual Meeting, Seattle, Washington, September 26-30, 2006

- Incidence of dysphagia comparing cervical arthroplasty and ACDF with internal fixation
- Cervical disc arthroplasty: preliminary results of a randomized prospective study of ACDF versus ProDisc-C® for the management of cervical spondylosis
- Sagittal split fractures in multilevel cervical arthroplasty using a keel prosthesis
- CT angiography: The role of surgical planning for lumbar arthroplasty
- Multilevel cervical arthroplasty: Rationale and early clinical outcomes
- Clinical outcome of lumbar arthroplasty in patients with prior lumbar surgery using ProDisc-L®

Spine Arthroplasty Society

7th Annual Meeting – Berlin, Germany, May 1-5, 2007

- Cervical Disc Arthroplasty: Preliminary Results of a Randomized Prospective Study of ACDF Versus ProDisc-C® for the Management of Cervical Spondylosis
- Incidence of Dysphagia Comparing Cervical Arthroplasty and ACDF with Internal Fixation
- CT Angiography: The Role of Surgical Planning for Lumbar Arthroplasty
- Anterior Ossification Following Cervical Arthroplasty with ProDisc-C®
- Multilevel Cervical Arthroplasty: Rationale and Early Clinical Outcomes
- The Value of Provocative Discography Using Artificial Disc Replacement as the New Gold Standard Outcome Measure

North American Spine Society

22st Annual Meeting, Austin, Texas, October 23-27, 2007

- 24 month Results from the Prospective Randomized Multi-Center IDE Trails of ProDisc-C® vs. ASCDF
- The Value of Provocative Discography using Artificial Disc Replacement as the new Gold Standard Control
- P-15 Graft Substitute, Mechanism and Function
- Surgical Treatment for Cervical Spondylotic Myelopathy: Initial 6 month Outcomes of a Multicenter Prospective Study of 160 Patients

American Association of Neurological Surgeons

76th Annual Meeting, Chicago, Illinois, April 26 – May 1, 2008

- Predictors of Outcome with Decompressive Surgery for Cervical Spondylotic Myelopathy: A Prospective Multicenter Study in 283 Patients with Independent Assessment

Spine Arthroplasty Society

8th Annual Meeting – Miami, Florida, May 6-9, 2008

- Bone Putty – A Novel Bone Graft Substitute for Use in Cervical Spinal Fusion. Early Results of a Multi-center Randomized Controlled Trial in North America

- The Use of CT Angiography to Define the Prevertebral Vascular Anatomy Prior to Anterior Lumbar Procedures

AOSpine Global Spine Congress

1st Annual Meeting – San Francisco, California, June 23-26, 2009

- Differences in Male and Female Spino-Pelvic Alignment in Asymptomatic Young Adults – A Three-Dimensional Analysis Using Upright Low-Dose Digital Biplanar X-Rays
- I-FACTOR Bone Graft – A Novel Bone Graft Substitute For Use in Cervical Spinal Fusion. Early Results of An FDA IDE Multi-Center Randomized Controlled Trial with Independent Outcomes Assessments
- Surgical Treatment for Cervical Spondylotic Myelopathy: One Year Outcomes of the AOSpine North America Multi-Center Prospective Study of 301 Patients
- Predictors of Outcomes in Patients with Cervical Spondylotic Myelopathy. Analysis of the One Year Outcomes of 301 Patients in the AOSpine North America Study
- Results From the Prospective, Randomized Multi-Center IDE Trial of Prodisc-C vs. ACDF with 4-Year Follow-Ups and Continued Access Patients
- Prospective, Controlled Results of Patients Treated with Expanded Indications for Prodisc-C

Spine Arthroplasty Society

10th Annual Global Symposium on Motion Preservation Technology—Las Vegas, Nevada, April 27-30, 2010

- Prospective, Controlled Results of Patients Treated with Expanded Indications for ProDisc®-C
- Quantification of Intradiscal Pressures below Thoracolumbar Spinal Fusion Constructs: Is there Evidence to Support Saving a Level?
- Results from the Prospective, Randomized, Multicenter IDE Study of 2-level ProDisc®-L: Randomized Patients versus Continued Access Patients at 2 Years

EuropSpine 2010 Conference

- i-Factor™ Bone Graft—a Novel Bone Graft Substitute for Use in Cervical Spinal Fusion. Early Results of a FDA IDE Multi-Center Randomized Controlled Trial with Independent Outcomes Assessments.

Congress of Neurological Surgeons

2010 Annual CNS Meeting—San Francisco, California, October 16-21, 2010

- AOSpine North America Cervical Spondylotic Myelopathy Study: Two Year Surgical Outcomes of A Prospective Multicenter Study in 280 Patients.

Cervical Spine Research Society

Annual Meeting—Charlotte, North Carolina, December 2-4, 2010

- Anterior vs Posterior Surgical Approaches to Treat Cervical Spondylitic Myelopathy: Outcomes of the Prospective Multicenter AOSpine North America CSM Study in 280 Patients.

AOSpine Global Spine Congress

Barcelona, Spain, April 23-26, 2011

- Cervical arthroplasty (Co-Moderation)
- Treatment of multilevel cervical degenerative disc disease with cervical TDR-pearls and pitfalls

- Large cervical HNP with myelopathy—case presentation
- Axial neck pain and cervical degenerative disc disease
- FDA approval in North America—how to receive it
- Lessons learned from the disc arthroplasty experience
- Spine—novel technologies and image guidance (Co-Moderation)
- Lumbar—surgical techniques (Co-Moderation)
- Cervical anterior surgery
- Endoscopy vs. microsurgery in cervical and lumbar disc surgery—can evidence determine the race?
- Thoracolumbar—surgery (Co-Moderation)
- Global Spine Congress Awards (Chairman)

18th International Annual Meeting—Copenhagen, Denmark, July 13-16, 2011

- Factors Associated with Perioperative Complications in the Treatment of Cervical Spondylotic Myelopathy Based on 302 Patients from the AOSpine North America Cervical Spondylotic Myelopathy Study
- The AOSpine North America Cervical Spondylotic Myelopathy Study: Perioperative Complication Rates Associated with Surgical Treatment Based on a Prospective Multicenter Study of 302 Patients
- Predictors of Outcomes in Surgical Treatment for Cervical Spondylotic Myelopathy: The AOSpine North America Multi-Center Prospective Study
- Impact of Diabetes on Symptoms and Treatment Outcomes in Patients with Cervical Spondylotic Myelopathy. The Results of the AOSpine North America Multi-Center Prospective Study
- 5-Year Results of the ProDisc-C Multi-Center Randomized Clinical Trial
- Total Disc Replacement in the Failed Back Surgery Patient, Analysis of Prospective, Randomized, and Continued Access Cohorts
- 5-Year Reoperation Rates: Cervical Total Disc Replacement Vs Fusion Results of a Randomized Clinical Trial

NASS 2011 Annual Meeting—Chicago, IL, November 2-5, 2011

- Total Disc Replacement in the Failed Back Surgery Patient, Analysis of Prospective, Randomized, and Continued Access Cohorts

SCIENTIFIC PRESENTATIONS:

Medical College of Georgia/University Hospital

- Esophageal Carcinomas, March 1987
- Bone Grafting Techniques, August 1987
- Nonunion of the Humeral Shaft, March 1988
- Phalangeal Fractures, January 1989
- Osteomyelitis: Current Treatment, January 1989
- Fractures/Dislocations of Thoracolumbar Spine, February 1989
- Internal Fixation of the Spine: Ground Rounds, January 1990
- Cervical Spine Trauma in Children: Grand Rounds, January 1991
- Low Back Pain: Diagnostic Dilemma, Physicians Assistance Teaching Program, May 1991
- Cervical Instrumentation: Uses and Abuses, Guest Professor, March 1994

Spinal Stenosis, Georgia Osteopathic Medical Society, Stone Mountain, Georgia, October 1989

South Carolina Orthopedic Association Meeting, Hilton Head, South Carolina, January 1990

- Lumbar Herniated Disc Disease: Comparison of MRI, Myelography and Post-Myelogram CT with Surgical Findings
- A New Technique for Closure of Fasciotomy Incisions

Techniques of Fasciotomies Closures, Kantonsspital, St. Gallen, Switzerland, March 1990

Lumbar Herniated Disc Disease, Eastern Swiss Orthopedic Society Meeting, Austria, March 1990

Decision Making for Spinal Implants in Lumbar spine fractures, Clinic for Orthopedic Surgery, Kantonsspital, St. Gallen, Switzerland, April 1990

Diagnosing Herniated Disc Disease, Resident Research Conference, Charleston, South Carolina, May 1990

Lumbar Herniated Disc Disease: Diagnostic Strategies, Southern Orthopedic Society, Maui, Hawaii, June 1990

Primary Femoral Shortening Osteosynthesis in the Management of Supracondylar Femur Fractures, Smith & Nephew Richards, 8th Annual Orthopaedic Resident Conference, Memphis, Tennessee, August 1990

Post-Traumatic Kyphosis of the Lower Cervical Spine In Children, American Academy of Orthopedic Surgery, Boston, Massachusetts, October 1990

Lumbar Herniated Disc Disease: Comparison of MRI, Myelography and Post-Myelographic CT Scan with Surgical Findings, Georgia, Orthopedic Society, 1990 Residents Award, Sea Island, Georgia, October 1990

Medical and Surgical Advances in the Management of Degenerative Diseases of the Lumbar Spine, Orthopedic Nursing, Savannah, Georgia, October 1990

Post-Traumatic Kyphosis of the Lower Cervical Spine in Children, Cervical Spine in Children, Cervical Spine Research Society, San Antonio, Texas, November, 1990

58th Annual Meeting at the Academy of Orthopedic Surgeons, Anaheim, California, March, 1991

- Lumbar Herniated Disk Disease, Comparison of MRI, Myelography, Post-Myelographic CT Scan with Surgical Findings
- Post Traumatic Kyphosis of the Lower Cervical Spine in Children

Post Traumatic Kyphosis of the Lower Cervical Spine in Children, Southeastern Resident Research Conference, Columbia, South Carolina, March 1991

24th Annual American Orthopedic Association, National Residents Conference, Kansas City, Kansas, April 1991

- Lumbar Herniated Disc Disease
- Primary Femoral Shortening Osteosynthesis in the Management of Comminuted Supracondylar Femur Fractures

Post-Traumatic Kyphosis in Cervical Spine in Children, Southern Orthopedics Annual Meeting, Colorado Springs, Colorado, August 1991

Eastern Orthopaedic Society, Lumbar Herniated Disc Disease, Madrid, Spain, October 1991

Diagnosing Lumbar Disc Disease, 2nd Annual Colorado Spine Symposium, Denver, Colorado, November 1991

Acute Management of Spinal Trauma, St. Anthony Hospital, Denver, Colorado November 1991

An Alternative Method of managing Open Wounds for Fasciotomies, Blue River Trauma Society, Blue River, British Columbia, Canada, January, 1992

Management of Supracondylar Femur Fractures, Annual Colorado Spine Symposium, Denver, Colorado November 1991

Colorado Osteopathic Society Meeting, Keystone, Colorado, February 1992

- Non-operative Management of Degenerative Lumbar Disc Disease
- The Surgical Management of the Degenerative Lumbar Spine

Current Concepts in the Diagnosis and Treatment of Compartment Syndrome, Spring Orthopaedic Day, Denver, Colorado, May 1992

The Management of Unstable Thoracolumbar Spine Fractures with the Fixture Interne, Colorado Trauma Symposium, Denver, Colorado, June 1992

Current Trends in the Management of Degenerative Disorders of the Lumbar Spine, LaVeta, Colorado, June 1992

Operative Treatment of Odontoid Fractures, Rocky Mountain Chapter of the Western Orthopedic Associations, Snowmass, Colorado, August 1992

Operative Treatment of Odontoid Fractures, 3rd Annual Colorado Spine Symposium, Denver, Colorado, November 1992

The History of Spinal Rods and the Development of the Texas Scottish Rite Hospital Systems, Spine Symposium for Operating Room Nurses, Denver, Colorado, November 1992

Diagnosis and Treatment of Neck Pain and Brachialgia, Lutheran Hospital Medical Center, Staff Conference, January 1993

Diagnosis and Management of Neck Pain and Brachialgia, Spring Orthopedic Day, Denver, Colorado, March 1993.

Management of Pediatric Cervical Spine Fractures Colorado Orthopedic Trauma Meeting, Denver, Colorado, June 1993

Western Orthopedic Meeting: Rocky Mountain Chapter, Aspen, Colorado, July 1993

- Sexual Function Following Lumbar Spinal Arthrodesis
- Cost Analysis of Pedicle Screw Instrumentation for Lumbosacral Arthrodesis

The Effect of Spinal Orthosis on Sexual Function Following Spinal Arthrodesis, Western Orthopedic Meeting, Seattle, Washington, August 1993

North American Spine Society Annual Meeting, San Diego, California, October 1993

- Sexual Function Following Lumbar Spinal Arthrodesis
- Lumbosacral arthrodesis with pedicle screw implants: Cost Comparison

AO ASIF course for operating room personnel and nurses, Denver, Colorado, November 1993
(Course Chairman)

American Academy of Orthopedic Surgeons Annual Meeting, New Orleans, Louisiana, February, 1994

- Cervical Discogenic Pain: A correlation of MRI with discography and CT/Disco grams
- Cost Analysis of Pedicle Screw instrumentation for lumbosacral arthrodesis: Federation of Spine Surgeons Specialty Day

Cervical Instrumentation, "Uses and Abuses," Guest Professor, Medical College of Georgia
March 1994

Cervical Trauma - Overview Sixth Annual Colorado Trauma Symposium, Denver, Colorado
June 1994

AO ASIF Spine Course Spine Course, Instructor, Montreal, Quebec, Canada, July 1994

Current Trends in Cervical Surgery, Mediplex Rehab, Thornton, Colorado, October 1994

AO ASIF ORP Course Cervical Trauma, Cervical Spondylosis, Thoracolumbar Spine Trauma
Sacramento, California, November 1994.

AO ASIF Spine Course, Davos, Switzerland, December 1994 **(Faculty)**

Spinal Trauma, Association of Surgical Technologist, Keystone, Colorado, January 1995.

AO ASIF ORP Course Chairman, Breckenridge, Colorado, February 1995

Current Trends in Cervical Trauma, Second Annual North Colorado Spine Symposium
Loveland, Colorado, February 1995

AO/ASIF Opine Course, Cabo San Lucas, Mexico, April 1995

- Odontoid Osteosynthesis: Technology Above Reason
- Thoracolumbar Spine Fractures
- National History of Degenerative Diseases of the Thoracolumbar Spine

Spine Fusion in the 21st Century, Denver Law School, Denver, Colorado, May 1995

Spine Imaging; In the Era of Managed Care, Colorado Osteopathic Annual Meeting
Snowmass, Colorado, June 1995

Cervical Trauma, Colorado Spine Symposium, Englewood, Colorado, June 1995

Indications for Instrumentation in the Degenerative Lumbar Spine, AO/ASIF Advanced Spine Course,
Bermuda, October 1995

Current Concepts for Anterior Cervical Stabilization for Cervical Trauma
A/O ASIF Advanced Spinal Techniques Course, Davos, Switzerland, December 1995

Subaxial Cervical Trauma: Current Treatment Modalities, 8th Annual Meeting
Whistler, British Columbia, Canada, January 1996

Reducing Low Back Injuries, Degenerative Conditions of the Lumbar Spine Diagnosis and Surgical
Treatment, Colorado Safety Association, Denver, Colorado, February 1996

AO/ASIF Spine Operating Room Personnel Course, Kansas City, Missouri, May 1996

- Thoracolumbar Spinal Trauma
- Thoracolumbar Fracture Stabilization
- New Concepts and Emerging Trends in Spinal Surgery

Cervical Spine Care: Presentation to Residents and Primary Care Physicians, Aurora Regional
June 1996

Spine Course, Dubai, United Arab Emirates, October 1996

- Indications and Techniques for Posterior Cervical Plating

- Indications and Techniques for Anterior Plating
- Indications for Treatment of Thoracolumbar Spine
- Surgical Treatments for Degenerative Spine
- Laparoscopic, Retroperitoneal Surgery

Cervical Spine: Posttraumatic deformity correction. Spine Course, Davos Switzerland, December 1996

Current Trends and Future Concepts in Spine Surgery Family Medicine Grand Rounds, Aurora Presbyterian/St. Luke's Hospital, Colorado, December 1996

Subaxial Cervical Spine Trauma: Current Concepts in Management, Whistler, British Columbia, January 1997

Advanced Spine Course, Banff, Alberta, Canada, March 1997

- Posterior Lumbar Interbody Arthrodesis: Indications, Techniques and Pitfalls
- Cervical Deformity: Correction Techniques and Pitfalls

5th North European Instructional Spine Course for Surgeons held in Nottingham, England, September 1997

- Sexual Function Following Spine Surgery
- Management of Late Kyphotic Deformity
- Posterior Lumbar Interbody Fusion Cages
- Bone Graft Physiology in Spinal Surgery
- Anterior vs. Posterior Indications in the Cervical Spine

Advanced Spine Course, Davos, Switzerland, December 1997

- Indications and techniques for posterior surgery
- Late deformities treatment concept
- Odontoid fractures in elderly: Which one to treat? Which one to forget?
- Failure of fixation: solutions for a difficult problem
- Criteria for surgical indications in rheumatoid arthritis of the upper cervical spine

Degenerative Cervical Spine - Surgical Options, Whistler, British Columbia, Canada, January 1998

AO ASIF Comprehensive Spine Course, Los Cabos, Mexico, February 1998

- Correction of late deformities in the cervical spine
- Post-laminectomy kyphosis
- Degenerative Spondylosis: To fuse or not to fuse?
- Anterior Lumbar Arthrodesis

The evaluation and management of axial neck and radicular pain, Columbia Presbyterian/St Luke's, March 26, 1998

Acute pain management, Denver Osteopathic Society, Bella Ristorante, Denver, Colorado, May 5, 1998

Anatomy of Cervical HNP and Discogenic Pain, Thornton, Colorado, May 21, 1998

AO ASIF Comprehensive and Interactive Spine course in Montreal, Quebec, Canada, July 16-19, 1998

- Correction of late deformities in the cervical spine
- Indications and pearls of posterior instrumentation for degenerative disc disease
- Upper cervical spine injury in the elderly; when and why to treat
- Post-traumatic deformity: when and how to correct
- Cervical disc surgery: discectomy with or without fusion?
- When and whom to operate? Reduction plus instrumentation plus fusion

AO/ORP Course, New concepts and trends in spine surgery, August 1998

Epidural abscess, diagnosis, treatment and pitfalls, Idaho, August 1998

Medical treatment guidelines for cervical spine injury, Department of Labor and Employment
Division of Workers Compensation, Grand Junction, Colorado, September 17, 1998

AO ASIF Course, South Africa, October 1998

- Odontoid screw fixation
- Classification of cervical trauma
- AO Classification of thoracolumbar fractures
- Ventrofix - Introduction of a new anterior fixation device

Anterior column support: Myth or Reality? AO Annual Spine Meeting, Sawgrass, Florida, November
1998

Advanced Spine Course, Davos, Switzerland, December 1998

- Failed back syndrome
- Posttraumatic kyphotic deformities
- Principles in cervical trauma
- Pathoanatomy of discogenic pain and disc injuries

Contemporary Update of Disorders of the Spine, Whistler, British Columbia, January 1999

- Metastatic disease of the spine: Principles and treatment options
- Subaxial cervical spine trauma

Visiting AO Lectureship for C1 C2 instability, Sarasota, Florida, February 1999

AO Spine Comprehensive Course, Hong Kong, March 1999

- Clinical presentation of degenerative spine
- Disc pathoanatomy and biomechanics
- Failed Back Syndrome
- Cervical Myelopathy: clinical presentation and principles of treatment
- Surgery for rheumatoid cervical spine
- Principles of management of spinal infections and tumors
- Anterior approach for thoracolumbar fracture
- The role of neurological decompression in thoracolumbar fractures
- Anterior approach for sub axial trauma
- Post-traumatic deformities of cervical spine

AO ASIF Spine Course, Cancun, Mexico, April 1999

- Cervical kyphosis
- Classification of thoracolumbar fractures

Evaluation of Neck Pain, Denver, Colorado, April 30, 1999

Classification and management of spinal trauma, Estes Park, Colorado, May1, 1999

New developments in anterior and posterior cervical instrumentation, Vancouver, British Columbia,
Canada, July 9, 1999

7th North European Advanced Spine Course, Nottingham, England, September 1999

- Minimally invasive surgery: posterior lumbar interbody fusion
- Biomechanics of fusion techniques
- Post traumatic deformity – how and when to correct

- Biomechanics of fixation devices
- Posterior laminectomy cervical instability
- Posterior approaches for the thoracolumbar trauma patient
- Subaxial cervical spine trauma
- Anterior column reconstruction

Visiting Guest Professor Essen Germany, Management of Thoracolumbar Trauma, September 1999

AO ASIF Interactive and Comprehensive Spine Course, Tuckers Town, Bermuda, November 1999

- ALIF Approach, least invasive spine surgery
- Complex cervical deformities
- Anterior column reconstruction for large deficits

Intradiscal Thermal Annuloplasty, Fact or Fiction. Symposium on IDET Procedures, Denver and Colorado Springs, Colorado, November 1999: Division of Labor Symposium

Complex Cervical Spine Symposium, Santiago, Chile, November 1999

- Complex occipital cervical injuries, management techniques
- Cervical deformities
- Posterior cervical foraminotomies
- Cervical spine infections

Management & Evaluation of Cervical Injuries. Exempla Occupational Medicine, Denver, Colorado, November 1999

69th AO ASIF Spine Course, Davos, Switzerland, December 1999

- Management of the failed back
- Anterior techniques for degenerative cervical spine
- Post-traumatic deformities
- Treatment concepts for post traumatic deformities after cervical spine trauma
- Implants for larger anterior column defects
- Case presentation: Adult degenerative scoliosis
- Case presentation: Failed back (failed back nonunion)
- Cages are the future of low back pain surgery (debate)

12th Annual Ski with the Spine Center, Whistler, British Columbia, Canada, January 2000

- Osteotomy for ankylosing spondylitis
- Debate: Laminoplasty

AO ASIF Comprehensive Spine Course, Breckenridge, Colorado, March 2000 (**Chairman**)

- Subaxial Trauma: posttraumatic deformity correction
- Anterior Lumbar Interbody Fusion (ALIF) with "biological cages"
- New frontiers in spine surgery: options for reconstruction of large anterior column deficits

AO ASIF Spine ORP Course, St. Louis, Missouri, March 2000 (**Chairman**)

- AO principles in spine surgery

AO ASIF Spine Course, Santiago, Chile, March 2000

- Posttraumatic deformities: lumbar kyphosis
- Anterior cervical approaches: cervical cages
- Synframe in the lumbar degenerative spine
- Spine care in the next millennium

AO ASIF Comprehensive Spine Course, Cyprus, Greece, April 8-11, 2000

- Posttraumatic Deformities in Cervical Spine Trauma
- Indication and Techniques for Posterior Surgery in Degenerative Cervical Spine

AO ASIF Comprehensive and Interactive Spine Courses, Captiva Island, Florida, September 7-11, 2000 (**Course Director**)

- Posttraumatic Kyphosis
- Intradiscal Electrothermal Therapy (IDET): Critical Review
- Posterior Lumbar Interbody Fusion with Biological Cages
- Minimally Invasive Spine Surgery (MISS)

8th International Spine Symposium, Nottingham, England, September 13-15, 2000

- Classification of Cervical Injuries
- C1/C2 Injuries
- Posttraumatic Kyphosis

Principles of Spine Teaching and Techniques, Spine Sales Conference, Austin, Texas, October 2000
Research Institute International Symposium, Scottsdale, Arizona, November 8-11, 2000

- Outcome Measures: How to Decide and Why Bother
- B.E.R.G. Technique and Results
- Vertical Biological Spacers for Interbody Fusion
- Treatment of Postoperative Spinal Infections

Chilean Orthopedic Society Congress), Iquique, Chile, November 17-20, 2000

(Invited International Guest Speaker)

- Management of Extensive Anterior Spine Deficits
- Posttraumatic Lumbar Kyphosis: Principles of Management & Pitfalls
- Conference: Failed Back Syndrome
- Cervical and Lumbar Cages: Update

Cervical Spine Symposium, Santiago, Chile, November 21, 2000

- Cervical Cages: Technology Above Reason
- Posterior Cervical Instrumentation – StarLock
- New Trends in Cervical Anterior Instrumentation – CSLPIII

Live Surgery Symposium, Bern, Switzerland, December 8-9, 2000

- MISS and Synframe for Anterior, Posterior and Combined Surgery
- Alternatives: PLIF surgery

AO Interactive Course, Davos, Switzerland, December 10-16, 2000

- Case Presentation: sub axial cervical dislocation
- Post-traumatic deformity: sub axial cervical injuries
- Surgical management options: post-traumatic deformity (thoracolumbar)
- Practical Exercise: CSLP for Vertebroctomy, Cervifix

13th Annual Ski with the Spine Center, Whistler, British Columbia, Canada, January 14-19, 2001

- Lumbar Degenerative Disease: “New Therapies – Critical Review”
- Hands-on Lab: Cervifix and Starlock

Stratec First Annual International Spine Conference, Marbella, Spain, April 2001

(Invited Guest Speaker)

- Technology in Anterior Cervical Instrumentation
- Technology in Posterior Cervical Instrumentation
- Structural Bone Grafting in Spine Surgery
- Demineralized Bone Matrix Carriers Applicable in Spine Surgery

Clear Creek Valley Medical Society May Membership Meeting, Lakewood, Colorado, May 9, 2001

- Management of Chronic Low Back Pain: IDET

Nursing Course at St. Joseph Hospital, Denver, Colorado, May 19, 2001

- Spinal anatomy
- Management of Cervical Spine Disease: Case Presentations
- Management of Lumbar Spine Disease: Case Presentations
- The Future of Spine Surgery
- Practical Exercise: Synthes Cervical Spine Locking Plate
- Practical Exercise: Synthes Universal Spine and Click 'X Systems

International Intradiscal Therapy Society 14th Annual Meeting, Tucson, Arizona, May 23-27, 2001

- Lumbar Interbody Fusion Devices: A Comparative Study
- Evaluation of CONTACT Fusion Cage for Posterior Lumbar Interbody Fusion

AO Combined Spine Course, Cartagena, Columbia, July 17-21, 2001

- C1 Trauma
- Post-Traumatic Cervical Deformities
- Workshop on C1-C2 Screws: Cervifix and Odontoid Fixation
- Discectomy: Plates? Cages? Autologous Bone Grafts?
- Degenerative Cervical Spine: Anterior Approach
- Infections
- Use of Synframe in Cervical Surgery
- New technology in Instrumentation: Starlock

AO ASIF Spine Operating Room Personnel Course, Chicago, Illinois, August 18, 2001

- Posterior Management of the Cervical Spine
- Workshop: Cervifix

Eurospine Meeting, Göteborg, Sweden, September 4-8, 2001

- Lumbar interbody fusion techniques: Allograft spacers
- Demineralized Bone Matrix in Spine Surgery
- Posterior Cervical Spine Fixation with Starlock
- Anterior Cervical Spine Fixation with CSLP Variable Angle

Biomechanica Symposium, Davos, Switzerland, September 23-25, 2001

- Stability of Posterior Cervical Fixation with Screw/Rod Constructs
- Biomechanics of Variable Angle Screw Fixation in Anterior Plating of the Cervical Spine
- Biomechanics of Machined Femoral Allograft Bone for Anterior Lumbar Fusions

Indiana Deformity Symposium, Indianapolis, Indiana, September 28-29, 2001

- Medical/Anesthesia Considerations in Spine Surgery

Spine Conference, The Spine Education and Research Institute, Thornton, Colorado, November 13, 2001

- Evaluations of New Technology in Spine Care

AO Interactive Spine Course, Davos Switzerland, December 9- 14, 2001

- Cage Alternatives
- **(Moderator)**: Subaxial dislocation
- Debate: Controversies in subaxial cervical injuries
- Surgical Management Options

14th Annual Disorders of the Spine Meeting, Whistler, British Columbia, Canada, January 19-25, 2002

- Lab: Anterior Interbody Reconstruction
- Case Presentation: Adolescent Grade II Spondylolisthesis
- Case Presentation: Cervical Myelopathy
- Case Presentation: Hematogenous Infections
- An Algorithm for Change

Live Surgery Symposium, Berne, Switzerland, February 1–2, 2002

- Meta-analysis of Cervical Anterior Interbody Fusion

Exploratory Science Workshop for Kids, Thornton, Colorado, March 14, 2002

- Bones 'R Us
- Anatomy of Frogs

Debating Issues in the Degenerative Thoracolumbar Spine, Thornton, Colorado, March 16, 2002

- Rationale for Biologic Material

Cervical Degenerative Disc Disease, Thornton, Colorado, March 19, 2002

- Live Surgery Demonstration of Anterior Cervical Fusion at C5-C6

Career in Healthcare, Thornton, Colorado, April 5, 2002

- Live Surgery Demonstration of Spinal Laminectomy

AO-ASIF Comprehensive and Interactive Spine Course, Coronado, California, April 18-21, 2002

- Anterior Approaches to the Degenerative Cervical Spine
- Posterior Stabilization of the Cervical Spine
- Hands-on Lab: ALIF, Translaminar Screws, and PLIF
- Posterior Lumbar Interbody Fusion

8th Annual Chinese Cervical Spine Course, Shanghai, China, May 6-12, 2002

- Advanced Treatment of Cervical Trauma
- Application of Cages in the Cervical Spine
- Surgical Approaches to the Cervical Spine

AO Spine Symposium, Nijmegen, Netherlands, May 31, 2002

- **(Moderator):** Degenerative Lumbar Spine
- Failed Back
- Degenerative Scoliosis: Surgical Treatment

Cervical Spine Research Society Annual Meeting, Paris, France, June 13-14, 2002

- Workshop: CSLP Variable Angle and Starlock

Second AO Cervical Spine Course, Santiago, Chile, August 12-14, 2002

- Transarticular C1-C2 Fixation: Principles and Techniques
- Post-traumatic deformities
- C-Spine Fusion with spacers
- Bone Substitutes in Cervical Spine Surgery
- Decision-making in Cervical Spine Fusions
- Reconstruction in multi-level corpectomy

AO-ASIF Operating Room Personnel Course, Thornton, Colorado, September 14, 2002

- Lumbar Interbody Fusion

Debating Issues in the Cervical Spine Symposium, Thornton, Colorado, October 12, 2002

- The Future of Cervical Spine Reconstruction

AO Interactive Spine Course, Dubai, United Arab Emirates, October 18-22, 2002

- Treatment of Traumatic Spondylolisthesis and Other Upper Cervical Spine Injuries
- Practical Exercise: CSLP
- Practical Exercise: Cervifix
- Practical Exercise: C1-C2 Transarticular Screw Fixation
- Indications and Results in PLIF

Synthes Spine National Sales Meeting, Tucson, Arizona, November 9-11, 2002

- Vertebroplasty

AO-ASIF Interactive Spine Course, Davos, Switzerland, December 9-13, 2002

- **(Moderator):** Low Back Problems
- Anterior Discectomy Fusion

Disorders of the Spine Annual Meeting, Whistler, British Columbia, Canada, January 18-24, 2003

- Case Presentation: Football Injury – Return to Play
- Case Presentation: Failed Back
- Case Presentation: AS-Osteotomy
- Case Presentation: Neuromuscular Scoliosis

Live Surgery Symposium, Bern, Switzerland, January 24-26, 2003

- Reconstruction of the Anterior Column of the Cervical Spine & Posterior Stabilization
- Cages in Anterior Reconstruction of the Cervical Disease
- Nucleoplasty, Concept & Realization

2003 Midwinter Conference, Keystone, Colorado, February 23-28, 2003

- Spine Technology – Balancing Quality, Cost, and Responsibility

AO-ASIF Comprehensive & Interactive Spine Course, Sun Valley, Idaho, February 27–March 2, 2003

- The AO: Past, Present, and Future
- Balancing Patient Safety and Efficacy
- Case Presentation: Herniated Nucleus Pulpous
- Nucleoplasty
- Biological Factors in the Degenerative Spine
- Case Presentation: Spinal Cord Injury
- Atlantoaxial Injuries
- Post-traumatic Kyphosis

Fellows Forum, Banff, Alberta, Canada, March 20-22, 2003

- Starting a Practice: Tips and Pearls

Anterior Lumbar Spine Forum, Denver, Colorado, April 4-5, 2003 **(Course Chairman)**

AO-ASIF Comprehensive Spine Course, Santiago, Chile, May 8-10, 2003

- Post-traumatic Deformities
- Anterior Lumbar Interbody Fusions
- Substitute of Autologous Bone Graft
- Present and Future of the Spinal Surgery

Rocky Mountain Resident's Forum, Thornton, Colorado, May 17, 2003

- AO Spine: Education and Research Opportunities
- Surgical Demonstration: Posterior Fixation Methods of the Cervical Spine

AO-ASIF Spine Course, Buenos Aires, Argentina, June 5-7, 2003

- Minimally Invasive Spine Surgery: Myth or Reality

- Non-Fusion Technology in Spine Surgery
- Outpatient Cervical Discectomy and Fusion: Cost vs. Safety

AO-ASIF Comprehensive and Interactive Spine Course, Quebec City, Quebec, Canada, July 21-27, 2003

- **(Moderator)** Spine Cord Injury
- Surgical Approaches of Anterior with Posterior Fixation
- Type C Injuries Management
- Herniated Nucleus Pulpous with Radiculopathy
- Degenerative Lumbar Spine

Anterior Lumbar Spine Forum, Denver, Colorado, August 8-9, 2004 **(Course Chairman)**

University of Colorado Weekly Core Curriculum Conference, Denver, Colorado, October 8, 2003

- Complications of Cervical Surgery

AO-ASIF Spine Course, Adelaide, Australia, October 13-20, 2003

- Non-Union & Failures of Fixation
- Cervical Myelopathy
- Cervical Disc Disease

North American Spine Society Annual Meeting, San Diego, California, October 21, 2003

- What's New in Spine Grafting Technology and Tissue Banking

AO-ASIF Interactive Spine Courses, Davos, Switzerland, December 14-20, 2003

- **(Moderator)** Axial Back Pain: What's new
- **(Moderator)** Cervical Spine
- Rationale of Cages and Arthroplasty
- **(Moderator)** Tips and Tricks in Spine Surgery: How to do it?

Anterior Lumbar Spine Forum, Denver, Colorado, January 11-12, 2004 **(Course Chairman)**

- Current Treatment Options for Anterior Lumbar Interbody Fusions
- A Review of Operative Anterior Lumbar Spine Surgeries

Spine Presentation, Craig, Colorado, January 14, 2004

- Balancing the Cost and Value of New Spine Technology

Practice Management for Spine Surgeons, Phoenix, Arizona, February 7-8, 2004

- Building a Spine Education and Research Center

AO-ASIF Spine Course, Sun Valley, Idaho, February 19-22, 2004

- Stenosis: Degenerative Spondylolisthesis

Live Surgery Demonstration for Thornton High School, Thornton, Colorado, March 3, 2004

- Surgery: Laminectomy with Decompression

Anterior Access Technology Course, Santa Monica, California, March 5-6, 2004

- Why Anterior Lumbar Interbody Fusion?
- Current Treatment Options for Anterior Lumbar Interbody Exposure

Fellows Forum, Banff, Alberta, Canada, March 26-28, 2004

- AO Spine NA – How it can work for you?

Revision Strategies in the Thoracolumbar Spine, Thornton, Colorado, April 3-4, 2004

- Failed Back Surgery vs. Revision Spine Surgery

Anterior Access Technology Course, Thornton, Colorado, April 4-5, 2004

- Surgical Management of Lumbar Degenerative Disc Disease
- Live Surgery Demonstration: L4-L5 Lumbar arthrodesis

North American Spine Society, Boca Raton, Florida, April 21-26, 2004

- Spine Centers: Do they deliver better care?

Spine Arthroplasty Society, Vienna, Austria, May 4-8, 2004

- Balancing Patient Safety and Efficacy In Spine Surgery Technology
- **(Moderator)**: Cervical Disc Results

National Spine Congress, Beijing, China, May 13–17, 2004

- Posterior and Anterior Approach to the Lumbar Spine
- Failed Low Back Surgery and Revision Surgery
- Debate: Artificial Disc or Fusion
- Discussion: Revision Cases In Cervical Spine Surgery

Disc Replacements of the Spine, Thornton, Colorado, June 15, 2004

- Cervical Degenerative Disc Disease: Fusion or Disc Replacement
- Lumbar Disc Replacement: Future or Fad in the Management of DDD

IMAST, Bermuda, July 1-3, 2004

- **(Moderator)**: Cervical Arthroplasty Workshop
- U.S. Clinical Experience and Results
- **(Faculty)** – Hands-on Workshop Cervical Arthroplasty
- **(Faculty)** – Hands-on Workshop Lumbar Arthroplasty

AO Cervical Spine Course, Puebla, Mexico, July 15-17, 2004

- AO Principles in Spine Surgery
- Surgical Management of Hangman Fracture
- Anterior Approach in Cervical Myelopathy
- Biological and Non-biological Grafts in Cervical Spine Surgery
- Complications in Cervical Spine Surgery and their Solutions

Anterior Lumbar Spine Forum, Philadelphia, Pennsylvania, August 1, 2004

- Why Anterior Interbody Fusion?
- Current Treatment Options for Anterior Lumbar Interbody Fusion

Anterior Lumbar Spine Forum, Denver, Colorado, August 8-9, 2004

- Future Developments for Treatment of Degenerative Disc Disease via Anterior Exposure
- Live Surgery Demonstration: L5-S1 Lumbar Arthrodesis

Mexican Spine Society Annual Meeting, Veracruz, Mexico, September 9-11, 2004

- Experience of Cervical Spine Arthroplasty
- Non-Fusion Technology in the Lumbar Spine
- Arthroplasty and Nucleoplasty
- Interbody Fusion Cages and Corpectomy Reconstruction
- Balance of Security and Efficiency in Spine Surgery
- Technology Principles of Anterior Approach to the Lumbar Spine

- Cervical Kyphosis: Treatment Principles
- New Technology in Cervical Spine Surgery from Anterior to Posterior

American College of Spine Surgeons Annual Meeting, Phoenix, Arizona, September 23-24, 2004

- Osteobiologics: Let's Get Focused
- Spinal Update Symposia

Georgia Orthopedic Society Spine Symposium, Augusta, Georgia, October 9, 2004

- Current Trends in Spine Arthroplasty
- How Not to do Spine Surgery
- Spine Arthroplasty: Future or Fad

North American Spine Society Pre-Course, Chicago, Illinois, October 25-29, 2004

- Balancing Safety and Efficacy in Spine Technology

Colorado Spine Symposium, Westminster, Colorado, November 12, 2004

- Indications and Early Results of Cervical and Lumbar Disc Replacement

AOSpine North America Faculty Development Forum, Southampton, Bermuda, November 4-7, 2004

- The Art of Moderating

AO-ASIF Interactive Spine Course, Davos, Switzerland, December 8–17, 2004

- Revision Strategies for Complex Deformities and Reconstructions
- Spine Arthroplasty in the Lumbar Spine
- Rationale for Cervical Disc Arthroplasty
- Difficulties and Complications in the Anterior Approach

17th Annual Disorders of the Spine, Whistler, British Columbia, Canada, January, 2005

- Case Presentation: Mid-Cervical Bilateral Facet
- Case Presentation: Cervical Myelopathy
- Case Presentation: Failed Back
- Arthroplasty: Approaches Surgical Tricks And Complications

National Occupational Medicine- Annual Meeting, January 2005

- Current Trends in Cervical and Lumbar Disc Replacement

5th Bernese Live Spine Surgery Symposium, Bern Switzerland, February 4-5, 2005 **(Participated via video)**

- **(Faculty)** ProDisc[®] of the Cervical Spine: Where does it stand?

AO-ASIF – Advanced Concepts in the Management of Spinal Disorders, Sun Valley, Idaho February 3-6, 2005

- **(Moderator)** Thoracolumbar Spine Trauma
- **(Moderator)** Failure of Surgery in the Degenerative Lumbar Spine

Anterior Lumbar Access and: ProDisc-L[®], Monterrey, Mexico, February 11-12, 2005

- Anatomy, Physiology, Biomechanics and Pathology of the Lumbar Spine
- Why ALIF?
- Interbody Fusion Techniques
- Why There is a Need for Lumbar Total Disc Replacement
- ProDisc-L[®] Details (History, Materials, Instrument, Surgical Steps)
- Indications/Patient Selection
- Demonstration Workshop
- Tips and Tricks

- Clinical Cases, Multi-Level, Borderline Cases, Complications
- Anatomy, Physiology, Biomechanics and Pathology of the Cervical Spine
- Anterior Implant Options for the Cervical Spine
- Why is There a Need for Cervical Total Disc Replacement?
- Cervical Motion Preservation Technique
- ProDisc-C® Details (History, Materials, Instruments, Surgical Steps)
- Indications/Patient Selection
- **(Moderator)** ProDisc-C® Live Surgery
- Demonstration Workshop
- Tips and Tricks
- Clinical Cases, Multi-Level, Borderline Cases, Complications

Grand Rounds, The Children's Hospital, Denver, Colorado, March 2, 2005

- Spinal Disc Replacement History, Clinical Experience and the Future

Emerging Technologies Spine Education Summit, Telluride, Colorado, March 3-5, 2005

- Cervical Disc Arthroplasty: Pearls & Pitfalls in the Management of Spondylosis
- **(Case Presentation)** Anterior vs. Posterior Approach in the Cervical Spine
- **(Moderator)** Lumbar Spine/Motion Sparing Technology

Problem Solving Strategies-Spine Monthly Case Conference, The Spine Education and Research Institute, Denver, Colorado, March 9, 2005

Colorado Rehabilitation Insurance Nurses Group, Englewood, Colorado, March 10, 2005

- Non Fusion Technology of the Spine: Fad or Future?

Spine Surgery Breakthrough: "Life is Motion," The Spine Education and Research, Denver, Colorado, March 12, 23 2005

AO Spine European Region, Excellence in Spine: The Lumbar Intervertebral Disc
Davos, Switzerland, March 17-20, 2005 **(Faculty)**

- Instrumented Disc Procedures, Indications and Strategies
- **(Moderator)** Workshop: Disc Replacement and Dynamic Stabilization
- **(Moderator)** Live Surgery Case

Current Trends in Spinal Disc Replacements, The Spine Education and Research, Denver, Colorado, March 29, 2005

Controversies in Cervical Spine Surgery: "A Knowledge Based Approach with Advanced Surgical Techniques, The Spine Education and Research Institute, Denver, Colorado, April 2-3, 2005
(Co-Chairman)

- Future Trends and Experience with Disc Arthroplasty

AORN 52nd Congress, New Orleans, Louisiana, April 6-9, 2005

- Anterior Access Approach in Spine Reconstruction: Perioperative Nurse Role

Problem Solving Strategies – Spine Monthly Case Conference, The Spine Education and Research Institute, Denver, Colorado, April 13, 2005 **(Moderator)**

AOSLA/AOSNA Combined Symposium-Complex Spinal Issues, Cancun, Mexico, April 21-23, 2005

- Degenerative Spine Lecture: Case Presentation
- **(Moderator)** Salvaging Failed, Displaced or Loose Disc Arthroplasty Devices-Lumbar
- Degenerative Spine Lecture: Poll Audience and Discuss Treatment Options using ARS
- Degenerative Spine Lecture: Posterior Fusion is Adequate
- Degenerative Spine Lecture: Role of Non-Fusion Technologies are the Future for DDD

Rocky Mountain Residents Forum: The Degenerative Cervical Spine, The Spine Education and Research Institute, Denver, Colorado, April 30-May 1, 2005 **(Course Director)**

SAS 5th Annual Global Symposium on Motion Preservation Technology, New York, New York, May 4 2005

- The Value of Preoperative CT Angiography for Anterior Lumbar Arthroplasty and Arthrodesis

Problem Solving Strategies – Spine Monthly Case Conference, Spine Education and Research Institute, Denver, Colorado, May 11, 2005 **(Moderator)**

ProDisc-L[®] and ProDisc-C[®] Canadian Surgeon Forum, McGill University Health Centre, Montreal, Quebec, Canada, May 18-20, 2005

- ProDisc-L[®] and Total Disc: Design, rationale and basic background on the development
- Discectomy and Remobilization
- ProDisc-C[®] and Total Disc: Design, rationale and development

AO ASIF Spine Course for Operating Room Personnel, The Spine Education and Research Institute, Denver, Colorado, May 21, 2005

- AO Principles Related to Spine Surgery
- Innovations in Spine Surgery

AO ASIF Foundation Board of Trustees Meeting 2005, Amelia Island, Florida, June 21-24, 2005

- **(Moderator)** Emerging Concepts: Non-Fusion Spine Surgery

A Surgeon's Prospective: Why Synthes Imports Instruments Session

- Angular Stable vs. Dynamic Plate Fixation: Why Choose CSLP-VA or VECTRA
- Cervical Arthroplasty: Why Choose ProDisc-C[®]
- Posterior Cervical Spine Session
- Posterior Cervical Stabilization: Why choose AXON
- Posterior Lumbar Degenerative Conditions Session
- Why Fixation and Why Click-X
- Why Arthroplasty and Why ProDisc-L[®]

Colorado Society of Osteopathic Medicine 2005 Annual Meeting – “Treating the Patient as a Whole”, Vail, Colorado, August 3-7, 2005

- Disc Replacement Procedures “Future or Fad”

Problem Solving Strategies – Spine Monthly Case Conference/Medical Grand Rounds, International Guest Speaker: Dr. Rudolf Bertagnoli, The Spine Education and Research, Denver, Colorado, September 14, 2005

- **(Moderator)** “Emerging Concepts in Spine Arthroplasty”

North American Spine Society 20th Annual Meeting, Philadelphia, Pennsylvania, September 27 - October 1, 2005

- **(Pre-Course Chairman)** What's New in Spine Surgery Procedures
- **(Co-Moderator)** Special Interest Poster: Total Disc Replacement in Humans
- ALIF
- The Value of Preoperative CT for Anterior Lumbar Arthroplasty and Arthrodesis of the Lumbar Spine

Rocky Mountain Residents' Spine Forum: “Trauma in the Cervical Spine”, The Spine Education and Research Institute, Denver, Colorado, October 15-16, 2005

- AO Education and Research Fellowships
- The Future of Cervical Spine Reconstruction
- Updated Cervical Disc Replacement Arthroplasty

Current & Emerging Issues in Complex Lumbar Spine Surgery, St. Louis, Missouri, November 3-4, 2005

- Anterior Lumbar Plating Techniques
- My Clinical Experience with Disc Arthroplasty
- **(3D Demonstration)** Total Lumbar Disc Replacement

3rd Trans Atlantic Spine Congress, "Innovations in Spine Surgery," Plano, Texas, November 4-5 2005

- **(Moderator)** Posterior Dynamic Stabilization
- "How does all of this fit together"

ProDisc Education Planning Meeting, Dallas, Texas, December 4, 2005

- ProDisc System

AO-ASIF Interactive Spine Course, Davos, Switzerland, December 8–16, 2005

- Introduction to AOSpine International
- Lumbar Disc Replacement
- **(Moderator)** Lumbar Arthroplasty, Cages
- Cervical Arthroplasty

Problem Solving Strategies – Spine Monthly Case Conference, Spine Education and Research Institute, Denver, Colorado, January 25, 2006

- Deformity Cases

Problem Solving Strategies – Spine Monthly Case Conference, The Spine Education and Research Institute, Denver, Colorado, February 8, 2006

6th Live Spine Surgery Symposium, Bern, Switzerland, February 10, 2006 **(Participated via video)**

- Disc Arthroplasty

AO ASIF Advanced Concepts in the Management of Spinal Disorders Course, Sun Valley, Idaho, February 22-26, 2006

- (Moderator) AOSpine International Fellows: World Experience
- Cervical Spondylosis
- Lumbar Arthroplasty
- Anterior Instrumentation for Thoracolumbar Fracture
- Posterior Instrumentation for Thoracolumbar Fracture
- Arthroplasty Demonstration

AOSpine China Train-the-Trainer Program, Shanghai, China, April 9, 2006

- How to Introduce AOSpine International and AOSpine Templates
- Case Discussions with Drs. Ashman, Chen, and Yuan

AOSpine China Cervical Spine Seminar for Spine Surgeons, Shanghai, China, April 10, 2006

- Symposium: 3-5 cases on Cervical Spine Disorders and Disc Replacement
- ProDisc-C[®] presentation

AOSpine Basic Course, Shanghai, China, April 11, 2006

- AOSpine Future Development

Cervical and Lumbar Disc Replacement Seminar, Beijing, China, April 11, 2006

- Cervical and Lumbar Disc Replacement Cases and Discussion

- ProDisc presentation

Taiwan Annual Congress, Taipei, Taiwan, April 15, 2006

- Future Trends in Disc Replacement Surgery for Degenerative Disc Disease
- ProDisc presentation and demonstration

SAS 6th Annual Global Symposium on Motion Preservation Technology, Montreal, Quebec, Canada, May 9-13, 2006

- Cervical disc arthroplasty: preliminary results of a randomized prospective study of ACDF vs. ProDisc-C® for the management of cervical spondylosis
- **(Moderator)** Cervical Disc Replacement II: Clinical Paper
- Incidence of dysphagia comparing cervical arthroplasty and ACDF with internal fixation
- **(Moderator)** Symposium III – Avoidance and Management of Complications of Lumbar Disc Arthroplasty
- Avoiding Complication by Patient Selection and Adherence to Proper Technique

AOAO 2006 Annual Clinical Assembly of Osteopathic Specialist, New Orleans, Louisiana, September 14-17, 2006

- Artificial Cervical Disc Replacement

North American Spine Society 21th Annual Meeting, Seattle, Washington, September 26-30, 2006

- Lumbar Disc Arthroplasty
- ProDisc-L® Surgical Technique
- Cervical disc arthroplasty: preliminary results of randomized prospective study of ACDF versus ProDisc-C® for the management of cervical spondylosis

Rocky Mountain Residents Forum: Cervical Spondylosis, The Spine Education and Research Institute, Denver, Colorado, April 30-May 1, 2005 **(Forum Chairman)**

Eurospine 2006, Istanbul, Turkey, October 25-28, 2006

- Overview of the status of disc replacement in general in the US including ongoing litigation, FDA status, ect.
- ProDisc-L®
 - Indications/Patient selection in the ProDisc-L® IDE Study
 - Comparison of training cases to randomized trial
 - Pivotal FDA Results at 2years:single level ProDisc-L® vs. 360o Fusion

Current & Emerging Issues in Complex Lumbar Spine Surgery, Saint Louis, Missouri, November 9-11, 2006 **(Faculty)**

- Non-Surgical Treatment Options and Rehabilitation
- Interspinous Technologies
- Anterior Lumbar Plating Techniques
- Lumbar Disc Replacement Demo

First Chinese Orthopaedic Association International Congress, Beijing, China, November 13-15, 2006

- Cervical Disc Arthroplasty
- Rational for Total Disc Replacement in Lumbar Spine

ProDisc-L® Symposium, Philadelphia, Pennsylvania, November 19, 2006 **(Faculty)**

- Rational for Motion Preservation
- ProDisc-L® Implant Technique

Medical Grand Rounds, The Spine Education and Research, Denver, Colorado, December 5, 2006

- Total Disc Arthroplasty for Lumbar Degenerative disc Disease, FDA Clinical IDE Results

AO-ASIF Interactive Spine Course, Davos, Switzerland, December 10-15, 2006

- **(Moderator)** Degenerative Disc Disease in the Lumbar Spine: Fusion or Non Fusion
- **(Co-Moderator)** Debate on Degenerative Cervical Spine
- **(Co-Moderator)** Debate on axial back pain: Arthroplasty
- **(Faculty)** Cervical Arthroplasty
- **(Faculty)** Instrumentation failure

19th Annual Contemporary Update on Disorders of the Spine, Whistler, British Columbia, Canada, January 13-19, 2007 **(Faculty)**

- Case Presentations
- Case Controversy
- Patient Selection and Adherence to Precise Surgical Techniques

ProDisc-L[®] Forum, Denver, Colorado, January 28-29, 2007 **(Chairman)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

AO ASIF Advanced Concepts in the Management of Spinal Disorder Course, Sun Valley, Idaho, January 31 – February 4, 2007 **(Faculty)**

- Case Presentation: Degenerative Joint Disease
- Arthroplasty Demonstration

ProDisc-L[®] Forum, Santa Monica, California, February 3-4, 2007 **(Faculty)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, February 11, 2007 **(Chairman)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

ProDisc-L[®] Surgeon Training Forum, Santa Monica, California, March 3, 2007 **(Faculty)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, March 18-19, 2007 **(Chairman)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

ProDisc-L[®] Surgeon Training Forum, Plano, Texas, April 13, 2007 **(Faculty)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, April 29-30, 2007 **(Chairman)**

- Rational for Motion Preservation

- ProDisc-L[®] Implant Techniques
 - Case Presentation: Patient Selection for TDR
- 2007 Lavyne/Hickrill/Weil Spine Lecture, New York, New York, May 24, 2007
- A Comprehensive Approach to Spine Care
- ProDisc-L[®] Symposium, Santa Monica, California, June 1-2, 2007 **(Faculty)**
- Indications and Patient Selection for ProDisc-L TDR
 - ProDisc-L[®] Implant Techniques
 - Postoperative Management, Implant Revisions
- AOSpine Symposium, The Degenerative Spine, Shanghai, China, June 11, 2007
- Introduction of AOSpine
 - Total Disc Replacement: indications and outcomes
- Synthes Spine Wine and Spine, Seattle, Washington, June 21, 2007
- Experiences with Total Disc Replacement
- ProDisc-L[®] Surgeon Training Forum, Plano, Texas, June 13 2007 **(Faculty)**
- Rational for Motion Preservation, ProDisc-L
 - Anterior Access; Discectomy and Remobilization
 - Case Presentation: Patient Selection for TDR
- ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, June 22-23 2007 **(Chairman)**
- Rational for Motion Preservation, ProDisc-L
 - Case Presentation: Patient Selection for TDR
- Advanced Concepts in the Management of Spinal Disorders Course, Niagara on the Lake, Ontario, Canada, August 2-4, 2007 **(Faculty)**
- Case Presentation: Degenerative Joint Disease, an evaluation
 - New Techniques: Arthroplasty and Non Fusion Techniques
 - Degenerative Scoliosis: Assessment Strategies and Interbody Devices
- ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, August 19-20, 2007 **(Chairman)**
- Rational for Motion Preservation
 - ProDisc-L[®] Implant Techniques
 - Case Presentation: Patient Selection for TDR
- 18th Annual Colorado Spine Symposium, Westminster, Colorado, September 28, 2007
- Early Results of a Randomized Controlled Clinical Trial Comparing ProDisc-C[®] and ACDF for Cervical Radiculopathy
 - Lumbar Disc Arthroplasty: Understanding the Clinical Results After Two USA IDE Trials
- Rocky Mountain Resident's Forum: Cervical Spondylosis, Denver, Colorado, October 20-21, 2007 **(Chairman)**
- Section of Motion Technology: Examining the Evidence, Austin, Texas, October 23, 2007 **(Faculty)**
- Performing an FDA RCT Trial: The Real World Experience
- North American Spine Society 22nd Annual Meeting, Austin, Texas, October 23-27, 2007
- Heterotopic Ossification at the index level after ProDisc-C[®]: What is the clinical significance?
 - New Technology: Argument for Lumbar ADR
- ProDisc-L[®] Surgeon Training Forum, Santa Monica, California, November 2-3, 2007 **(Faculty)**
- Indications and Patient Selection for ProDisc-L TDR
 - ProDisc-L[®] Implant Techniques
 - Postoperative Management, Implant Revisions

ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, November 4-5, 2007 **(Chairman)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

Current & Emerging Issues in Complex Lumbar Spine Surgery, Saint Louis, Missouri, November 8-10, 2007 **(Faculty)**

- Posterior: L4-5 Advanced facet arthropathy with instability (degenerative spondylolisthesis) with either primary back pain vs neurogenic claudication vs both
- Posterior Column Lumbar Spine Surgical Pathologies
- Anterior: Two level degenerative disc disease, one (caudal) with advanced facet arthropathy, other (cephalad) with near normal facets with chronic refractory back pain, i.e. surgical candidate
- Iatrogenic sagittal flatback in healthy 66 y/o female after previous l-2/l-5 instrumentated PLF, progressive pain and deformity
- Total Lumbar Disc Replacement, 3 D Demonstration

ProDisc-L[®] Surgeon Training Forum, Plano, Texas, November 16, 2007 **(Faculty)**

- Rational for Motion Preservation, ProDisc-L
- Case Presentation: Patient Selection for TDR
- ProDisc-L[®] Implant Techniques

AO-ASIF Interactive Spine Course, Davos, Switzerland, December 9-14, 2007 **(Faculty)**

- The Spine Surgeon's impact on Today's society
- Pitfalls and complications in disc arthroplasty
- Debate – Pro: Arthroplasty is better

ProDisc-L[®] Surgeon Training Forum, Denver, Colorado, January 13-14, 2008 **(Chairman)**

- Rational for Motion Preservation
- ProDisc-L[®] Implant Techniques
- Case Presentation: Patient Selection for TDR

Advanced Cervical Solutions with ProDisc-C[®] Surgeon Training Forum, Las Vegas, Nevada, January 20, 2008 **(Chairman)**

- Motion Preservation in Cervical Spine
- Surgical Observations
- Tips & Tricks, Postop Management, and Revision Strategies

World Forum for Spine Research, The Intervertebral Disc, Kyoto, Japan, January 23-26, 2008

- Rationale and Clinical Results of Lumbar Total Disc Replacements
- USA IDE Results of PRCT of Cervical Disc Replacement compared to Fusion

ProDisc-C Surgeon Training Forum, Denver, Colorado, February 9-10, 2008 **(Chairman)**

- FDA IDE ProDisc-C Study
- Surgical Observations
- Tips & Tricks, Postop Management, and Revision Strategies

John McCulloch Memorial Winter Conference, Breckenridge, Colorado, February 22, 2008 **(Faculty)**

- Lumbar Arthroplasty

ProDisc-C Surgeon Training Forum, Dallas, Texas, February 23-24, 2008 **(Faculty)**

- ProDisc-C Implant Technique
- Discectomy, Decompression, and Remobilization

Winter Clinic, Snowmass, Colorado, February 25, 2008 **(Faculty)**

- Cervical Arthroplasty and results of RCT with metal on poly implant versus fusion

Medical “Home Improvements” Course, Keystone, Colorado, February 23-28, 2008 **(Faculty)**

- Motion preservation technology in spine

ProDisc-C Surgeon Training Forum, Denver, Colorado, March 1-2, 2008 **(Chairman)**

- FDA IDE ProDisc-C Study
- Reimbursement, Tips & Tricks, Postop Management, and Revision Strategies

ProDisc-C Surgeon Training Forum, St. Louis, Missouri, March 14, 2008 **(Faculty)**

- FDA IDE ProDisc-C Study
- ProDisc-C Implantation Technique
- Patient Selection / Technique
- Tips & Tricks, Postop Management, Revision Strategies
- Next Steps

AONA Fellows Forum, Banff, Calgary, April 3 – 6, 2008

- Current Concepts in the Management of Degenerative Disc Disease

2008 International Symposium of Orthopaedics & the 50th Anniversary of the Orthopaedic Department of Peking University Third Hospital, Beijing, China, April 11-13, 2008

- Total Replacement Technology for Lumbar Degenerative Disc Disease “Future of Fad”

Total Disc Arthroplasty Grand Rounds, Medical College of Georgia, Augusta, Georgia, April 21, 2008 **(Presenter)**

- Total Disc Arthroplasty

ProDisc-C Surgeon Training Forum, Las Vegas, Nevada, April 26-27, 2008 **(Chairman)**

- FDA IDE ProDisc-C Study
- Tips & Tricks, Postop Management, and Revision Strategies
- Next Steps

SAS 8th Annual Global Symposium on Motion Preserving Technology, Miami, Florida, May 6-9, 2008

- Tips & Techniques from AOS
- Results of the Prospective, Randomized, Multi-Center Food and Drug Administration Investigational Device Exemption Study of the Pro-Disc C Total Disc Replacement vs. Anterior Discectomy and Fusion for the Treatment of 1-Level Symptomatic Cervical Disc Disease
- Spine Biomechanics Related to Posterior Stabilization
- Incidence of Dysphagia Comparing Cervical Arthroplasty and ACDF with Internal Fixation
- Evidence of Lower Adjacent Level Changes after ProDisc-C Compared to ACDF

ProDisc-C Surgeon Training Forum, Denver, Colorado, May 10, 2008 **(Chairman)**

- ProDisc-C Implantation Technique
- Discussion: Patient Selection/Technique
- Next Steps

ProDisc-L Surgeon Training Forum, Denver, Colorado, May 18-19, 2008 **(Chairman)**

- Rationale for Motion Preservation, ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Patient Selection for TDR

Spine Week 2008, Geneva, Switzerland, May 26-31, 2008

- Heterotopic Ossification (HO) at the Index Level after Pro-Disc-C Cervical Total Disc Replacement (TDR) Surgery: What is the Clinical Significance?

AO Foundation Board of Trustees Meeting, Davos, Switzerland, June 11-14, 2008

- Artificial Disc Replacement: Fact or Fiction
- The Next Five Years of AO: Changes and Challenges in Spine
- Smoke on the Water, Fire in the Sky
- Did AO Improve Patient Care in Spine?

ProDisc-C Surgeon Training Forum, Denver, Colorado, June 21-22, 2008 **(Chairman)**

- FDA IDE ProDisc-C Study
- Reimbursement Tips & Tricks, Postop Management, Revision Strategies, Zero-P Introduction
- Motion Preservation in Cervical Spine
- Next Steps

ProDisc-C Surgeon Training Forum, Denver, Colorado, August 16, 2008 **(Chairman)**

- Motion Preservation in Cervical Spine
- ProDisc-C Implantation Technique
- Reimbursement, Zero-P introduction
- Tips & Tricks, Postop Management, Revision Strategies, Next Steps

ProDisc-C Surgeon Training Forum, Chicago, Illinois, September 21, 2008 **(Chairman)**

- Motion Preservation in Cervical Spine
- Reimbursement
- Tips & Tricks, Postop Management, Revision Strategies, Next Steps

ProDisc-C Surgeon Training Forum, Phoenix, Arizona, October 11, 2008 **(Chairman)**

- Motion Preservation in Cervical Spine
- FDA IDE ProDisc-C Study
- Reimbursement
- Tips & Tricks, Postop Management, Revision Strategies, Next Steps

North American Spine Society 23rd Annual Meeting, Toronto, Ontario, Canada, October 14-18, 2008 **(Faculty)**

- Evidence of Adjacent Level Changes after ProDisc-C Compared to ACDF
- Surgical Treatment for Cervical Spondylotic Myelopathy: One Year Outcomes of a Prospective, Multicenter Study of 316 Patients.
- Predictors of Outcome Following Anterior Surgery for Cervical Spondylotic Myelopathy: Results from a Multicenter Prospective Clinical Study with Independent Outcomes Assessments
- Section on Motion Technology: Examining the Evidence
- Lumbar Posterior Stabilization Devices: State of the Art Talk
- Incidence of Contraindications to Total Disc Arthroplasty: A Retrospective Review of 100 Consecutive Fusion Patients with a Specific Analysis of Facet Arthrosis

19th Annual Colorado Spine Symposium, Denver, Colorado, October 31, 2008 **(Faculty)**

- The Risks & Benefits of Being a Clinical Investigator for a New Technology and Performing a Device FDA Randomized Control Trial: The Real World Experience.

Current and Emerging Issues in Complex Lumbar Spine Surgery Course, St. Louis, Missouri, November 6-8, 2008 **(Chairman)**

- Rationale for PLIF/TLIF
 - ALIF/TDR Technique
 - Rationale for Non-Fusion Posterior Fixation
 - Pitfalls, Complications and Revisions
- 3rd International Congress of Chinese Orthopaedic Association, Suzhou, China, November 13-16, 2008
- Pre Operative Vascular Evaluation for Anterior Access in Lumbar Arthroplasty and Arthrodesis
 - Cervical Disc Replacement: Results from FDA Randomized Clinical Study Comparing ProDisc-C to Anterior Cervical Fusion
- AOSpine Advances Course, Davos, Switzerland, December 15-19, 2008
- Patient Selection Outcome Measures
 - Anterior Access: Pearls, Pitfalls and Techniques
 - Preoperative Assessment of the Vascular Anatomy
 - Outcomes after Disc Arthroplasty – The Evidence
 - Techniques for Dynamic Fixation
 - The Case for Motion Preservation
 - Posttraumatic Reconstructions
 - Physician and Industry-Financial Relationship? Conflict of Interest.
 - Ethical Case Discussion
 - Defining Physicians' Conflicts of Interest
 - Success in Spine Surgery – Putting It All Together
- AO Governance Retreat Meeting / A.A.O.S. Annual Meeting, Philadelphia, PA, February 26-March 1 2009
- Single Level Cervical Disc Herniation Debate: Pro
- AOTK ProDisc User's Meeting, Cancun, Mexico/Cozumel, Mexico, March 6-8, 2009 (Chairman)
- ProDisc-L Revisions and Salvage Data
 - Fireside Case Presentations and Discussion
 - ProDisc-C IDE Study Update, 4-5 Year data
- AO Spine Master Symposium, Dubai, United Arab Emirates, April 18, 2009
- Anterior Nonfusion Technology of the Lumbar Spine
 - Single Segment Disease
 - Debate: Examining the Evidence: Rationale for Total Disc Replacement (Moderator)
 - Multilevel Disease
 - Debate: Why Failures Occur (Moderator)
 -
- ProDisc-L Surgeon Training Forum, Denver, Colorado, April 25, 2009 (Chairman)
- Rationale for Motion Preservation, ProDisc-L
 - ProDisc-L FDA IDE Multi-Center Study Results
 - Patient Selection for TDR
 - Pro-Disc-L Implant Technique
- ProDisc-C Surgeon Training Forum, Denver, Colorado, April 26, 2009 (Chairman)
- Motion Preservation in Cervical Spine
 - Reimbursement
 - Pro-Disc-C Implant Technique
- 9th Annual SAS – Motion Preservation Technology Meeting, London, England, April 28-May1, 2009
- Cervical TDR II with Dr. Vijay Goel (Moderator)

Sponsored by Stryker Spine, Scientific Education and Research Institute
Thornton, CO, May 9-10, 2009

- Natural History of Degenerative Disc Disease

Medical College of Georgia Sixth Annual Resident Research Day, Augusta, Georgia, May 29, 2009

- Clinical Investigator for New Technology: The Real World Experience

AO Foundation Board of Trustees Meeting, Chicago, Illinois, June 17-20, 2009

- Degenerative Disc Disease: Refuse to Fuse

AOSpine Global Spine Congress, San Francisco, California, June 23-26, 2009

- Evidence of Adjacent Level Changes After ProDisc-C Compared to ACDF
- Scientific Session-B22 Surgery-Lumbar Degenerative (Moderator)
- Scientific Session-B23 Surgery-Lumbar Degenerative (Moderator)
- Scientific Session-B24 Surgery-Lumbar Degenerative (Moderator)
- Symposium : Lumbar Arthroplasty, (Co-Chair)
- Complications of Total Disc Replacement-What Can We Expect?
- Symposium: Current Concepts in Minimally Invasive Spinal Surgery (Co-Chair)
- Does MISS = MORE – Operative Time, Cost Radiation Exposure and clinical Outcome

Synthes Spine, Advance Cervical Solutions with ProDisc-C Surgeon Training Forum, San Francisco, California, June 27, 2009

- Approach; Discectomy, Decompression and Remobilization
- Faculty Case Review, Surgical Observation Reimbursement

Synthes Spine ProDisc-L Surgeon Training Program, San Francisco, California, June 28, 2009

- Rationale for Motion Preservation, ProDisc-L
- Patient Selection for TDR
- Interactive Observation of Filmed ProDisc-L Surgery
- Additional Tips and Tricks

Synthes Spine ProDisc-L and ProDisc-C Surgeon Training Forum, Chicago, Illinois, July 12-13, 2009

- Rationale for Motion Preservation, ProDisc-L
- Patient Selection for TDR: Case Study
- Additional tips and tricks
- ProDisc-C implantation technique
- Faculty case Review: Surgical observation

Synthes Spine Harborview Spine Forum, October 3, 2009

- The promise of lumbar disc replacement
- Attempting Level 1 research in the real world
- Cervical disc replacement: why not?

Current and Emerging Issue in Complex Lumbar Spine Surgery – Workshop, St. Louis, MO October 15-17, 2009

- Treatment Options – Total disc replacement
- Treatment Options – Decompression only
- Literature evidence for motion preservation treatment
- Case presentation and treatment for back and leg pain
- Total disc replacement cadaver presentation

Synthes Spine Rocky Mountain Residents Spine Forum, Denver, CO, October 17-18, 2009

- Complications of ALIFs/TDRs
- Interactive case presentations

- AOSpine presentation

AOSpine Global Interactive Courses, Kuala Lumpur, Malaysia, October 26-30, 2009

- Posterior foramenotomy
- C1 Lateral mass / C2 pedicle screw fixation
- Adjacent level disease: Myth or fact
- In the driver's seat: how to take control of your life
- Osteoporotic fracture

Synthes Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Miami FL, Dec 5, 2009

- Motion Preservation in Cervical Spine
- Cadaver Bioskills Lab

AOVet Masters Course, Davos, Switzerland, December 8, 2009

- Degenerative Disc Disease: "Refuse to Fuse"

Synthes Prodisc Forums, San Francisco, CA, January 22-24, 2010 **(Chairman)**

- Motion Preservation in the Cervical Spine
- FDA IDE Prodisc - C Study Results
- Post-operative Management, Implant Revisions
- Tips and Tricks, Post-op Management, Revision Strategies, Next Steps

9th Annual Symposium on Current Concepts in Spinal Disorders, Las Vegas, NV, Feb. 4-6, 2010

- Prodisc-C

ACFAS 68th Annual Scientific Conference, Las Vegas, NV, Feb. 23-25, 2010 **(Faculty)**

- Bone Healing: What Can We Learn From Spine Surgeons

Rocky Mountain Resident Forum: Treatments in Thoracolumbar Trauma, Thornton, CO, Feb. 27-28, 2010 **(Faculty)**

- Cadaver Demonstration: Anterior Decompression and Corpectomy, Anterior Reconstruction featuring VLIFT & THOR

Synthes Spine ProDisc-Lumbar Surgeon Training Forum, Denver, CO, March 27th, 2010 **(Chairman)**

- Rationale for Motion Preservation, ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Anterior Access; Discectomy and Remobilization
- Additional Tips and Tricks

Synthes Spine Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Denver, CO, March 28, 2010 **(Chairman)**

- Motion Preservation in Cervical Spine
- FDA IDE Pro-Disc-C Study
- Faculty Case Reviews, Reimbursement
- Tips and Tricks, PostOp Management, Revision Strategies

Synthes Spine ProDisc-C Surgeon Forum, Indianapolis, IN, April 24, 2010 **(Chairman)**

- Motion Preservation in Cervical Spine
- FDA IDE Pro-Disc-C Study
- Surgical Technique: ProDisc-C Implantation Technique
- Pre-Recorded Surgical Observation
- Tips and Tricks, PostOp Management, Revision Strategies

Synthes Spine ProDisc-C Forum, Cincinnati, OH, May 15th, 2010 **(Chairman)**

- Motion Preservation in Cervical Spine
- FDA IDE Pro-Disc-C Study
- Surgical Technique: ProDisc-C Implantation Technique
- Pre-Recorded Surgical Observation
- Tips and Tricks, PostOp Management, Revision Strategies

Synthes Spine Posterior Cervical Training, Denver, CO, May 18th, 2010

- Motion Preservation in Cervical Spine
- Posterior Cervical Decompression
- Posterior Stabilization of the Cervical Spine for Degenerative Disease and Trauma
- Laminoplasty

Synthes Spine ProDisc Cervical and Lumbar Course, Denver, CO, August 5-6, 2010 **(Chairman)**

- Rationale for Motion Preservation for ProDisc-L
- Rationale for Motion Preservation for ProDisc-C
- Anterior Access: Discectomy and Remobilization
- ProDisc-L Implant Technique
- Approach: Discectomy, Decompression, and Remobilization
- ProDisc-C Implant Technique
- Interactive Observation of Filmed ProDisc-L Surgery
- Interactive Observation of Filmed ProDisc-C Surgery
- History, Design, Mechanical Testing of ProDisc-L
- History, Design, Testing of ProDisc-C
- Indications and Patient Selection for ProDisc-L TDR
- Case Studies for ProDisc-L
- Tips and Tricks for ProDisc-L
- Postoperative Management, Implant Revisions for ProDisc-L
- Final Wrap Up, Reimbursement Update, Next Steps for ProDisc-L
- Faculty Case Reviews and Reimbursement for ProDisc-C
- Tips and Tricks, Postoperative Management, Revisions, Strategies, Next steps for ProDisc-C

Synthes Spine Preceptorship, Denver, CO August 9-11, 2010

- PSF/TLIF Peek Cage and ClickX
- PSF/USS 8 Levels
- ProDisc Cervical
- Indications/Patient Selection/Patient Evaluations on IDE patients in Clinic
- ACDF with CSLP VAS
- Cadaver Training Osteotomy
- L2 Vertebroplasty
- 3 Surgical cases: Complex 7 level fusion with USS system for deformity; ALIF 9 ATP; Lumbar decompression C Fusion USS

Synthes Spine Preceptorship, Sarasota, FL October 4, 2010

- ProDisc-Lumbar, TDR L4-L5

Synthes Spine ProDisc Cervical Surgeon Forum, Temple, TX October 23, 2010 **(Chairman)**

- Welcome, Objectives, Motion Preservation in Cervical Spine
- FDA IDE ProDisc-C Study

- Surgical Technique: ProDisc-C Implantation Technique and Surgical Video Observation
- Tips and Tricks, Post-Op Management, Revision Strategies, Next Steps

Practical Anatomy and Surgical Education Presents Current and Emerging Issues in Complex Lumbar Spine Surgery, St. Louis, MO October 28-30, 2010

- Literature Based Evidence for Treatment: Spondylolisthesis
- Lecture: Clinical Research in Spine Care: A Real World Experience
- Cauda Equina Syndrome: Early vs. Late Surgery
- Cadaver Demonstration: Total Disc Arthroplasty

Synthes Spine Private Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Denver, CO November 5, 2010 (**Chairman**)

- Welcome, Objectives, Motion Preservation in Cervical Spine
- FDA IDE ProDisc-C Study
- Surgical Technique: ProDisc-C Implantation Technique
- Surgical Technique: Surgical Video Observation (Pre-recorded)
- Tips and Trips, Post-Op Management, Revision Strategies, Next steps

Synthes Spine Preceptorship, Sarasota, FL November 8, 2010

- ProDisc-Cervical Surgery

Synthes Spine Advanced Cervical Solutions with ProDisc-C Training Forum, Burlington, VT December 16, 2010

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique: Approach, Discectomy, Decompression, and Remobilization
- Surgical Technique: ProDisc-C Implantation Technique
- Surgical Technique: Surgical Video Observation (Pre-recorded)
- Dry Hands-On Lab
- Grand Rounds Presentation at Fletcher Allen Hospital
- Cadaveric Bioskills lab
- Faculty Case Reviews and Reimbursement
- Tips and Tricks, Postop Management, Revision Strategies, Next Steps

Synthes Spine Advanced Cervical Solutions with ProDisc-C Training Forum, Little Rock, AR January 29, 2011

- Welcome, Objectives, Motion Preservation in Cervical Spine
- Surgical Technique: ProDisc-C Implantation Technique
- Surgical Technique: Surgical Video Observation (Pre-recorded)
- Dry Hands-On Lab
- Cadaveric Bioskills lab
- Tips and Tricks, Postop Management, Revision Strategies, Next Steps

Synthes Spine Spine Product Development Surgeon Visit, San Diego, CA February 15, 2011

- Lateral Access Instruments Project Scope Meeting

AOVA PCB Meeting, Paso Robles, CA March 31-April 3, 2011

Synthes Spine ProDisc L Surgeon Training Forum, Sacramento, CA April 30, 2011

- Welcome, Objectives
- Rational for Motion Preservation, ProDisc-L
- History, Design, Testing of ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Indications and Patient Selection for ProDisc-L TDT
- Patient Selection for TDR: Selected Cases from Faculty
- ProDisc-L Technique
- Anterior Access: Discectomy and Remobilization
- ProDisc-L Implant Technique
- Hands-on Demo ProDisc-L
- Cadaveric Bioskills lab: Discectomy/Remobilization and ProDisc-L Implantation
- Interactive Observation of Filmed ProDisc-L Surgery
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Denver, CO June 5, 2011 (Chairman)

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique – Approach; Discectomy, Decompression and Remobilization
- ProDisc-C Implantation Technique
- Cadaveric Bioskills Lab
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Los Angeles, CA June 11, 2011 (Chairman)

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique – Approach; Discectomy, Decompression and Remobilization
- ProDisc-C Implantation Technique
- Cadaveric Bioskills Lab
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine ProDisc L Surgeon Training Forum, Tyler, TX August 20, 2011

- Welcome, Objectives
- Rational for Motion Preservation, ProDisc-L
- History, Design, Testing of ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Indications and Patient Selection for ProDisc-L TDT
- Patient Selection for TDR: Selected Cases from Faculty
- ProDisc-L Technique
- Anterior Access: Discectomy and Remobilization
- ProDisc-L Implant Technique
- Hands-on Demo ProDisc-L
- Cadaveric Bioskills lab: Discectomy/Remobilization and ProDisc-L Implantation
- Interactive Observation of Filmed ProDisc-L Surgery
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine Advanced Cervical Solutions with ProDisc-C Surgeon Training Forum, Reno, Nevada September 11, 2011 (Chairman)

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique – Approach; Discectomy, Decompression and Remobilization
- ProDisc-C Implantation Technique
- Cadaveric Bioskills Lab
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine- Degenerative Diseases of the Lumbar Spine, Residents Spine Forum, Denver, CO October 14-15, 2011

- Interactive Faculty Case Presentations
- Posterior Fusion Procedures for Lumbar Degenerative Diseases
- Cadaveric Lab – Posterior Segmental Instrumentation and Interbody Stabilization
- Cadaveric Bioskills Lab – Cadaveric Dissection and Instrumentation Posterior
- Anterior Procedures for Lumbar Degenerative Diseases
- Rationale for Lumbar Total Disc Arthroplasty
- Cadaveric Presentation – Anterior Interbody Fusion – Anterior Total Disc Remobilization and TDR
- Cadaveric Bioskills Lab – Cadaveric Dissection – Anterior Fusion and TDR

Synthes – Annulus Closure Discussion – January 17, 2012

AOSpine North America – Complex Spine Surgery Course, Snowbird, UT February 16-19, 2012
(Faculty)

- Cervical Spine Arthroplasty – Indications and Implant Options
- Outcomes, Utility, Complications – Debate – ALIF vs TDR

Synthes Spine ProDisc L Surgeon Training Forum, Chicago, IL April 21, 2012 – **(Faculty)**

- Welcome, Objectives
- Rationale for Motion Preservation, ProDisc-L
- History, Design, Testing of ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Indications and Patient Selection for ProDisc-L TDR
- Patient Selection for TDR: Selected Cases from Faculty
- ProDisc-L Technique
- Anterior Access: Discectomy and Remobilization
- ProDisc-L Implant Technique
- Hands-on Demo ProDisc-L
- Cadaveric Bioskills lab: Discectomy/Remobilization and ProDisc-L Implantation
- Interactive Observation of Filmed ProDisc-L Surgery
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine ProDisc-C Surgeon Training Forum, Chicago, IL April 22, 2012 **(Faculty)**

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique – Approach; Discectomy, Decompression and Remobilization
- ProDisc-C Implantation Technique
- Cadaveric Bioskills Lab
- Faculty Case Review, Surgical Observation, Reimbursement

- Tips & Trick, Postop Management, Revision Strategies, Next steps

14th Annual Orthopaedic Spine Conference, Augusta, GA, April 27-28, 2012

Synthes Spine ProDisc-C Surgeon Training Forum, Denver, CO April 28, 2012 **(Chairman)**

- Welcome, Objectives, Motion Preservation in Cervical Spine
- History, Design, Testing of ProDisc-C
- FDA IDE ProDisc-C Study
- Surgical Technique – Approach; Discectomy, Decompression and Remobilization
- ProDisc-C Implantation Technique
- Cadaveric Bioskills Lab
- Faculty Case Review, Surgical Observation, Reimbursement
- Tips & Trick, Postop Management, Revision Strategies, Next steps

Synthes Spine ProDisc L Surgeon Training Forum, Denver, CO April 29, 2012 – **(Chairman)**

- Welcome, Objectives
- Rational for Motion Preservation, ProDisc-L
- History, Design, Testing of ProDisc-L
- ProDisc-L FDA IDE Multi-Center Study Results
- Indications and Patient Selection for ProDisc-L TDR
- Patient Selection for TDR: Selected Cases from Faculty
- ProDisc-L Technique
- Anterior Access: Discectomy and Remobilization
- ProDisc-L Implant Technique
- Hands-on Demo ProDisc-L
- Cadaveric Bioskills lab: Discectomy/Remobilization and ProDisc-L Implantation
- Interactive Observation of Filmed ProDisc-L Surgery
- Tips & Trick, Postop Management, Revision Strategies, Next steps

2nd CERTAIN Spine Forum: Driving Change in WA State Spine Care, Seattle, WA June 8, 2012
(Faculty)

- Introduction and Welcome
- Update on Spine SCOAP
- Progress in Statewide Spine CER/CED Initiative
- The Evidence for Treatment of Degenerative Disc Disease
- Reactor Panel Discussion
- Closing

Deputy Synthes Spine Prodisc Cervical Total Disc Replacement Surgeon Training Forum, Minneapolis, MN
September 22-21, 2013 **(Faculty)**

Innovative and Advanced Surgery of the Degenerative and Deformed Lumbar Spine, St. Louis MO
September 26 – 28, 2013 **(Faculty)**

- Black Disc Disease/Axial Back Pain: Who needs Surgery and Why?
- Lumbar Total Disc Replacement “Myth or Reality”

The AOSpine Davos Courses 2013, Davos, Switzerland December 8-12, 2013 **(Faculty)**

- Moderating Case discussion 3: Degenerative Spondylolisthesis
- Solution for Complex Cases-Case from Participants

AOSpine World Forum for Spine Research 2014, The Intervertebral Disc- from Degeneration to
Therapeutic Motion Preservation, Xi'an, China
May 15-17, 2014 **(Faculty)**

- Lumbar Degenerative Anterior approach only (fusion and/or disc arthroplasty)

- Cervical Disc Herniation
- Lateral Approach
- Lumbar arthroplasty complication

AOSpine Advanced Course-Lumbar Spine, Cairo, Egypt, May 29-31, 2014 **(Faculty)**

- Lumbar Disc Prolapse, Degenerative Disc Disease
- Lumbar Canal Stenosis, Recent technologies, evidence based overview
- Spondylolysis and Isthmic Spondylolisthesis
- Lumbar Disc Arthroplasty, Evidence based approach

AOSpine Advanced Symposium, Controversial Cases in Spinal Degeneration & Deformity. Suzhou, China October 23, 2015 **(Faculty)**

- Updates of the Management of Spine Degenerative Disease

AOSpine Minimally Invasive Spinal Surgery and Navigation, Phoenix, AZ November 20-21, 2015 **(Faculty)**

- Complication Avoidance and Management

John McCulloch, MD, FRCS Memorial Winter Spine Conference, Breckenridge, Colorado, March 30-April 1, 2017. **(Faculty)**

- Total Eclipse Following TDR

AOSpine Masters Symposium, Cervical Spine, Shanghai, China. April 8, 2017. **(International Faculty)**

- Minimally Invasive Surgery for Cervical Spine
- Occipitocervical
- Complications
- Motion Preservation, case presentation, Case Solution and Take Home Message, Keynote Speech: Controversies in TDR cervical surgery
- Cervical Sagittal Imbalance Issue

CONTINUING EDUCATION

AO ASIF Workshop
Fort Gordon, Georgia
August 1987

Dwight Eisenhower Orthotic Symposium
Fort Gordon, Georgia
September 1987

Dallas Orthotics and Prosthetics Course
Dallas, Texas
October 1987

Regional Review Course in Hand Surgery
Dallas, Texas
November 1987

Arthroscopy of Shoulder: Primer Course
Florence, South Carolina
January 1988

Academy of Orthopaedic Surgeons
Atlanta, Georgia
February 1988

Sports Medicine & Biomechanics Symposium
Fort Gordon, Georgia
April 1988

16th Pediatric Orthopaedic International Symposium
San Francisco, California
May 1988

International Limb Lengthening Workshop

DePaul International Symposium:

San Francisco, California
May 1988

New Developments in Total Joint Reconstruction
St. Louis, Missouri
June 1988

49th AO ASIF Course
Davos, Switzerland
December 1988

AFIP: Orthopaedic Pathology Course
Bethesda, Maryland
March 1989

Complex and Primary Total Joint Arthroplasty
Breckenridge, Colorado
March 1989

3rd Annual Seminar of Lower Extremity
Infections in the Diabetic Patient
Augusta, Georgia
March 1989

Biomet Prosthesis Design Seminar
Warsaw, Indiana
June 1989

AO ASIF Workshop
Dwight Eisenhower Army Medical Center
Fort Gordon, Georgia
July 1989

Southeastern Regional Resident Conference
Atlanta, Georgia
August 1989
Texas Back Institute
Operative Treatment/Fractures and
Nonunions
Plano, Texas
October 1989

Osteopathic Mid-year Conference
Stone Mountain, Georgia
October 1989
50th AO ASIF Advanced Course
Davos, Switzerland
December 1989

South Carolina Orthopedic Society Meeting
Hilton Head, South Carolina
January 1990

American Academy of Orthopaedic Surgeons
New Orleans, Louisiana
February 1990

Eastern Swiss Orthopedic Conference
Fieldchrist, Austria
April 1990

Isoelastic Femoral Prosthesis Symposium
Solothurn, Switzerland
April 1990

Current Concepts Spine 1990
Charleston, South Carolina
May 1990

Smith & Nephew Richards
8th Annual Orthopaedic Conference
Memphis, Tennessee
August 1990

American Academy of Pediatrics
Section of Orthopedics
Boston, Massachusetts
October 1990

Georgia Orthopaedic Society
Winner – 1990 Residents Award
Sea Island, Georgia
October 1990

Regional Review in Hand Surgery
Management
American Society for Surgery of Hand
Charleston, South Carolina
October 1990

Advanced Concepts in Bone Fracture
New Orleans, Louisiana
November 1990

Cervical Spine Research Society
San Antonio, Texas
November 1990

Regional Review Course in Orthopedics
Philadelphia, Pennsylvania
April 1991

American Orthopedic Association

Spine Fellowship Symposium

Residents Conference
April 1991

EBI Medical Center
June 1991

North American Spine Society Annual Meeting
Keystone, Colorado
July 1991

Current Techniques in Halo Applications
University of Colorado
September 1991

Scoliosis Research Society
Instrumentation
Minneapolis, Minnesota
September 1991

8th International Cotrel-Dubousset Congress
Minneapolis, Minnesota
September 1991

Eastern Orthopedic Society Annual Meeting
Madrid, Spain
October 1991

Laser In Orthopaedic Surgery Course
Vail, Colorado
November 1991

13th Annual Blue River Trauma Society
Blue River, British Columbia, Canada
January 1992

Current Methodology of Spinal Instrumentation:
Degenerative and Deformity Applications
Washington, D.C.
February 1992

59th Annual Meeting of the AAOS
Washington, D.C.
February 1992

Laser Disc Decompression with the KTP/532
Englewood, Colorado
March 1992

Comprehensive Review Course for Ortho.
Surgery
Chicago, Illinois
March 1992

Current Concepts of Lumbar Spine Fusion
Atlanta, Georgia
May 1992

Colorado Orthopaedic Trauma Symposium
Denver, Colorado
June 1992
Shoulder Arthroplasty
Float Idaho Medical Workshop
Idaho
Charles Rockwood, M.D.
August 1992

Rocky Mountain Chapter of Western Orthop. Assoc.
Annual Meeting
Snowmass Club, Aspen, Colorado, August 1992
Scoliosis Research Society Annual Meeting
Kansas City, Missouri
September 1992

AO ASIF Spine Course
Davos, Switzerland
December 1993

60th Annual Meeting of American
Academy of Orthopaedic Surgeons
San Francisco, California
February 1993

Orthopaedic Outcome Research
San Antonio, Texas
May 1993

Tachdjian International Pediatric Symposium
Chicago, Illinois
May 1993

Maine Orthopedic Review Courses
Colby College
Waterville, Maine
June 1993

Colorado Orthopaedic Trauma
Denver, Colorado
June 1993

Rocky Mountain Chapter
Western Orthopaedic Meeting

Float Idaho Medical Workshop
Trauma Symposium

Aspen, Colorado
August 1993

Techniques in Spinal Fixation
Denver, Colorado
August 1993

28th Annual Scoliosis Research Society
Dublin, Ireland
September 1993

Cervical Spine Research Society
New York, New York
November 1993

American Academy of Orthopaedic Surgery
New Orleans, Louisiana
February 1994

Sixth Annual Colorado Orthopaedic Trauma
Englewood, Colorado
June 1994
(Faculty)

Multiple Trauma
Float Idaho Medical Workshop
Salmon, Idaho
August 1994
(Faculty)

North American Spine Society
Minneapolis, Minnesota
October 1994

64th Annual AO/ASIF Spine Course
Davos, Switzerland
December 1994
(Faculty)

American Academy of Orthopaedic Surgeons
Orlando, Florida
February 1995

Colorado Trauma Symposium
Englewood, Colorado
June 1995
(Faculty)

Colorado Osteopathic Society
Annual Meeting
Snowmass, Colorado
June 1995

Twin Falls, Idaho
August 1993

Orthopaedic Trauma
Richard Kyle, Speaker
Twin Falls, Idaho
August 1993

North American Spine Society
San Diego, California
October 1993

Blue River Trauma Society
Blue River, British Columbia, Canada
January 1994
(Faculty)

Summertime CME for DO's
Vail, Colorado
June 1994
(Faculty)

AO/ASIF Spine Course
Montreal, Quebec, Canada
July 1994
(Faculty)

International Spine Workshop
Dr. John Webb
Nottingham, England
September 1994

Colorado Spine Symposium
Denver, Colorado
October 1994
(Faculty)

Second Northern Colorado Spine Symposium
Loveland, Colorado
February 1995

AO/ASIF Spine Course
Cabo San Lucas, Mexico
April 1995

Thoracoscopy & Laparoscopy of the Spine
Dallas, Texas
June 1995

Thoracoscopy of Spine
San Francisco, California
July 1995

Level II Physician Accreditation Seminar
July 1995

North American Spine Society
Annual Meeting
Washington, D.C.
October 1995

(Faculty)
65th Annual AO ASIF
Spine Course / Instructor
Davos, Switzerland
December 1995
(Faculty)

Breckenridge Spine Institute
Winter Conference
Breckenridge, Colorado
February 29-March 2, 1996
(Faculty)

AO ASIF Operating Room Nurse Course
Kansas City, Missouri
May 1996 **-(Faculty)**

Float Idaho Medical Workshop
Shoulder and Neck Pain
Charles A. Rockwood, M.D.
August 1996

AO ASIF
Faculty Forum
Colorado Springs, Colorado
October 1996

Trauma and Advanced Spine Course
Davos, Switzerland
December 8-13, 1996
(Faculty)

American Academy of Orthopaedic Surgeons
Annual Meeting
San Francisco, California
February 1997

Spine Conference
Spinal Stenosis
Center for Spinal Disorders
Denver, Colorado

Float Idaho Medical Workshop
Trauma Symposium
August 1995
(Faculty)

AO ASIF Advance Spine Techniques Course
Bermuda
October 1995
(Faculty)

A Contemporary Update/Disorders of the Spine
8th Annual Meeting
Whistler, British Columbia, Canada
January 1996
(Faculty)

Advanced Techniques in Spinal Surgery
Keystone, Colorado
March 1996

Advanced Techniques in Spinal Surgery
Montreal, Quebec, Canada
June 1996 **-(Faculty)**

Lumbar Interbody Fusion of the Spine
Minneapolis, Minnesota
September 13, 1996

Department of Health and Medical Services
Spine Course
Dubai, United Arab Emirates
October 22-24, 1996
(Faculty)

Contemporary Update on Spinal Disorders
Whistler, British Columbia, Canada
January 1997
(Faculty)

Advanced Spinal Techniques
AO ASIF Course
Banff, Alberta, Canada
March 1997
(Faculty)

Spine Conference
PE of Lumbar Spine
Center for Spinal Disorders
Denver, Colorado

July 22, 1997

Float Idaho Medical Workshop
A Contemporary Update on Spinal Disorders
Idaho
August 15-20, 1997
(Faculty)

August 7, 1997

Spine Conference
Management of Patients w/ Osteoarthritis
Center for Spinal Disorders
Denver, Colorado
September 3, 1997

5th North European Instructional Course for
Surgeons
Nottingham, England
September 8-11, 1997
(Faculty)

Spine Conference
Lumbar Stabilization – lit review
Center for Spinal Disorders
Denver, Colorado
September 15, 1997

Spine Conference
Electrodiagnostic Evaluation of Radiculopathy
Center for Spinal Disorders
Denver, Colorado
October 2, 1997

Spine Conference
Advanced Pain Management Techniques
Center for Spinal Disorders
Denver, Colorado
December 9, 1997

67th AO ASIF Course
Basic Spine Course and Advanced Spine
Course
Davos, Switzerland
December 14-19, 1997
(Faculty)

Spine Conference
Evaluation of Intervertebral Disk
Center for Spinal Disorders
Denver, Colorado
January 14, 1998

Contemporary Update on Disorders of the
Spine
Whistler, British Columbia, Canada
January 18-23, 1998
(Faculty)

Spine Conference
Lumbar MRI
Center for Spinal Disorders
Denver, Colorado
February 17, 1998

AO ASIF Comprehensive Spine Course
San Jose del Cabo, Mexico
February 19-22, 1998
(Faculty)

Winter Spine Conference
Breckenridge, Colorado
February 27-28, 1998
(Faculty)

American Academy of Orthopaedic Surgeons
New Orleans, Louisiana
March 19-23, 1998

Spine Conference, Case Presentations
Center for Spinal Disorders
Denver, Colorado
April 1, 1998

Spine Conference
Case Presentations
Center for Spinal Disorders
Denver, Colorado
April 23, 1998

AO ASIF Comprehensive and Interactive Spine
Course
Montreal, Quebec, Canada
July 16-19, 1998
(Faculty)

Idaho Medical Workshop
Debating Current Issues in Spinal Care
August 15-20, 1998
(Chairman)

AO ASIF Spine Course
China
August 24 – September 2, 1998
(Faculty)

AO ASIF Spine Course
South Africa
October 8-10, 1998
(Faculty)

Contemporary Update on Disorders of the
Spine
Whistler, British Columbia, Canada
January 15-22, 1999
(Faculty)

AO Spine Comprehensive Course
Hong Kong, China
March 26-28, 1999
(Invited International Faculty)

Minimal Invasive Circumferential
Lumbar Fusion Seminar/Workshop
Bettlach, Switzerland
April 16, 1999

Idaho Medical Workshop
Current Issues in Spinal Care
August 7-12, 1999
(Chairman)

7th North European Advanced Spine Course
Nottingham, England
September 1999
(Faculty)

AO Cervical Spine Symposium
Santiago, Chile
November 1999
(Invited International Faculty)

69th AO ASIF Basic and Advanced Spine
Course
Davos, Switzerland
December 12 – 18, 1999
(Faculty)

AO ASIF Comprehensive Spine Course
Breckenridge, Colorado
March 9-12, 2000
(Chairman)

AO ASIF Spine Course
2nd AO Course of the Vertebral Column
Santiago, Chile
March 29 – April 1, 2000
(Faculty)

68th AO ASIF
Basic Spine Course and Advanced Spine Course
Davos, Switzerland
December 12-19, 1998
(Faculty)

American Academy of Orthopaedic Surgeons
Annual Meeting
Anaheim, California
February 4-8, 1999

AO ASIF Comprehensive Spine Course
Cancun, Mexico
April 8-11, 1999
(Chairman)

6th International Meeting on Advanced Spine
Techniques
Vancouver, British Columbia, Canada
July 8-10, 1999
(IMAST Faculty)

Annual Meeting of Spine Society of Europe
Munich, Germany
September 1999

North American Spine Society
Annual Meeting
Chicago, Illinois
October 1999

AO ASIF Interactive Spine Course
Tuckers Town, Bermuda
November 1999
(Faculty)

12th Annual Ski with the Spine Center
A Contemporary Update on Disorders of the Spine
Whistler, British Columbia, Canada
January 16-21, 2000
(Faculty)

AO ASIF Spine Operating Room Personnel Course
St. Louis, Missouri
March 25, 2000
(Chairman)

AO ASIF Comprehensive Spine Course
Cyprus, Greece
April 8-11, 2000
(Faculty)

Current Trends in Osteobiologics & Spine
Surgery
Jackson Hole, Wyoming
June 24, 2000

Float Idaho Medical Workshop
Musculoskeletal Care
Twin Falls, Idaho
August 7-12, 2000

AO ASIF Comp. & Interactive Spine Course
Captiva Island, Florida
September 7-10, 2000
(Course Director)

8th International Spine Symposium
Interactive/Instructional Course, Master Class
Nottingham, England
September 13-15, 2000
(Faculty)

3rd Annual Continuing Medical Ed. Conference
Pinnacle Assurance
Breckenridge, Colorado
October 13, 2000

North American Spine Society
15th Annual Meeting
New Orleans, Louisiana
October 25-28, 2000

Research Institute International Symposium
Anterior Column Support of the Spine VI
Scottsdale, Arizona
November 8-11, 2000
(Faculty)

Chilean Orthopedic Society Congress
Iquique, Chile
November 17-20, 2000
(Invited International Guest Speaker)

AO ASIF Cervical Spine Symposium
Santiago, Chile
November 21, 2000
(Faculty)

AO AISF Live Surgery Symposium
Minimally Invasive Spine Surgery (MISS)
Bern, Switzerland
December 8-9, 2000
(Faculty)

AO Spine Interactive Courses
Davos, Switzerland
December 10-15, 2000
(Faculty)

13th Annual Ski with the Spine Center
Whistler, British Columbia, Canada
January 14-19, 2001
(Faculty)

Inflatable Bone Tamp Uses in Cancellous
Bone Educational Course
Aurora, Colorado
February 10, 2001

American Academy of Orthopedic Surgeons
Annual Meeting
San Francisco, California
February 28 – March 3, 2001

Spine 2010 Forum: "The Future of Spine
Care"
Gunnison, Colorado
(Invited Faculty)

Spine Arthroplasty Symposium
Munich, Germany
May 3-5, 2001

Float Idaho Medical Workshop
New Advances in Spine Surgery
Twin Falls, Idaho
July 30 – August 4, 2001
(Chairman)

AO ASIF Spine Operating Room Personnel Course
Chicago, Illinois
August 18, 2001

North American Spine Society
16th Annual Meeting
Seattle, Washington
October 31- Nov. 3, 2001

Spine Conference
Evaluations of New Technology
The Spine Education and Research Institute
Denver, Colorado
November 13, 2001

Spine Conference
Methods of Outcome Assessment Following
Musculoskeletal Surgical Procedures
The Spine Education and Research Institute
Denver, Colorado
November 27, 2001

AO Interactive Spine Course
Davos, Switzerland
December 9- 14, 2001
(Invited Faculty)

Spine Conference
Patient Safety Issues
The Spine Education and Research Institute
Denver, Colorado
December 18, 2001

Spinal Cord Stimulators
Presentation & Live Patient Implantation
The Spine Education and Research Institute
Denver, Colorado
January 4, 2002
(Participating Physician)

Disorders of the Spine
14th Annual Meeting
Whistler, British Columbia, Canada
January 19-25, 2002
(Invited Faculty)

Live Surgery Symposium
Bern, Switzerland
February 2-3, 2002
(Invited Faculty)

AOM Percutaneous Vertebral Body Access
The Spine Education and Research Institute
Denver, Colorado
March 2, 2002

Exploratory Science Workshop for Kids
The Spine Education and Research Institute
Denver, Colorado
March 14, 2002

Debating Issues in the Degenerative
Thoracolumbar Spine
The Spine Education and Research Institute
Denver, Colorado
March 16, 2002
(Course Chairman)

Cervical Degenerative Disc Disease
The Spine Education and Research Institute
Denver, Colorado
March 19, 2002

Careers in Healthcare
The Spine Education and Research Institute
Denver, Colorado
April 5, 2002

AO-ASIF Comp. & Interactive Spine Course
Coronado, California
April 18-21, 2002

CMS Message on HIPAA-Where are we today
The Spine Education and Research Institute
Denver, Colorado
May 1, 2002

8th Annual Chinese Cervical Spine Course
Shanghai, China
May 6-12, 2002

AO Spine Symposium
Nijmegen, Netherlands
May 31, 2002
(Invited International Faculty)

Cervical Spine Research Society Annual Meeting
Paris, France
June 13 – 14, 2002

Functional Evaluations of Hand Injuries
The Spine Education and Research Institute
Denver, Colorado
July 24, 2002

Second AO Cervical Spine Course
Santiago, Chile
August 12 – 14, 2002

AO Faculty Retreat
Sagamore Landing, New York

AO-ASIF Operating Room Personnel Course
Thornton, Colorado

August 22 – 25, 2002

Debating Issues in the Cervical Spine
Thornton, Colorado
October 12, 2002
(Chairman)

AO-ASIF Interactive Spine Course
Davos, Switzerland
December 7-13, 2002
(Invited International Faculty)

Live Surgery Symposium
Bern, Switzerland
January 24-26, 2003
(Invited International Faculty)

AO-ASIF Comprehensive & Interactive Spine
Course
Sun Valley, Idaho
February 27 – March 2, 2003
(Course Chairman)

Spine Arthroplasty Society
Scottsdale, Arizona
May 1-3, 2003

AO-ASIF Spine Course
Argentinean Spine Society
June 5-7, 2003
(Invited International Faculty)

AO-ASIF Spine Course
Quebec City, Quebec, Canada
August 6-9, 2003
(Invited International Faculty)

University of Colorado – Department of
Orthopedics
Denver, Colorado
October 8, 2003

North American Spine Society
Pre-Course Program Director
What's New in Spine Grafting Technology and
Tissue Banking?
October 21, 2003

September 14, 2002
(Co-Chairman)

AO Interactive Spine Course
Dubai, United Arab Emirates
October 18-22, 2002
(Invited International Faculty)

Disorders of the Spine
15th Annual Meeting
Whistler, British Columbia, Canada
January 18-24, 2003
(Invited Faculty)

2003 Midwinter Conference
CO Society of Osteopathic Medicine
Keystone, Colorado
February 23-28, 2003

Fellows Forum
Banff, Alberta, Canada
March 20 – 22, 2003
(Invited Faculty)

AO-ASIF Comprehensive Spine Course
Santiago, Chile
May 8-10, 2003
(Invited International Faculty)

Float Idaho Medical Workshop
Stanley, Idaho
July 21 – July 27, 2003

Anterior Access Technology Course
Santa Monica, California
September 12–13, 2003

AO/ASIF Spine Course
Weekly Core Curriculum Conference
Adelaide, Australia
October 13-20, 2003
(Invited International Faculty)

Medical Grand Rounds:
Adult Spinal Deformity
The Spine Education and Research Institute
Denver, Colorado
November 20, 2003

AO-ASIF Interactive Spine Courses
Davos, Switzerland
December 14-20, 2003

Disorders of the Spine
16th Annual Meeting
January 17-23, 2004
Whistler, British Columbia, Canada
(Invited International Faculty)

Live Surgery Symposium
Bern, Switzerland
February 7-8, 2004
(Participated via video)

Anterior Access Technology Course
Santa Monica, California
March 5-6, 2004
(Course Chairman)

Fellows Forum
Banff, Alberta, Canada
March 26-28, 2004
(Invited Faculty)

Anterior Access Technology Course
The Spine Education and Research Institute
Denver, Colorado
April 4-5, 2004
(Course Chairman)

Spine Arthroplasty Society
Vienna, Austria
May 4-8, 2004
(Invited International Faculty)

Disc Replacements of the Spine
The Spine Education and Research Institute
Denver, Colorado
June 15, 2004
(Director)

AO Cervical Spine Course
Puebla, Mexico July 15-17, 2004
(Invited International Faculty)

Anterior Lumbar Spine Forum
Denver, Colorado
August 8-9, 2004
(Course Chairman)

American College of Spine Surgery Annual Meeting

Anterior Access Technology Course
Thornton, Colorado
January 11-12, 2004
(Course Director)

Practice Management for Spine Surgeons
Phoenix, Arizona
February 6-7, 2004
(Course Chairman)

AO-ASIF Spine Course
Sun Valley, Idaho
February 19-22, 2004

American Academy of Orthopedic Surgeons
2004 Annual meeting
San Francisco, California
March 10-14, 2004

Revision Strategies/Thoracolumbar Spine
The Spine Education and Research Institute
Denver, Colorado
April 3-4, 2004

North American Spine Society
Spring Break
Boca Raton, Florida
April 21-26, 2004
(Invited Faculty)

National Spine Congress
Beijing, China
May 13-17, 2004
(Invited International Faculty)

IMAST
Bermuda
July 1-3, 2004
(Invited International Faculty)

Anterior Lumbar Spine Forum
Philadelphia, Pennsylvania
August 1, 2004
(Invited Faculty)

Mexican Spine Society Annual Meeting
Veracruz, Mexico
September 9-11, 2004
(Invited International Faculty)

Current Concepts in Artificial Discs
Huntington Beach, California

Phoenix, Arizona
September 23-24, 2004
(Invited Faculty)

September 25, 2004

Georgia Orthopedic Society Spine
Symposium
Augusta, Georgia
October 9, 2004
(Visiting Professor)

North American Spine Society
Chicago, Illinois
October 25-29, 2004
(Chairman of the Pre-Course)

AO Spine North America Faculty
Development Forum
Southampton, Bermuda
November 4-7, 2004

Colorado Spine Symposium
Westminster, Colorado
November 12, 2004
(Visiting Professor)

Level II Re-Accreditation Seminar
Denver, Colorado
December 3-4, 2004

AO-ASIF Interactive Spine Course
Davos Switzerland
December 12-17, 2004
(Invited International Faculty)

Disorders of the Spine
17th Annual Meeting
Whistler, British Columbia, Canada
January 13-16, 2005

Current Issues in Occupational and
Orthopedic Health
Denver, Colorado
January 22, 2005

5th Annual Live Surgery Symposium
Bern, Switzerland
February 3-6, 2005
(Participated via video)

AO-ASIF Interactive Spine Course
Sun Valley, Idaho
February 4-5, 2005

Strategies in Spinal Cord Regeneration
The Spine Education and Research Institute
Denver, Colorado
February 8, 2005

Anterior Access and Arthroplasty Course
Monterrey, Mexico
February 10-12, 2005
(Invited International Faculty)

AAOS 72nd Annual Meeting
Washington, DC
February 24-26, 2005

Grand Rounds
The Children's Hospital
Denver, Colorado
March 2005

Emerging Technologies
Spine Education Summit
Telluride, Colorado
March 3-5, 2005

Colorado Rehabilitation Insurance
Nurses Group
Englewood, Colorado
March 10, 2005

Spine Surgery Breakthrough: Life is Motion
The Spine Education and Research Institute
Denver, Colorado
March 14, 23, 2005

AO Spine, European Region
Excellence in Spine: The Lumbar Intervertebral Disc
Davos, Switzerland
March 17-20, 2005

Trends in Spinal Disc Replacements
The Spine Education and Research Institute
Denver, Colorado
March 29, 2005

SAS 5th Annual Global Symposium on
Motion Preserving Technology
New York, New York
May 4-7 2005

AO ASIF Spine Course for Operating Room
Personnel
The Spine Education and Research Institute
Denver, Colorado
May 21, 2005

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
June 8, 2005

Colorado Society of Osteopathic
Medicine 2005 Annual Meeting
Vail, Colorado
August 3-7, 2005

EuroSpine 2005
Barcelona, Spain
September 22-25, 2005

North American Spine Society
20th Annual Meeting
Philadelphia, Pennsylvania
September 27 – October 1, 2005
(Pre-Course Chairman)

3rd Transatlantic Spine Congress
Texas Back Institute and Research
Foundation
Plano, Texas
November 4-5, 2005
(Faculty)

AONA Musculoskeletal Trauma Faculty
Development Forum
Phoenix/Scottsdale, Arizona
November 10-11, 2005

AOSLA/AOSNA Combined Symposium
Complex Spinal Issues
Cancun, Mexico
April 21-23, 2005

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
May 11, 2005

Medical Grand Rounds
"Obesity Surgery: Rationale and Outcomes"
The Spine Education and Research Institute
Denver, Colorado
June 2, 2005

AO ASIF Foundation Board of
Trustees Meeting 2005
Amelia Island, Florida
June 21-24, 2005

Medical Grand Rounds
"Emerging Concepts in Spine Arthroplasty"
International Guest Speaker:
Dr. Rudolf Bertagnoli
The Spine Education and Research Institute
Denver, Colorado
September 14, 2005

Medical Grand Rounds
"Emerging Concepts in Spine Arthroplasty"
International Guest Speaker:
Dr. Rudolf Bertagnoli
The Spine Education and Research Institute
Denver, Colorado
September 14, 2005

AOAO 2005 Annual Assembly
of Osteopathic Specialists
Orlando, Florida
October 22-25, 2005
(Faculty)

Current and Emerging Issues in
Complex Lumbar Spine Surgery
St. Louis, Missouri
November 3-5, 2005
(Faculty)

Medical Grand Rounds
Guest Speaker: Pat Chant
The Spine Education and Research Institute
Denver, CO
December 7, 2005

AO-ASIF Interactive Spine Course
Davos, Switzerland
December 8–16, 2005
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
January 11, 2006

Medical Grand Rounds
Guest Speaker: Pat Chant
The Spine Education and Research Institute
Denver, Colorado
February 2, 2006

6th Live Spine Surgery Symposium
Bern, Switzerland
February 10, 2006
(Participated via video)

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
March 8, 2006

AOSpine Japan
Faculty Meeting
Osaka, Japan
April 8, 2006
(Invited participate)

AOSpine China
Cervical Spine Seminar for Spine Surgeons
Shanghai, China
April 10, 2006
(Invited International Faculty)

AOSpine China
Cervical and Lumbar Disc Replacement
Seminar
Beijing, China
April 11, 2006
(Invited International Faculty)

Cervical Symposium
Denver, Colorado
January 10, 2006

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
January 25, 2006

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
February 8, 2006

AO ASIF Advanced Concepts in the Management of
Spinal Disorders Course
Sun Valley, Idaho
February 22–25, 2006
(Faculty)

Medical Grand Rounds
Guest Speakers: Michael Norins & Harold Pine
The Spine Education and Research Institute
Denver, Colorado
April 4, 2006

AOSpine China
Train-the-Trainer Program
Shanghai, China
April 9, 2006
(Invited International Faculty)

AOSpine China
AOSpine Basic Course
Shanghai, China
April 11, 2006
(Invited International Faculty)

Educational Seminar
CRING & Pinnacol Luncheon
The Spine Education and Research Institute
Denver, Colorado
April 13, 2006
(Participated via Video)

AOSpine Taiwan
Taiwan Annual Congress
Taipei, Taiwan
April 15, 2006
(Invited International Faculty)

The Lumbar Intervertebral Disc: Current
Concepts in Nonfusion Technology
The Musculoskeletal Learning Center
Denver, Colorado
April 29-30, 2006
(Course Chairman)

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
May 24, 2006

Medical Grand Rounds
"The Future of Non-Fusion Spinal
Technology"
International Guest Speaker:
Dr. Rudolf Bertagnoli
The Spine Education and Research Institute
Denver, Colorado
September 6, 2006

North American Spine Society
21th Annual Meeting
Seattle, Washington
September 26 – September 30, 2006
(Pre-Course Faculty)

Spine Society of Europe
Euro Spine 2006
Istanbul, Turkey
October 25-28, 2006

Current & Emerging Issues in Complex
Lumbar Spine Surgery
St. Louis, Missouri
November 9-11, 2006
(Faculty)

Medical Grand Rounds
"Total Disc Arthroplasty for Lumbar
Degenerative Disc Disease"
The Spine Education and Research Institute
Denver, Colorado
December 5, 2006

Problem Solving Strategies
Spine Monthly Case Conference
The Spine Education and Research Institute
Denver, Colorado
April 26, 2006

SAS 6th Annual Global Symposium on
Motion Preserving Technology
ASIF Spine Course
Montreal, Quebec, Canada
May 9-13, 2006

Problem Solving Strategies
Spine Monthly Case Conference
Guest Speak: Dr. Xinsheng Peng
"Occipital Cervical Spine Cases"
The Spine Education and Research Institute
Denver, Colorado
June 28, 2006

AOAO 2006 Annual Clinical Assembly of
Osteopathic Specialists
New Orleans, Louisiana
September 14–17, 2006
(Faculty)

Total Disc Replacement Symposium
Los Angeles, California
October 7, 2006
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
"Rheumatoid Cervical Spine"
The Spine Education and Research Institute
Denver, Colorado
November 8, 2006

First Chinese Orthopaedic Association International
Congress
Beijing, China
November 13-15, 2006
(International Faculty)

AO-ASIF Interactive Spine Course
Davos, Switzerland
December 10-15, 2005
(Faculty)

AO-ASIF Interactive Spine Course
Davos, Switzerland
December 10-15, 2005
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
“Peripheral Neuropathy & Spinal Stenosis”
The Spine Education and Research Institute
Denver, Colorado
January 10, 2007

Disorders of the Spine
19th Annual Meeting
Whistler, British Columbia, Canada
January 13-19, 2007
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
“Congenital Anomaly of the Facet Joint”
The Spine Education and Research Institute
Denver, Colorado
January 24, 2007

AO-ASIF Interactive Spine Course
Sun Valley, Idaho
January 31 – February 4, 2007
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
“Charcot’s Disease of the Spine”
The Spine Education and Research Institute
Denver, Colorado
February 14, 2007

Total Disc Replacement Symposium
Santa Monica, California
March 3, 2007
(Faculty)

Spine Global Product Development Surgeon Visit
West Chester, Pennsylvania
March 15, 2007
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
“Thoracic and Lumbar Fractures”
The Spine Education and Research Institute
Denver, Colorado
April 11, 2007

Problem Solving Strategies
Spine Monthly Case Conference
“Osteoporotic Spine Fracture”
The Spine Education and Research Institute
Denver, Colorado
April 25, 2007

Weill Cornell Medical College
2007 Lavyne/Hickrill/Weil Spine Lecture
“A Comprehensive Approach to Spine Care”
New York, New York
May 24, 2007
(Guest Lecturer)

AOSpine Symposium
The Degenerative Spine
Shanghai, China
June 11, 2007
(International Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
“Cervical Spinal Stenosis”
The Spine Education and Research Institute
Denver, Colorado
June 27, 2007

Advanced Concepts in the Management of Spinal
Disorders Course
Niagara on the Lake, Ontario, Canada
August 2-4, 2007
(Faculty)

Cervical Arthroplasty: Core Education Course
Broomfield, Colorado
August 17, 2007

18th Annual Colorado Spine Symposium
Westminster, Colorado
September 28, 2007

Spine Society of Europe
Euro Spine 2007
Brussels, Belgium
October 3-7, 2007

North American Spine Society 22nd Annual Meeting
Austin, Texas
October 23-27, 2007

Section of Motion Technology: Examining the
Evidence
Austin, Texas
October 23, 2007
(Faculty)

Current & Emerging Issues in Complex Lumbar Spine
Surgery
St. Louis, Missouri
November 8-10, 2007
(Faculty)

Problem Solving Strategies
Spine Monthly Case Conference
"Spondylolysis with Spondylolisthesis of the
Lumbar Spine"
The Spine Education and Research Institute
Denver, Colorado
November 28, 2007

Oracle Disc Lab
West Chester, Pennsylvania
November 29, 2007
AO-ASIF Interactive Spine Course
Davos, Switzerland
December 9-14, 2005
(Faculty)

World Forum for Spine Research
The Intervertebral Disc
Kyoto, Japan
January 23-26, 2008
(Faculty)

In-Space Training
Munich, Germany
February 5-8, 2008

John McCulloch Memorial Winter Conference
Breckenridge, Colorado
February 22, 2008
(Faculty)

The Medical "Home Improvements" Course
Keystone, Colorado
February 23-28, 2008
(Faculty)

Winter Clinic
Snowmass, Colorado
February 25, 2008
(Faculty)

AONA Fellows Forum
Banff, Calgary, Canada
April 3-5, 2008

Total Disc Arthroplasty Grand Rounds
Medical College of Georgia
School of Medicine
Augusta, Georgia
April 21, 2008
(Case Presenter)

SAS 8th Annual Global Symposium on
Motion Preserving Technology
Miami, Florida
May 6-9, 2008

Spine Week
Geneva, Switzerland
May 26-29, 2008

North American Spine Society 23rd Annual Meeting
Toronto, Ontario, Canada
October 14 – 18, 2008
(Faculty)

19th Annual Colorado Spine Symposium
Denver, CO
October 31, 2008
(Faculty)

Current and Emerging Issues in Complex Lumbar
Spine Surgery Course
St. Louis, MO
November 6 – 8, 2008
(Chairman)

3rd International Congress of Chinese
Orthopaedic Association

Fall 2008 Spine Symposium – Case Controversy: A
Knowledge Based Approach to Low Back and Lower

Suzhou, China
November 13 – 16, 2008

AOSpine Advances Course
Davos, Switzerland
December 15 – 19, 2008
(Chairman)

Emerging Technologies Spine Education
Summit
Steamboat Springs, CO
February 4 – 7, 2009

9th Annual SAS-Motion Preservation
Technology Meeting
London, England, U.K.
April 28-May 2, 2009
(Moderator)

St. Louis University PAWS Course
St. Louis, MO
October 15-17, 2009
(Co-chair)

AOVet Master's Course
Davos, Switzerland
December 8, 2009
(Faculty)

ACFAS 68th Annual Scientific Conference
Las Vegas, NV
Feb. 23-26, 2010
(Moderator)

Level II Accreditation Seminar
Course Year 2010

University of CO School of Medicine
Denver, CO

European Accreditation Council for CME
April 24-26, 2011
(Chairman, Moderator, Presenter)

AOSIB North America Trustee Council
Meeting,
July 18-24, 2011 Board Member

AOVA Meeting, Solothurn, Switzerland
September 21-25, 2011

Extremity Pain
Denver, CO
November 19, 2008
(Faculty)

7th Annual Instituto Nacional De Rehabilitacion Spine
Course
Mexico City, Mexico
January 29 – 31, 2009
(Faculty)

American Academy of Orthopaedic Surgeons
Las Vegas, Nevada
February 27-March 1, 2009
(Faculty)

AOSpine Global Spine Congress
San Francisco, CA
June 23-26, 2009
(Faculty & Moderator)

AOSpine Global Interactive Courses
Kuala Lumpur, Malaysia
October 26 – 30, 2009
(Faculty)

Symposium on Current Concepts in Spinal Disorders
Cedar Sinai Medical Center
Las Vegas, NV, Feb. 4-6, 2010
(Faculty)

North American Spine Society
Orlando, FL
Oct 5-9, 2010
(Member)

AOSpine Global Spine Congress
Barcelona, Spain

AOVA PCB Meeting, Paso Robles, CA March 31-April
3, 2011

SAS 11 Annual Conference , Las Vegas, NV April 26-
30, 2011
(Presenter, Member)

MedAdvance Summer Leadership Conference, Spine
Education & Research Institute, August 7-9, 2011
(Presenter)

AOSIB Forum, Sicili, Italy, October 7-8, 2011
(Member)

North American Spine Society
Chicago, IL
Current Controversies in Spine Surgery
November 2-5, 2011
(Faculty)

AOVA Board Meeting
Davos, Switzerland
December 7 - 15, 2011

AOSpine Masters Symposium
Davos, Switzerland
December 7 - 15, 2011

AOCID Committee Meeting
San Francisco, CA
February 10, 2012

AO North America
Controversies in Complex Spine Surgery
Snowbird, UT
February 16-18, 2012
(Faculty)

SI-BONE Surgeon Training Course
Miami, FL
March 10, 2012

AOSIB Strategic Workshop on Research
Kyoto, Japan
March 23-24, 2012
(Member)

AO Retreat/Meeting
West Chester, PA
March 30, 2012
(Member)

166th AOVA Meeting
West Chester, PA
March 31, 2012
(Member)

Depuy Spine Video Recording
Chicago, IL
May 9-10, 2012

World Forum for Spine Research 2012
AO Board Meeting
The Intervertebral Disc – from Degeneration
to Pain
Helsinki, Finland
June 18-21, 2012
(Member)

167th AOVA Meeting
Davos, Switzerland
June 26, 2012
(Member)

CID Committee Meeting
Davos, Switzerland
June 27, 2012
(Member)

AO North America Trustees Meeting
Davos, Switzerland
June 28, 2012
(Member)

AO Board of Trustees Meeting
Davos, Switzerland
June 27-30, 2012
(Member)

ProDisc Publication Meeting
Dallas, Texas
August 17, 2012

Globus Medical: Secure-C Training
Philadelphia, PA
Oct 18-19, 2012

AOCID Committee Meeting
Miami, Florida
Oct 20-21, 2012

NuVasive: PCM[®] Cervical Disc Course
Paramus, NJ

Stryker Spine VIP Meeting
Allendale, New Jersey

Feb 2, 2013

International Mobidays
Strasbourg, France
April 9-13, 2013

The AOSpine Davos Courses 2013,
Davos, Switzerland
December 8-12, 2013 **(Faculty)**

AOSpine Advanced Course-Lumbar Spine
Cairo, Egypt,
May 29-31, 2014 **(Faculty)**

North American Spine Society
30th Annual Meeting
Chicago, IL
October 14-17, 2015

AOSpine Minimally Invasive Spinal Surgery
and Navigation
Phoenix, Arizona
November 20-21, 2015 **(Faculty)**

AOSpine Davos Courses 2015
Davos, Switzerland
December 13-17, 2015 **(Faculty)**

MedEd Advancements in TLIF
Las Vegas, NV
February 19, 2016

AOSpine Advanced Symposium-Cervical
Spine
Shanghai, China
April 9-10, 2016

129th Annual Meeting of the American
Orthopaedic Association Scientific Group
Seattle, WA
June 22-25, 2016

John McCulloch, MD Winter Spine
Conference
Breckenridge, Colorado
March 30 – April 1, 2017 **(Faculty)**

April 17-18, 2013

Innovative and Advanced Surgery of the Degenerative
and Deformed Lumbar Spine
St. Louis, MO
September 26-28, 2013 **(Faculty)**

AOSpine World Forum for Spine Research 2014, The
Intervertebral Disc- from Degeneration to Therapeutic
Motion Preservation,
Xi'an, China
May 15-17, 2014 **(Faculty)**

Special Session of the Spine Conference: “John A.
McCulloch Memorial Lecture”
Breckenridge, CO
February 26-28, 2015 **(Faculty)**

AOSpine Advanced Symposium
Controversial Cases in Spinal Degeneration &
Deformity
Suzhou, China
October 23, 2015 **(Faculty)**

Aesculap Academy
Motion Preservation in the Lumbar Spine
Pathology & Indications for Optimized Outcomes
Plano, TX
August 15, 2015

AOSpine Seminario Avanzado AOSpine – Meet the
expert: Columna Degerativa
Guatemala, Guatemala
January 13, 2016 **(Faculty)**

ISASS16
Las Vegas, NV
April 6-8, 2016 **(Faculty)**

Global Spine Congress & World Forum for Spine
Research 2016
Dubai, United Arab Emirates
April 13-16, 2016

Meeting of Beijing Orthopedic Association
Beijing, China
August 12-14, 2016

AOSpine Masters Symposium, Cervical Spine
Shanghai, China
April 8, 2017 **(Faculty)**

