

Travis G. Maak, MD

9/08/2019

University of Utah
Department of Orthopaedic Surgery
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Foreign Languages: Spanish

ACADEMIC APPOINTMENT

2018-Present Associate Professor with Tenure
2012-2018 Assistant Professor
Division of Sports Medicine – Hip and Knee Preservation Service
Department of Orthopaedic Surgery
University of Utah Medical Center
University of Utah School of Medicine
Salt Lake City, Utah

EDUCATION

2001-2006 **Yale University School of Medicine**, New Haven, Connecticut, 06510
Doctor of Medicine

1997-2001 **Stanford University**, Palo Alto, California, 94305
Bachelor of Sciences
Major: Biology with Honors

1993-1997 **Judge Memorial High School**, Salt Lake City, Utah, 84106

POST GRADUATE EDUCATION AND TRAINING

2012-2013 **Sports Clinic**, Hannover, Germany
Traveling Clerkship in Complex Knee Surgery – Focus: Malalignment and Knee Osteotomies
Mentor: Philip Lobenhoffer

2011-2012 **Hospital for Special Surgery**, New York, New York 10021
Clerkship in Hip Preservation and Arthroscopy
Mentor: Bryan T. Kelly

2011-2012 **Hospital for Special Surgery**, New York, New York 10021
Clinical Fellow in Sports Medicine and Shoulder Surgery

2010-2011 **University of Ghent**, Ghent, Belgium
Traveling Clerkship in Sports Medicine – Focus: Biologic knee reconstruction and repair
Mentor: Rene Verdonk

2006-2011 **Hospital for Special Surgery**, New York, New York 10021
Resident in Orthopaedic Surgery

New York-Presbyterian Hospital/New York Weill Cornell Center, Weill Medical College of
Cornell University, New York, New York 10021
Clinical Associate in Orthopaedic Surgery

Memorial Sloan-Kettering Cancer Center, New York, New York 10021
Clinical Associate in Orthopaedic Surgery

2006-2007 **New York-Presbyterian Hospital/New York Weill Cornell Center**, Weill Medical College of
Cornell University, New York, New York 10021
Intern in General Surgery

2005-2006 **Yale University School of Medicine**, Department of Orthopaedic Surgery – Spine Division, New
Haven, Connecticut 06510
Doris Duke Clinical Research Fellow; Mentor: Manohar M. Panjabi, PhD
Biomechanical manifestations of subclinical cervical spine injury during whiplash in a human
cadaveric model using 3-dimensional imaging real-time technique

AWARDS & HONORS

2019 Top Doctor 2019 – Orthopedic Surgery. Top Doctor Magazine
2014 ISHA Best Basic Science Paper Trainee Award: Wylie J, Jenkins P, Beckmann J, Aoki S, **Maak TG**.
The risk of ionizing radiation in the imaging evaluation of young adults with hip pain. ISHA, Rio
de Janeiro, Brazil. October 9-11, 2014.
2013 Sports Health T. David Sisk Award for Best Review Paper: Delos D, **Maak TG**, Rodeo SA. Muscle
injuries in athletes: Enhancing recovery through scientific understanding and novel therapies.
2012 Emerging Leader – American Orthopaedic Association
2012 AAOS Award of Excellence: Scientific Exhibit: Schrupf M, Dines J, Bedi A, **Maak TG**, Delos D,
Jones K, Walch G, Dines D. Managing bone loss in anterior instability. AAOS San Francisco, CA.
February 7-11, 2012.
2011 Trainee Presentation Prize – Finalist, International Society of Hip Arthroscopy, Paris, France.
October 14-15, 2011
2011 Jean C. McDaniel Award for Excellence in Surgical Skill and Ethics, Hospital for Special Surgery
2006 Alpha Omega Alpha Medical Honor Society
2006 Cum Laude, Yale University School of Medicine
2006 Parker Prize for Superlative Medical Student Performance, Yale University School of Medicine
2006 Dean's Prize for Community Service, Yale University School of Medicine
2005 Farr Research Scholar, Yale University School of Medicine
2001 Honors in Biological Sciences, Stanford University
2001 Deans Award for Academic Excellence, Stanford University
1994 Eagle Scout, Boy Scouts of America

ADMINISTRATIVE EXPERIENCE

2019-Present University of Utah Sports Knowledge and Innovation Initiative (USKI) – Executive Director

2018-Present AOSSM Self-Assessment Committee – Member
2017-Present International Olympic Committee Research Consortium – Member
2017-Present Clinical Orthopaedics & Related Research, Philadelphia, PA – Associate Editor
2016-Present National Basketball Association (NBA) Research Committee – Member
2016-Present University of Utah Athletic Training Program – Medical Director
2014-Present United States Olympic Committee National Medical Center – Executive Director
2013-Present University of Utah Sports Medicine Executive Board – Chairman
2013-Present Utah State Orthopaedic Society Governing Board – Member
2014-Present Utah State Orthopaedic Society Annual Meeting – Course Director
2014-2016 NIH PROMIS Sports Activity Function Scale Development Committee - Member
2013-2017 AOSSM Fellowship Oversight Committee – Member
2012-2016 University of Utah IRB – Member
2012-2015 Knee Clinical Pathway Oversight Committee – Member
2011-2012 Chief Fellow, Hospital for Special Surgery, New York, NY
2011-2012 Administrative Fellow, Sports Medicine and Shoulder Service, HSS, New York, NY
2011-2012 Medical Oversight Board – Member, Hospital for Special Surgery, New York, NY
2011-2012 House Staff Quality Care Committee – Member, Hospital for Special Surgery, New York, NY
2009-2011 Alumni Affairs Committee – Member, Hospital for Special Surgery, New York, NY
2008-2011 Inpatient Service Line Committee – Member, Hospital for Special Surgery, New York, NY
2006 Medical Student Admissions Committee – Member, Yale School of Medicine, New Haven, CT
2005 Hunger and Homelessness Auction Committee – Chairman, Yale School of Medicine, New Haven, CT
2003-2006 Yale New Haven Physicians Council – Member, Yale School of Medicine, New Haven, CT

TEAM COVERAGE EXPERIENCE

2016-Present Medical Director & Head Team Physician, **Utah Stars NBA G-League Team**, Salt Lake City, UT
2014-Present Medical Director & Head Team Physician, **Utah Jazz NBA Basketball Team**, Salt Lake City, UT
2014-Present Team Physician, **United States Olympic Committee**, Colorado Springs, CO
2014-Present Medical Director & Team Physician, **Salt Lake Bees AAA Baseball Team**, Salt Lake City, UT
2012-Present Team Physician, **University of Utah Athletics**, Salt Lake City, UT
2012-Present Head Team Physician, **Herriman High School**, Herriman, UT
2018-2019 Team Physician, **Utah Stallions AAF Football Team**, Salt Lake City, UT
2011-2012 Asst. Team Physician, **New York Giants NFL Football Team**, New York Football Giants, NY, NY
2011-2012 Asst. Team Physician, **Iona College Athletics**, New Rochelle, NY
2008-2012 Team Physician, **Curtis High School Football**, NY Public School Athletic League, New York, NY

RESEARCH EXPERIENCE

THE HOSPITAL FOR SPECIAL SURGERY, DEPARTMENT OF ORTHOPAEDIC SURGERY, THOMAS P. SCULCO, MD (2006-2012)

Computer assisted navigation technical analysis of anterior and posterior cruciate ligament reconstruction, morphology, isometry and impingement; hip abductor dysfunction and gait abnormalities associated with femoroacetabular impingement

YALE UNIVERSITY SCHOOL OF MEDICINE, DEPARTMENT OF ORTHOPEDIC SURGERY, SECTION OF SPINE SURGERY, JONATHAN N. GRAUER, MD (2002-2006)

Effects of GDF-5, OP-1 and Healos on posterolateral lumbar fusion in a pseudarthrosis rabbit model

YALE UNIVERSITY SCHOOL OF MEDICINE, DEPARTMENT OF ORTHOPEDIC SURGERY, SECTION OF SPINE SURGERY, MANOHAR M. PANJABI, PhD (2001-2006)

Biomechanical manifestations of subclinical cervical spine injury during whiplash in a human cadaveric model using 3-dimensional imaging real-time techniques.

STANFORD UNIVERISTY SCHOOL OF MEDICINE, DEPARTMENT OF SURGERY, SECTION OF VASCULAR SURGERY, CHRISTOPHER K. ZARINS, MD (1994-1997)

Elastin gene expression during aortic wall remodeling in sustained hypertension using a rat model; aortic intimal injury – a comparison of soft-insert vascular clamps to standard steel clamps in the sheep aorta.

UNIVERSITY OF UTAH SCHOOL OF MEDICINE, DEPARTMENT OF SURGERY, SECTION OF VASCULAR SURGERY, LARRY L. KRAISS, MD (1993-1994)

Shear-induced phosphorylation of p70^{s6k} in response to dynamic shear stresses applied in a hemodynamic model

MASTERS & DOCTORAL RESEARCH MENTORSHIP

- 2015-2020 Yuki Uemura Ph.D. Candidate in Exercise and Sport Science. Research Project: The relationship of lower extremity eccentric strength and dynamic balance in female collegiate soccer athletes
- 2014-2016 Brenden Klennert M.S. Masters Candidate in Biomechanical Engineering. Research Project Understanding the Mechanics of Focal Chondral Defects in the Hip: A Framework to Advance Treatment Options
- 2015-2020 Jocelyn Todd Ph.D. Candidate in Biomechanical Engineering. Research Project: Understanding the Mechanics of Focal Chondral Defects in the Hip: A Framework to Advance Treatment Options
- 2015-2020 Hallie Thorp Ph.D. Candidate in Pharmaceutical Chemistry. Research Project: Efficacy of Allogeneic Stem Cells in Chondral Repair Using Cell Seed 3D Matrix Technology

CLINICAL TRIALS

- 2019 **Maak TG.** Prospective Randomized Evaluation of Subchondroplasty Effectiveness, Pain Relief and Economic Value in the Knee (PRESERVE) – Zimmer Biomet

GRANTS

- 2018 **Maak TG,** Todd J, Weiss J. Defining the role of hip arthroscopy in patients with chondral damage using MRI and Optical Coherence Tomography (OCT): A Clinical Study. LS Peery Investigator Grant (\$120,000) – In Progress
- 2018 Anderson AE, **Maak TG,** Foreman K, Aoki SK. Injury and Prevention: Developing a Comprehensive, Quantitative Understanding of Hip Morphometrics and Biomechanics in Collegiate Athletes at Risk for Developing Femoroacetabular Impingement Syndrome. PAC12 Research Grant (\$751,136) – In Progress
- 2016 Okano T, Grainger D, **Maak TG,** Patel A, Brixner D, Kim K, Egami M. Utah's Cell Sheet Engineering Center (CSTEC@Utah): Allogenic cell sheet development for commercial regenerative medicine clinical applications in the USA. USD1M, SCM Lifescience CSTEC Collaboration, Stem cell sheet for regenerative therapy (\$1,735,987) – Completed

- 2015 **Maak TG**, Kapron AL, Weiss J. Understanding the mechanics of focal chondral defects in the hip: A framework to advance treatment options. University of Utah Funding Incentive Seed Grant (\$35,000) – Completed
- 2014 **Maak TG**, Kapron AL, Weiss J. Understanding the mechanics of focal chondral defects in the hip: A framework to advance treatment options. LS Peery Investigator Grant (\$40,000) – Completed
- 2009 **Maak TG**, Ranawat AS, Hoenig J, Coleman S, Hillstrom, HJ, Edelstein J, Bachus SI, Kelly BT. Motion and muscle analysis in individuals with femoroacetabular impingement. MAKO Surgical Corporation Research Grant (\$20,000) – Completed
- 2009 **Maak TG**, Ranawat AS, Hoenig J, Coleman S, Hillstrom, HJ, Edelstein J, Bachus SI, Kelly, BT. Motion and muscle analysis in individuals with femoroacetabular impingement. Internal Sports Medicine Research Grant (\$35,000) – Completed
- 2005 **Maak TG**, Ivancic PC, Tominaga Y, Panjabi MM. Side impact causes multiplanar cervical spine injuries. Doris Duke Clinical Research Fellowship (\$30,000) – Completed
- 2004 **Maak TG**, Tominaga Y, Panjabi MM, Ivancic PC. Alar, transverse and apical ligament strain due to head-turned rear impact. The National Institute of Health Student Research Grant (\$5,000) – Completed
- 1999 **Maak TG**, Xu C, Lee S, Zarins CK Elastin gene expression during aortic wall remodeling in response to sustained hypertension. Howard Hughes Medical Institute Research Grant (\$5,000) – Completed

PEER-REVIEWED PUBLICATIONS

1. Shin J, Adeyemi TF, Hobson T, Peters CL, **Maak TG**. The Bipolar Hip: Combined acetabular and femoral pathomorphology determine hip motion. *Arthroscopy*. 2019 (Submitted)
2. Bailey TL, Stephens AR, Adeyemi TF, Xu Y, Presson AP, Aoki SK, **Maak TG**. Traction time, force and postoperative nerve block significantly influence the development and duration of neuropathy following hip arthroscopy. *Arthroscopy*. 2019. (In Press)
3. Murphy MM, Atkins PR, Kobayashi EF, Anderson AE, **Maak TG**, Nechyporenko A, Aoki SK. Assessment of acetabular morphology utilizing the acetabular anterior center edge angle on modified false-profile radiographs. *Arthroscopy*. 2019. (In Press)
4. Cannamela PC, Quinlan NJ, **Maak TG**, Adeyemi TF, Aoki SK. Knee extension does not reliably reduce acute Type II tibial spine fractures: an MRI evaluation in extension versus resting flexion. *OJSM*. 2019 Jul 18;7(7).
5. Rogers MJ, Adeyemi TF, Kim J, **Maak TG**. Understanding pre-operative demographics and risk factors for revision surgery in patients undergoing hip arthroscopy: A Large database study. *OJSM*. 2019 Jun 26;7(6).
6. Dy C, Osei DA, **Maak TG**, Gottschalk MB, Zhang AL, Maloney MD, Presson AP, O'Keefe RJ. Safety of overlapping inpatient orthopaedic surgery: A Multicenter study. *JBJS-Am*. 2018 Nov 21;100(22):1902-1911.
7. Kapron AL, Karns MR, Aoki SK, Adeyemi TF, Baillargeon EA, Hartley MK, Todd JN, **Maak TG**. Patient-Specific parameters associated with traction in primary and revision hip arthroscopy. *OJSM*. 2018 Nov 19;6(11):2325967118807707
8. Phillippi MT, Khan TL, Adeyemi TF, **Maak TG**, Aoki SK. Extracapsular local infiltration analgesia in hip arthroscopy patients: a randomized, prospective study. *J Hip Preserv Surg*. 2018 Sept 18;5(3):226-232.

9. **Maak TG.** CORR Insights: Intravenous Tranexamic Acid Reduces Postoperative Blood Loss After High Tibial Osteotomy. CORR. 2018 Nov;476(11):2155-2156.
10. Karns MR, Jones DL, Todd DC, **Maak TG**, Aoki SK, Burks RT, Yoo M, Nelson RE, Greis PE. Patient- and Procedure-Specific Variables Driving Total Direct Costs of Outpatient Anterior Cruciate Ligament Reconstruction. OJSM. 2018 Aug 5;5(8):2325967118788543.
11. Jones DL, Philippi MT, **Maak TG**, Aoki SK. Progressive osteoarthritis during pregnancy several years following hip arthroscopy for femoroacetabular impingement. J Orthop. 2018 Mar 27;15(2):475-479.
12. Karns MR, Adeyemi TF, Stephens AR, Beese ME, Aoki SK, Salata MJ, **Maak TG.** Revisiting the Anteroinferior Iliac Spine: Is the Subspine Pathologic? A Clinical and Radiographic Evaluation. CORR. 2018 Jul;276(7):1494-1502.
13. Shin J, **Maak TG.** Arthroscopic Transtibial PCL reconstruction: Surgical Technique and Clinical Outcomes. Curr Rev Musculoskel Med. 2018 Jun;11(2):307-315.
14. Marchand LS, Todd DC, Kellam P, Adeyemi TF, Rothberg DL, **Maak TG.** Is the lesser trochanter profile a reliable means of restoring anatomic rotation after femur fracture fixation? CORR 2018 Jun;476(6):1253-1261.
15. Kapron AL, Aoki SK, Weiss JA, Krych AJ, **Maak TG.** Isolated focal cartilage and labral defects in patients with femoroacetabular impingement syndrome may represent new, unique injury patterns. KSSTA 2018 Feb 13. (EPub)
16. Philippi MT, Kahn TL, Adejemi TF, **Maak TG**, Aoki SK. Extracapsular local infiltration analgesia in hip arthroscopy: a retrospective study. J Hip Preserv surg. 2018 Jan 22;5(1):60-65.
17. Todd JN, **Maak TG**, Ateshian GA, Maas SA, Weiss JA. Hip chondrolabral mechanics during activities of daily living: Role of the labrum and interstitial fluid pressurization. J. Biomech. 2018 Jan 16.
18. Wylie JD, Jenkins P, Aoki SK, **Maak TG.** Computed tomography scans in patients with young adult hip pain carry a lifetime risk of malignancy. Arthroscopy. 2018, Jan; 34(1):155-163.
19. Sanders TL, Pareek A, Johnson NR, Carey JL, **Maak TG**, Stuart MJ, Krych AJ. Nonoperative management of osteochondritis dissecans of the knee: Progression to osteoarthritis and arthroplasty at mean 13-year follow-up. Orthop J Sports Med. 2017 Jul 24;5(7). Epub.
20. Atkins PR, Fiorentino NM, Aoki SK, Peters CL, **Maak TG**, Anderson AE. In vivo measurements of the ischiofemoral space in recreationally active participants during dynamic activities: A High-speed dual fluoroscopy study. AJSM. 2017. Jul 1. Epub
21. Wylie JD, Kapron AL, Peters CL, Aoki SK, **Maak TG.** Relationship between the lateral center-edge angle and 3-dimensional acetabular coverage. Orthop J Sports Med. 2017 Apr 12;5(4).

22. Beebe MJ, Wylie JD, Bodine BG, Kapron AL, **Maak TG**, Mei-Dan O, Aoki SK. Accuracy and reliability of computed tomography and magnetic resonance imaging compared with true anatomic femoral version. *JPO*. 2017 Jun;37(4):e265-e270.
23. Wylie JD, **Maak TG**. Medial closing-wedge distal femoral osteotomy for genu valgum with lateral compartment disease. *Arthrosc Tech*. 2016 Nov 28;5(6):e1357-e1366.
24. Teramoto M, Cross CL, Rieger RH, **Maak TG**, Willick SE. Predictive validity of national basketball association draft combine on future performance. *J Strength Cond Res*. 2017 Jan 20.
25. Klennert BJ, Ellis BJ, **Maak TG**, Kapron AL, Weiss JA. The mechanics of focal chondral defects in the hip. *J Biomech*. 2016 Nov 29.
26. Teramoto M, Cross CL, Cushman DM, **Maak TG**, Petron DJ, Willick SE. Game injuries in relation to game schedules in the National Basketball Association. *J Sci Med Sports*. 2016 Sept 1.
27. Wylie JD, Jones DL, Hartley MK, Kapron AL, Krych AJ, Aoki SK, **Maak TG**. Distal femoral osteotomy for the valgus knee: Medial closing wedge versus lateral opening wedge: A Systematic review. *Arthroscopy*. 2016 Jun 3.
28. **Maak TG**, Wylie JD. Medical Device Regulation: A Comparison of the United States and European Union. *JAAOS*. 2016 Aug;24(8):537-43.
29. Wylie JD, Abtahi AM, Beckmann JT, **Maak TG**, Aoki SK. Arthroscopic and imaging findings after hip dislocation in patients younger than 25 years of age. *J Hip Preserv Surg*. 2015 May 29;2(3):303-9.
30. Hanson JA, Kapron AL, Swenson KM, **Maak TG**, Peters CL, Aoki SK. Discrepancies in measuring acetabular coverage: revisiting the anterior and lateral center edge angles. *J Hip Preserv Surg*. 2015 Jun 13;2(3):280-6.
31. Pareek A, Reardon PJ, **Maak TG**, Levy BA, Stuart MJ, Krych AJ. Long-term outcomes after osteochondral autograft transfer: A Systematic review at mean follow-up of 10.2 years. *Arthroscopy*. 2016 Jun;32(6):1174-84.
32. Brandenburg JB, Kapron AL, Wylie JD, Wilkinson BG, **Maak TG**, Gonzalez CD, Aoki SK. The Functional and structural outcomes of arthroscopic iliopsoas release. *AJSM*. 2016 May;44(5):1286-91.
33. Beckman JT, Wylie JD, Potter MQ, **Maak TG**, Greene TH, Aoki SK. Effect of naproxen prophylaxis on heterotopic ossification following hip arthroscopy: A Double-blind randomized placebo-controlled trial. *JBJS-Am*. 2015 Dec 16;97(24):2032-7.
34. Krych AJ, Nawabi DH, Farshad-Amacker NA, Jones KJ, **Maak TG**, Potter HG, Williams RJ 3rd. Bone marrow concentrate improves early cartilage phase maturation of the scaffold plug: A Comparative magnetic resonance imaging analysis to platelet-rich plasma and control. *AJSM*. 2015 Nov 16.
35. Wylie JD, Hartley MK, Kapron AL, Aoki SK, **Maak TG**. Failures and reoperations after matrix-assisted cartilage repair of the knee: A Systematic review. *Arthroscopy*. 2015 Sep 27.

36. Wylie JD, Beckmann JT, **Maak TG**, Aoki SK. Arthroscopic capsular repair for symptomatic hip instability after previous hip arthroscopy. *AJSM*. 2015 Sep 29.
37. Kullar RS, Kapron AL, Ihnat D, Aoki SK, **Maak TG**. Acetabular paralabral cyst: an unusual cause of femoral vein compression. *Arthrosc Tech*. 2015 Jan 26;4(1):e35-40.
38. **Maak TG**. CORR Insights: Lateral opening-wedge distal femoral osteotomy: Pain relief, functional improvement and survivorship at 5 years. *CORR*. 2015 Feb 3.
39. Wylie JD, Hartley MK, Kapron AL, Aoki SK, **Maak TG**. What is the effect of matrices on cartilage repair? A Systematic review. *CORR*. 2015 Jan 21.
40. Wylie JD, Beckmann JT, **Maak TG**, Aoki SK. Arthroscopic treatment of mild to moderate deformity after slipped capital femoral epiphysis: Intra-Operative findings and functional outcomes. *Arthroscopy*. 2014 Oct 16.
41. Jimenez CL, Beebe MJ, **Maak TG**, Aoki SK. Acute severe hip pain associated with labral calcific deposition disease. *Orthopedics*. 2014 Dec; 37(12):e1137-40.
42. Beckmann JT, Wylie JD, Kapron AL, Hanson JA, **Maak TG**, Aoki SK. The effect of NSAID prophylaxis and operative variables on heterotopic ossification after hip arthroscopy. *AJSM*. 2014 Mar 24.
43. Potter MQ, Sun GS, Fraser JA, Beckmann JT, Swenson JD, **Maak TG**, Aoki SK. Psychological distress in hip arthroscopy patients affects postoperative pain control. *Arthroscopy*. 2014 Feb;30(2):195-201.
44. Schrupf MA, **Maak TG**, Delos D, Jones KJ, Dines DM, Walch G, Dines JS. The management of anterior glenohumeral instability with and without bone loss: AAOS exhibit selection. *JBJS Am*. 2014 Jan 15;96(2):e12.
45. Ozturk BY, **Maak TG**, Fabricant P, Altchek DW, Williams RJ, Warren RF, Cordasco FA, Allen AA. Return to sports after arthroscopic anterior stabilization in patients aged younger than 25 years. *Arthroscopy*. 2013 Dec;29(12):1922-31.
46. Cross MB, Raphael BS, **Maak TG**, Plaskos C, Egidy CC, Pearle AD. Characterization of the orientation of Humphrey's ligament. *Knee*. 2013 May 6;S0968-0160(13). Epub.
47. Delos D, **Maak TG**, Rodeo SA. Muscle injuries in athletes: enhancing recovery through scientific understanding and novel therapies. *Sports Health*. 2013 Jul;5(4):346-52.
48. Kelly BT, **Maak TG**, Larson CM, Bedi A, Zaltz I. Sports hip injuries: assessment and management. *Instructional Course Lectures 01/2013*; 62:515-31.
49. **Maak TG**, Osei D, Delos D, Cross M, Taylor S, Warren RF, Weiland AJ. Peripheral nerve injuries in sports-related surgery: Presentation, evaluation and management. *JBJS*. 2012 Aug 15;94(16):e1211-10.
50. Nam D, **Maak TG**, Raphael BS, Kepler C, Warren RF. Rotator cuff tear arthropathy: Evaluation, diagnosis and treatment. *JBJS*. 2012 Mar 21;94(6):e34.

51. Fabricant P, **Maak TG**, Cross M, Kelly BT. Avoiding complications in hip arthroscopy. *Operative Techniques in Sports Medicine*. 2011. June ; 19(2):108-113.
52. Bedi A, **Maak T**, Walsh C, Rodeo SA, Grande D, Dines DM, Dines JS. Cytokines in rotator cuff degeneration and repair. *JSES*. 2012 Feb;21(2):218-27.
53. **Maak TG**, Fabricant PD, Wickiewicz TL. Indications for meniscus repair. *Clinics in Sports Medicine*. 2012. Jan; 31(1):1-14. Epub 2011 Oct 11.
54. Iriuchishima T, **Maak TG**, Fu F, Bedi A, Pearle AD. ACL Graft Impingement: Letter to the editor. *AJSM*. 2011. Oct; 39(10):NP3-4.
55. Raphael BR, **Maak TG**, Citak M, Suero E, Pearle AD. From wall graft to roof graft: Reassessment of femoral posterior cruciate ligament positioning. *Am J Orthop*. 2011. Sep; 40(9):479-84.
56. Schrupf MS, **Maak T**, Hammoud S, Craig EV. The glenoid in total shoulder arthroplasty. *Current Reviews in Musculoskeletal Medicine*. 2011 Dec;4(4):191-9.
57. Bedi A, **Maak TG**, Musahl V, O'Loughlin PF, Choi D, Citak M, Cross MB, Pearle AD. Effect of tunnel position and graft size in single-bundle ACL reconstruction: An evaluation of time-zero stability. *Arthroscopy*. 2011. Nov;27(11):1543-51. Epub 2011 Jun 25.
58. Cross MB, Fabricant P, **Maak TG**, Kelly BT. Impingement (Acetabular Side). *Clinics in Sports Medicine*. 2011. Apr;30(2):379-90.
59. **Maak TG**, Marx RG, Wickiewicz T. Management of chronic tibial subluxation in the multiple-ligament injured knee. *Sports Medicine and Arthroscopy Review*. 2011 Jun;19(2):147-52.
60. **Maak TG**, Bedi A, Raphael B, Citak M, Suero EM, Wickiewicz T, Pearle AD. Effect of femoral socket position on graft impingement after anterior cruciate ligament reconstruction. *AJSM*. 2011. May;39(5):1018-23.
61. Bedi A, **Maak TG**, Musahl V, Citak M, O'Loughlin PF, Choi D, Pearle AD. Effect of tibial tunnel position on stability of the knee after anterior cruciate ligament reconstruction. Is the tibial tunnel position most important? *AJSM*. 2011 Feb;39(2):366-73.
62. **Maak TG**, Voos JE, Wickiewicz TL, Warren RF. The effect of tunnel widening in revision anterior cruciate ligament reconstruction. *JAAOS*. JAAOS 2010; 18(11):695-706.
63. Bedi A, Musahl V, O'Loughlin PF, **Maak TG**, Dixon P, Citak M, Pearle AD. A comparison of central anatomical single-bundle anterior cruciate ligament reconstruction and double-bundle anterior cruciate ligament reconstruction on pivot-shift kinematics. *AJSM*. 2010 Sep;38(9):1788-94.
64. Voos JE, Musahl V, **Maak TG**, Wickiewicz TL, Pearle AD. Comparison of tunnel positions in single-bundle anterior cruciate ligament reconstructions using computer navigation. *KSSTA*. 2010 Sep;18(9):1282-9.

65. Barker JU, Drakos MC, **Maak TG**, Warren RF, Williams RJ, Allen AA. The effect of graft selection on the incidence of post-operative infection in anterior cruciate ligament reconstruction. *AJSM*. 2010; Feb; 38(2):281-6.
66. **Maak TG**, Ivancic PC, Tominaga Y, Panjabi MM. Side impact causes multiplanar cervical spine injuries. *J. Trauma*. 2007; Dec; 63:1296-307.
67. **Maak TG**, Grauer JN. The contemporary treatment of odontoid injuries. *Spine*. 2006; 31:S53-60; discussion S1.
68. **Maak TG**, Tominaga Y, Panjabi MM, Ivancic PC. Alar, transverse and apical ligament strain due to head-turned rear impact. *Spine*. 2006; 31:632-8.
69. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/recombinant human growth and differentiation factor-5 induces posterolateral lumbar fusion in a New Zealand white rabbit model. *Spine*. 2006; 31:2180-8.
70. Tominaga Y, **Maak TG**, Ivancic PC, Panjabi MM, Cunningham BW. Head-turned rear impact causing dynamic cervical intervertebral foramen narrowing: implications for ganglion and nerve root injury. *J. Neurosurgery Spine*. 2006;4:380-7.
71. Panjabi MM, **Maak TG**, Tominaga Y, Ivancic PC. Dynamic intervertebral foramen narrowing during whiplash. *Spine* 2006;31(5):E128-E34.
72. White AP, **Maak TG**, Prince D, Vaccaro AR, Albert TJ, Hilibrand AS, Grauer JN. OP-1-induced gene expression: Evaluation in a posterolateral spinal pseudarthrosis model. *Spine*. 2006; 31:2550-2555.
73. Panjabi MM, Ivancic PC, **Maak TG**, Tominaga Y, Rubin W. Multiplanar cervical spine injury due to head-turned rear impact. *Spine* 2006;31(4):420-9.
74. Ivancic PC, Panjabi MM, Tominaga Y, Pearson AM, Gimenez SE, **Maak TG**. Spinal canal narrowing during simulated frontal impact. *Eur Spine J*. 2006 Jun;15(6):891-901. Epub 2005 Oct 12.

WEB BASED JOURNAL ARTICLES

1. **Maak TG**, Warren RF, Rodeo S. Meniscal Injury: An Overview. Hospital for Special Surgery. http://www.hss.edu/conditions_meniscal-injuries-overview.asp
2. **Maak TG**, Grauer JG. Bone marrow aspirates for spinal fusion. Orthopedics Hyperguide Online. Orthobiologics & Pharmacologics, Spine Section, Chapter 3. <http://www.ortho.hyperguides.com/>
3. **Maak TG**, Grauer JN. Understanding Whiplash Injuries. Understand Spine Surgery.com. Studies & Articles. http://www.understandspinesurgery.com/whiplash_article.asp

BOOK CHAPTERS

1. Ruzbarsky JJ, **Maak TG**, Rodeo SA. Chapter 94 – Meniscus Injuries. DeLee, Drez and Miller's Orthopaedic Sports Medicine, ed 5. Miller & Thompson editors. 2018

2. Raskind JR, **Maak TG**. Complications of Arthroscopic Knee Surgery. Chapman's Comprehensive Orthopaedic Surgery. Chapman MW, James MA editors. 2017
3. Beckman JT, **Maak TG**, Aoki SK. Hip Arthroscopy: Peritrochanteric Space Access Beckman J, Maak TG, Aoki SK. Hip Arthroscopy and Hip Joint Preservation Surgery. Nho SJ, Leunig M, Larson CM, Bedi A, Kelly BT editors. New York: Springer. 2014
4. **Maak TG**, Tashjian R. Complications of Ulnar Collateral Ligament Reconstruction. Elbow Collateral Ulnar Ligament Injury: A Guide to Diagnosis and Treatment. Dines J, Altchek DW editors. 2014
5. **Maak TG**, Burks BT. Point Counterpoint: Revision with Open Stabilization. Controversies in Shoulder Instability. Dines J, Dodson C editors. 2014.
6. **Maak TG**, Rodeo SA. Meniscus Injuries. DeLee & Drez's Orthopaedic Sports Medicine, 4e. Miller & Thompson editors. 2013
7. **Maak TG**, Byrd JT. Sport Specific Injuries of the Hip: The Contact Athlete: Football / Rugby. Sports Hip Injuries: Diagnosis and Management. Kelly BT, Larson C, Bedi A editors. 2013.
8. Kelly BT, **Maak TG**, Larson C, Bedi A, Zaltz I. Sports Hip Injuries: Assessment and Management. ICL Chapter 62. AAOS ICL 2013.
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ABSTRACTS AND/OR PROCEEDINGS

1. Todd J, **Maak TG**, Weiss J. Focal Chondral Defects in the Dysplastic Hip Cause Activity-and Size-dependent Increases in Stress and Strain, CMBBE, New York City, NY. August 14-16, 2019.
2. Todd J, **Maak TG**, Weiss J. Focal Chondral Defects in the Dysplastic Hip Cause Activity-and Size-dependent Increases in Stress and Strain, SB3C, Seven Springs, PA. June 25-29, 2019.
3. Shin J, Adeyemi TF, Hobson T, Peters CL, **Maak TG**. The Bipolar Hip: Combined Acetabular and Femoral Pathomorphology Determine Hip Motion. AOSSM Annual Meeting, Boston, MA. July 11-14, 2019
4. O'Neill D, Hadley M, Adeyemi TF, Aoki SK, **Maak TG**. The Effect of Venting and Capsulotomy on Traction Force and Hip Distraction in Hip Arthroscopy Patients. AANA Annual Meeting, Orlando, FL. May 2-4, 2019.
5. Todd J, Weiss J, **Maak TG**. Effects of Chondral Defects and Labral Delamination Transient Mechanics of Cartilage in the Hip. BMES Annual Meeting. Atlanta, GA. October 17-20, 2018.
6. Karns M, Kapron AL, Aoki SK, Adeyemi TF, Baillargeon EA, Hartley MK, Todd JN, **Maak TG**. Patient-specific Parameters Associated with Traction Stiffness in Primary and Revision Hip Arthroscopy. AOSSM Annual Meeting. San Diego, CA. July 5-8, 2018
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15. Philippi MT, Kapron AL, **Maak TG**, Aoki SK. Local infiltration analgesia in hip arthroscopy patients: An Extra-capsular approach ISHA, San Francisco, CA. September 15-18, 2016.
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23. Klennert B, Ellis, BJ, **Maak TG**, Kapron A, Kaiser T, Weiss J. Understanding the Mechanics of Focal Chondral Defects in the Hip: A Framework to Advance Treatment Options. BMES, Tampa, FL. October 7-10, 2015.
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58. Cross MB, **Maak TG**, Nam D, Dy C, Delos D, Reinhardt K, Ranawat A, Pearle AD. The meniscal tear in the varus knee: A multidisciplinary approach. American Academy of Orthopaedic Surgery, San Diego, CA February 2011.
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64. Murowski C, O'Loughlin PF, **Maak TG**, Kennedy JK. Anteromedial impingement in the ankle joint: outcomes following arthroscopy. American Academy of Orthopedic Surgery, New Orleans, LA February 2010.
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68. **Maak TG**, Levine DS. Bilateral avascular necrosis of the talus – Müller-Weiss syndrome. 87th Annual Alumni Meeting at the Hospital for Special Surgery Hospital for Special Surgery, New York City, NY, November 2009.
69. **Maak TG**, White AP, Vaccaro AR, Albert TJ, Hilibrand AS, Grauer JN. OP-1-induced gene expression: Evaluation in a posterolateral spinal pseudarthrosis model. Eastern Orthopedic Association, Chesapeake Bay, MD, October, 2005.
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78. White AP, **Maak TG**, Albert TJ, Hilibrand AS, Vaccaro AR, Grauer JN. Osteogenic and angiogenic gene expression upregulated by OP-1 during repair of nicotine-induced rabbit pseudarthroses. Eastern Orthopaedic Association, Cambridge, MD, October 2005

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80. White AP, **Maak TG**, Albert TJ, Hilibrand AS, Vaccaro AR, Grauer JN. Osteogenic and angiogenic gene expression upregulated by OP-1 during repair of nicotine-induced rabbit pseudarthroses. American Academy of Orthopaedic Surgeons, Chicago 2006.
81. White AP, **Maak TG**, Albert TJ, Hilibrand AS, Vaccaro AR, Grauer JN. Osteogenic and angiogenic gene expression upregulated by OP-1 during repair of nicotine-induced rabbit pseudarthroses. OREF New England Resident Research Competition, Boston, MA, May 2006.
82. White AP, **Maak TG**, Albert TJ, Hilibrand AS, Vaccaro AR, Grauer JN. Osteogenic and angiogenic gene expression upregulated by OP-1 during repair of nicotine-induced rabbit pseudarthroses. OREF New York Resident Research Competition, New York, NY, May 2006.
83. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/ rhGDF-5 induced fusion in a rabbit posterolateral lumbar fusion model. The 12th International Meeting on Advanced Spine Techniques, Fairmont Banff Springs, Canada, July, 2005.
84. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/ rhGDF-5 induced fusion in a rabbit posterolateral lumbar fusion model. International Society for the Study of the Lumbar Spine, New York, NY, May 2005.
85. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/ rhGDF-5 induced fusion in a rabbit posterolateral lumbar fusion model. North American Spine Society, Philadelphia, PA, September, 2004
86. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/ rhGDF-5 induced fusion in a rabbit posterolateral lumbar fusion model. Scoliosis Research Society 40th Annual Meeting, Miami, FL, October, 2005.
87. Magit D, **Maak TG**, Hammouri Q, Raphael BS, Albert TJ, Grauer JN. Healos/ rhGDF-5 induced fusion in a rabbit posterolateral lumbar fusion model. Eastern Orthopaedic Association, Cambridge, MD, October 2005.
88. **Maak TG**, Xu C, Lee S, Zarins CK. Elastin expression during aortic wall remodeling in response to sustained hypertension. 87th Clinical Congress of the American College of Surgeons, New Orleans, LA, October 2001.

INVITED ORAL PRESENTATIONS / INSTRUCTIONAL COURSE LECTURES

1. **Maak TG**. ICL 205: Hip Arthroscopy: The Basics – Incorporation of Hip Arthroscopy into Your Sports Practice. AOSSM Annual Meeting. Boston, MA. July 12, 2019
2. **Maak TG**. ICL 103: Hip Arthroscopy – Complex Cases, Revisions and New Frontiers. AOSSM Annual Meeting. Boston, MA. July 11, 2019

3. **Maak TG.** Research, Patient Outcomes and Surgeon Education. Hip Arthroscopy Orthopedic Technology and Innovation Forum, Naples, FL. June 6-8, 2019.
4. **Maak TG.** Pincer Resection Pearls. Hip Arthroscopy Orthopedic Technology and Innovation Forum, Naples, FL. June 6-8, 2019.
5. **Maak TG.** Complex Case Presentations. Hip Arthroscopy Orthopedic Technology and Innovation Forum, Naples, FL. June 6-8, 2019.
6. **Maak TG.** Capsular Management and Extra-Articular Hip Pathology. Hip Arthroscopy Orthopedic Technology and Innovation Forum, Naples, FL. June 6-7, 2019.
7. **Maak TG.** Hip Arthroscopy Level III – Patient Positioning and OR Setup. Arthrex Sports Medicine Fellows Forum. Naples, FL. May 11, 2019.
8. **Maak TG.** Hip Arthroscopy Level III – Portal Placement and Joint Access. Arthrex Sports Medicine Fellows Forum. Naples, FL. May 11, 2019.
9. **Maak TG.** Hip Arthroscopy Level III – Managing the Deficient Labrum: Labral Reconstruction. Arthrex Sports Medicine Fellows Forum. Naples, FL. May 11, 2019.
10. **Maak TG.** Management of Atypical Meniscus Pathology. Arthrex Sports Medicine Fellows Forum. Naples, FL. May 9-10, 2019.
11. **Maak TG.** Injury Prevention in the Athlete: Current Concepts and Future Directions. 3rd Annual Injury Prevention Symposium. United States Olympic Committee / Steadman Philippon Research Institute. Vail, CO. May 1-3, 2019.
12. **Maak TG.** Identifying and Repairing Meniscus Extrusion. Arthrex West Coast Orthopedic Technology and Innovation Forum. La Jolla, SD. April 12-13, 2019
13. **Maak TG.** Criteria to Return to Sport Following Meniscal Surgery. Winter SKS: 2019 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2019
14. **Maak TG.** Does Any of This Work to Preserve the Knee? Winter SKS: 2019 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2019
15. **Maak TG.** Moderator: General Case Presentations / Discussion on Sports Injuries of the Knee. 2019 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2019
16. **Maak TG.** Tendon tears around the hip – Diagnosis and Management. 3rd Annual Sports Medicine Symposium: The Weekend Warrior. United States Olympic Committee / University of Utah. Park City, UT. February 22-23, 2019
17. **Maak TG.** Biologics: What the patient should know, and what the research indicates. Utah State Orthopaedic Society Annual Meeting. Salt Lake City, UT. September 21, 2019.

- 18. Maak TG.** A 19-year-old male with an acute foot inversion injury. 20th Annual AAOS/AOSSM/AANA Sports Medicine Course. Park City, UT. January 30-February 3, 2018.
- 19. Maak TG.** Key Note Lecture: The Painful Hip: FAI, Labrum and Myotendinous Injury. 19th Annual AAOS/AOSSM/AANA Sports Medicine Course. Park City, UT. January 31-February 4, 2018.
- 20. Maak TG.** Biologics: What the Patient Should Know & What the Research Indicates. Utah State Orthopaedic Society Annual Meeting. Salt Lake City, UT. September 21, 2018.
- 21. Maak TG.** Hip and Core Injury in the Elite Athlete. NBA Players Association Annual Meeting. New York, NY. August 5, 2018.
- 22. Maak TG.** ICL 208: Hip Arthroscopy Basics and How to Incorporate into Your Sports Practice. AOSSM Annual Meeting. San Diego, CA. July 6, 2018.
- 23. Maak TG.** ICL 203: Panelists Tell All: Deciphering Fact from Fiction in Hip Arthroscopy. AANA Annual Meeting. Chicago, IL. April 27, 2018
- 24. Maak TG.** Hip Cases Debates: 24-Year-Old Male with CAM FAI – How to Treat the Capsule: Close the Capsule. AANA Annual Meeting. Chicago, IL. April 27, 2018
- 25. Maak TG.** Clinical Case Panel: Complex Cases in Hip Arthroscopy. AANA Annual Meeting. Chicago, IL. April 27, 2018
- 26. Maak TG.** Femoroacetabular Impingement. Sports Medicine Symposium: The Pediatric Athlete. Park City, UT. March 2-3, 2018
- 27. Maak TG.** Examination of the Young Adult with Hip Pain. Winter SKS: 2018 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2018
- 28. Maak TG.** Hip Arthroscopy Indications and Technique. Winter SKS: 2018 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2018
- 29. Maak TG.** Hip Arthroscopy: A Case- Based Presentation: 2018 Shoulder, Knee & Sports Medicine Meeting. Snowbird, UT. February 22-25, 2018
- 30. Maak TG.** Decision-making in the patient with an ACL Tear. 19th Annual AAOS/AOSSM/AANA Sports Medicine Course. Park City, UT. January 31-February 4, 2018.
- 31. Maak TG.** Key Note Lecture: The Painful Hip: FAI, Labrum and Myotendinous Injury. 19th Annual AAOS/AOSSM/AANA Sports Medicine Course. Park City, UT. January 31-February 4, 2018.
- 32. Maak TG.** Advanced Decision-Making and Treatment of Articular Cartilage and Meniscus. AANA APEx Teaching Series. Chicago, IL. August 18-20, 2017
- 33. Maak TG.** ICL 307: Hip Arthroscopy Basics and How to Incorporate into Your Sports Practice. AANA Annual Meeting. Denver, CO. May 20, 2017.

34. **Maak TG.** The Acetabulum: Hammer and Nail or Bring Your Tool Belt? Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. March 4-7, 2015.
35. **Maak TG.** The Labrum: Resect, Repair, or Reconstruct. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. March 4-7, 2015.
36. **Maak TG.** ACL Reconstruction: Getting to the femoral origin. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. January 23-25, 2014.
37. **Maak TG.** The FAI Patient Work-up. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. January 23-25, 2014.
38. **Maak TG.** Femoral Osteoplasty: Pearls & Pitfalls. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. January 23-25, 2014.
39. **Maak TG.** Evaluation of the unstable patellofemoral joint. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. January 23-25, 2014.
40. **Maak TG.** What we learned at Metcalf 2014. Metcalf / AANA Arthroscopic Surgery Seminar. Snowbird, Utah. January 23-25, 2014.
41. **Maak TG.** Knee ligament and meniscus injury. Visiting Professor Lecture. University of Utah School of Medicine. March 21, 2014.
42. **Maak TG.** Knee Preservation – Concepts and Results. Department of Orthopaedics, University of Utah. Salt Lake City, UT. September 18, 2013.
43. **Maak TG.** Cartilage restoration: Decision-making & Treatment Rationale. Department of Rheumatology, University of Utah. Salt Lake City, UT. April 19, 2013.
44. **Maak TG.** Biomechanics of Orthopaedic Surgery. Department of Biomechanics, University of Utah. Salt Lake City, UT. April 12, 2013.
45. **Maak TG.** Knee ligament and meniscus injury. Visiting Professor Lecture. University of Utah School of Medicine. March 13, 2013.
46. **Maak TG.** Knee dislocations & Multiligamentous knee injury. Grand Rounds. University of Utah. August 12, 2012.

OTHER RELEVANT EXPERIENCE

- 2017-Present Associate Editor, Clinical Orthopaedics & Related Research, Philadelphia, PA
2014-Present Journal Reviewer, Journal of Bone & Joint Surgery
2013-Present Journal Reviewer, Journal of Shoulder and Elbow Surgery
2011-Present Journal Reviewer, American Journal of Sports Medicine, Rosemont, IL
2010-Present Journal Reviewer, Clinical Orthopaedics & Related Research, Philadelphia, PA
2009-2012 Journal Reviewer, HSS Journal, New York, NY
2011-2012 Orthopaedic Anatomy Course – Teacher, Weill-Cornell Medical School, New York, NY

2011-2012 The Orthopaedic Physical Examination – Teacher, Weill-Cornell Medical School, New York NY
2009 Journal Consultant, Clinical Orthopaedics & Related Research, Philadelphia, PA
2001-2006 Medical Volunteer, American Red Cross, New Haven, CT
2003-2005 Hunger and Homelessness Auction Volunteer, New Haven, CT
2002-2004 Volunteer Health Sciences Teacher, Roberto Clemente Junior High School, New Haven, CT
1999 Medical Volunteer, Tetecala, Mexico
1998-1999 Medical Volunteer, Arbor Free Clinic, Palo Alto, CA
1995-1998 National Ski Patrolman, Park City Mountain Resort, Park City, UT

CONTINUING MEDICAL EDUCATION

AANA Annual Meeting, Chicago, IL. April 26-28.
AANA Annual Meeting, Denver, CO. May 18-21.
Metcalf Memorial & AANA Winger Meeting, Snowbird, Utah. February 23-26, 2017.
American Academy of Orthopaedic Surgery Annual Meeting, Orlando, FL. March 1-5, 2016.
International Society for Hip Arthroscopy, Cambridge, England, September 23-27, 2015
Metcalf Memorial & AANA Winter Meeting, Snowbird, Utah. March 4-7, 2015.
American Academy of Orthopaedic Surgery Annual Meeting, New Orleans, LA. March 11-15, 2014.
International Society for Hip Arthroscopy, Rio de Janeiro, Brazil, October 9-11, 2014.
American Orthopaedic Society of Sports Medicine Annual Meeting, 2014
Metcalf Memorial & AANA Winter Meeting, Snowbird, Utah. January 23-25, 2014.
American Academy of Orthopaedic Surgery Annual Meeting, Chicago, IL. March 19-23, 2013.
American Orthopaedic Society of Sports Medicine Annual Meeting, Chicago, IL. July 11-14, 2013.
Metcalf Memorial & AANA Winter Meeting, Sun Valley, ID, 2013.
Instructor & Team Leader, Sports Medicine Course: Current Concepts in Sports Medicine, Hospital for Special Surgery, New York, NY, April 21, 2012.
Table Instructor, Fundamentals in Arthroscopy: Arthrex Course, Arthrex, Arthrex Learning Center, New York, NY, November 12th, 2011.
Metcalf Memorial & AANA Winter Meeting, Snowbird, UT, March 24-27, 2011.
American Academy of Orthopaedic Surgery Annual Meeting, San Diego, CA, February 16-19, 2011.
AANA Advanced Arthroscopic Techniques, Chicago, IL, December 3-5, 2009.
AO ASIF Basic Principles and Techniques of Operative Fracture Management Course for Residents, San Diego, CA, August 27-31, 2009.
Twelfth Annual Mount Sinai Musculoskeletal Pathology Course, New York, NY, October 28-30, 2008
87th Annual Alumni Meeting at the Hospital for Special Surgery Hospital for Special Surgery, New York City, NY, November 10-11, 2009.

PROFESSIONAL SOCIETIES

2014 NBA Physicians Association – Active Member
2014 International Society of Hip Arthroscopy – Active Member
2012 American Orthopaedic Association – Active Member
2011 Arthroscopy Association of North America – Active Member
2011 American Orthopedic Society for Sports Medicine – Active Member
2007 American Academy of Orthopaedic Surgeons – Active Member
2007 American College of Surgeons – Active Member
2006 American Medical Association – Active Member
2006 Alpha Omega Alpha Medical Honor Society – Active Member

CERTIFICATION

2015- Board Eligible –Orthopaedic Sports Medicine Subspecialty Certification – ABOS
2014-2024 Board Certified – American Academy of Orthopaedic Surgery (ABOS)
2006-2018 Basic Life Support, American Heart Association
2006-2012 Advanced Cardiac Life Support, American Heart Association
2006 USMLE Step 3
2003 USMLE Step 2
2002 USMLE Step 1

MEDICAL LICENSURES

2012-Present Physician License (#8234797-1205), Utah Department of Professional Licensing (DOPL) – Active
2012-Present Controlled Substances License (#8234797-8905), Utah DOPL – Active
2007-Present DEA License (FM0664018), Federal Drug Enforcement Agency – Active
2007 - 2011 Physician License (#246370-1), New York State Education Department – Expired

SKILLS

Proficient in Microsoft applications (Word, Excel, Powerpoint, Access, Videomaker), SPSS statistical software, Adobe Photoshop, HTML, Visual Basic, Turbo C++, and Turbo Pascal as well as other common applications.