1. Name: Spero G. Karas, MD

2. Office Address: Emory Sports Medicine Complex

1968 Hawks Lane Brookhaven, GA 30329

Tel: 404-778-7204 Fax: 404-778-4324

3. E-mail Address: <u>skaras@emory.edu</u>

4. Citizenship: USA

- 5. Current Titles and Affiliations:
  - a. Academic Appointments

# EMORY UNIVERSITY, Atlanta, GA

Associate Professor of Orthopaedics, September 1, 2009- present Assistant Professor of Orthopaedics, February 1, 2005- August 31, 2009 Director, Orthopedic Sports Medicine Fellowship Program 2006-present

6. Previous Titles and Affiliations:

# UNIVERSITY OF NORTH CAROLINA, Chapel Hill, NC

Assistant Professor, Department of Orthopedic Surgery September 1, 2000- January 31, 2005

Adjunct Assistant Professor, Department of Exercise and Sports Science July 1, 2004-present

Chief, UNC Shoulder and Elbow Service 2002-2004

Team Physician, UNC Tar Heel Athletics 2003-2004

Director, Orthopedic Sports Medicine Fellowship 2001-2004

Upper Extremity Consultant, UNC Tar Heel Athletics 2000-2004

#### 7. Licensures, Specialty Boards, and Certifications:

American Board of Orthopedic Surgery Combined Recertification in Orthopedics and Sports Medicine, October 24, 2013

American Board of Orthopedic Surgery, July 18, 2002

American Board of Orthopedic Surgery Subspecialty Certification in Orthopedic Sports Medicine, November 7, 2008

National Board of Medical Examiners, July 1, 1994 (#428227)

Georgia Board of Medical Examiners (Active), 2004 (#055533) North Carolina Board of Medical Examiners (Inactive), 1997 (#97-0185) South Carolina Board of Medical Examiners (Inctive), 2004 (#26986) Colorado State Board of Medical Examiners (Inactive), 1999 (#37718)

#### 8. Education:

a. Undergraduate: 8/1985- 5/ 1989

UNIVERSITY OF NOTRE DAME, Notre Dame, Indiana B.A. Pre-Professional Studies and Psychology

b. Medical: 8/1989- 5/1993

INDIANA UNIVERSITY SCHOOL OF MEDICINE, Indianapolis, Indiana

- 9. Post-Doctoral Training
- a. DUKE UNIVERSITY MEDICAL CENTER, Durham, North Carolina General Surgery Internship, June 1993 - June 1994 General Surgery Junior Assistant Resident, July 1994 - June 1995 Orthopedic Surgery Residency, July 1995 - June 1999
- b. STEADMAN-HAWKINS CLINIC, Vail, Colorado Sports Medicine, Shoulder, Knee, and Elbow Fellowship, 7/1999 –7/2000
- 10. Clinical Appointments

Atlanta Falcons: Head Team Physician, 2/2011-Present

#### 11. Committees and Positions:

- American Shoulder and Elbow Society Fellowship Exchange Committee, 2012-2016
- Southern Orthopaedic Association Board of Trustees. Term 2010-2012.
- Eastern Orthopaedic Association Georgia State Representative. Term 2010-2012.
- American Orthopaedic Society for Sports Medicine Georgia State Delegate.
  Term 2010-2011.
- AAOS Annual Meeting Organizing Committee- Shoulder and Elbow Section.
  2009-2013 Annual Meetings
- AAOS Multimedia Education Center Subcommittee 2006-2008
- Arthroscopy Association of North America Membership Committee 2005-2007
- Director, Emory University Orthopaedic Sports Medicine and Shoulder Fellowship Program

- Director, University of North Carolina Orthopaedic Sports Medicine and Shoulder Fellowship, 2001- 2004
- Chief, UNC Shoulder and Elbow Service, September 2002 2004
- UNC Musculoskeletal Outcomes Group
- Center for the Study of Retired Athletes Advisory Group
- UNC Medical Center Surgical Services Advisory Committee
- UNC Medical Center Operating Room Policy Committee
- UNC Department of Orthopaedics Operating Room Committee, 2002-2004
- Student Delegate to the Sports Medicine Society of the Indiana State Medical Association 1990-1993
- Indiana University Medical School Academic Standards Committee 1991-1993
- Indiana University Medical Student Council Regional Representative 1989-1991
- American Medical Association Student Section Representative to National Congress, Honolulu (1989) and Chicago (1990)
- Indiana University Medical School Student Surgical Society 1992-1993
- University of Notre Dame Pre-professional Society 1986-1989
- University of Notre Dame Student Senate 1988-1989

#### 12. Editorships and Editorial Boards:

Assistant Editor, Journal of Shoulder and Elbow Surgery 2007- present Editor, Wheeless' Textbook of Orthopaedics (Shoulder Section) 2007-2009

#### 13. Manuscript and Society Reviewer

- Manuscript Reviewer- Journal of Shoulder and Elbow Surgery, 2007- present
- Manuscript Reviewer- American Journal of Sports Medicine, 2002-present
- Moderator- Shoulder and Elbow Session. North Carolina Orthopaedic Association Annual Meeting, Asheville, NC. October 10, 2004.
- Moderator- Rotator Cuff Scientific Session. American Orthopaedic Society for Sports Medicine Annual Meeting, Quebec City, Canada. June, 2004.
- Moderator- Shoulder Instability Scientific Session. American Orthopaedic Society for Sports Medicine Specialty Day; San Francisco, CA. March 13, 2004.
- Moderator- Shoulder Scientific Session. American Orthopaedic Society for Sports Medicine Annual Meeting, San Diego, CA. July, 2003.
- Moderator- Elbow Scientific Session. American Orthopaedic Society for Sports Medicine Specialty Day; New Orleans, LA. February 8, 2003.
- Discusser- Rotator Cuff Scientific Session. American Orthopaedic Society for Sports Medicine 28<sup>th</sup> Annual Meeting; Orlando, FL. July 2, 2002.
- Abstract Reviewer- American Orthopaedic Society for Sports Medicine Annual Meeting and AAOS Specialty Day, 2001-2005
- Moderator, foot and ankle section of the American Orthopaedic Association Annual Residents Meeting. Chapel Hill, NC. Spring, 1999.

# 14. Team Physician:

- Atlanta Falcons NFL, February, 2011-present (Head Team Physician)
- Atlanta Braves, MLB, March, 2017-present
- Atlanta Steam LFL, Jan 2013-present (Head Team Physician)
- Lakeside High School Athletics- 2007-2012
- Team Physician- Georgia Tech University Baseball, February 2007-2012
- Consulting Team Physician- Georgia Tech University Athletics February 2005present
- Consulting Team Physician- Emory University Athletics, February 2005- present
- Consulting Team Physician- Oglethorpe University, 2009- Present
- Consulting Team Physician- Georgia Perimeter College, 2009- Present
- Team Physician, University of North Carolina Varsity Athletics, 2003-2005
- Upper Extremity Consultant- University of North Carolina Athletics 2000-2003
- Denver Broncos Training Camp Physician, July-August, 1999
- National Football League Invitational Combine Team Physician (Denver Broncos) February 2000
- Colorado Rockies Team Physician, Spring Training, March, 2000
- Head Resident Team Physician, Duke University, 1997-1998
- Head Resident Team Physician, North Carolina Central University, 1995-1997

#### 15. Professional Societies:

- NFL Physicians Society, February 2011-present
- American Shoulder and Elbow Surgeons

Active Member 2009-Present

Associate Member 2006-2009

American Orthopedic Association 2006-Present

Emerging Leaders Program 2005-2006

- Diplomat of the American Board of Orthopedic Surgery 2002-present
- Arthroscopy Association of North America 2000-present

Membership Committee 2005-2007

Fellowship Committee 2005-2007

- American Orthopaedic Society for Sports Medicine 2000-present Magellan Society 2005-present
- American Academy of Orthopaedic Surgeons 2000-

Multimedia Education Center Subcommittee 2006-2008

Shoulder and elbow Subcommittee 2009-2010

- Georgia Shoulder and Elbow Society 2006-
- Diplomat of the National Board of Medical Examiners 1994-
- AAOS Political Action Committee 2006
- Hawkins Shoulder Society 2000-
- The Piedmont Orthopaedic Society 1999-
- North Carolina Orthopaedic Society 2000-2004
- North Carolina Shoulder Club 2000-2004

The Notre Dame Orthopaedic Society 2002-

#### 16. Honors and Awards:

- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2017
- "Atlanta's Top Physician's" Atlanta Magazine, July, 2016
- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2015
- "Outstanding Patient Satisfaction Award" (90th percentile nationally for patient satisfaction), July 7, 2014
- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2014
- "Atlanta's Top Physician's" Atlanta Magazine, July, 2013
- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2012
- "Atlanta's Top Physician's" Atlanta Magazine, July, 2011
- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2010
- "Twenty Best Shoulder Specialists to Know" *Becker's Ambulatory Surgery Center Review*, 2009.
- "Atlanta's Top Physician's" *Atlanta Magazine*, July, 2009.
- "America's Top Sports Medicine Specialists for Women". Women's Health Magazine. November, 2008.
- "Atlanta's Top Physician's" Atlanta Magazine, July, 2007.
- Harley and Betty Baxter Southern Orthopaedic Association Resident/Fellow Award 2007
- Skoot Dimon Award for best resident paper (corresponding author). Real Life Orthopaedics Symposium September 21, 2007.
- "America's Top Sports Medicine Specialists". Men's Health Magazine. April, 2007.
- Emerging Leaders Program- American Orthopaedic Association 2005-2006
- American Orthopaedic Society for Sports Medicine Pacific Rim Traveling Fellowship. July 19-August 12, 2005.
- Melvin Post Award Finalist (top 7 abstract), American Shoulder and Elbow Surgeons Annual Meeting, 2004
- Best Resident Paper, North Carolina Orthopaedic Association Annual Meeting, 2004
- "Best Seller" video production, AAOS Instructional Series, 2004
- Orthopaedic Research and Education Foundation Order of Merit, 2001
- American Medical Association Physician's Recognition Award, 2002
- O'Connor Award Finalist (top 10 abstract), Arthroscopy Association of North America Annual Meeting, 2002
- American Academy of Orthopaedic Surgeons 2001 Annual Meeting "Award Winner" for outstanding video production
- NCAA Catholic College Wrestling All-American, 1986
- University of Notre Dame National Monogram Club

• University of Notre Dame London Program (Study Abroad)

## 17. Organization of National and Local Conferences:

Emory Sports Medicine Annual Symposium. Emory University Health Sciences Center, Atlanta, GA; March 24-25, 2018.

Emory Sports Medicine Annual Symposium. Emory University Health Sciences Center, Atlanta, GA; April 25-26, 2017.

Emory Sports Medicine Annual Symposium. Emory John's Creek Hospital, John's Creek, GA; April 22-23, 2016.

Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; October 11, 2015

Emory Sports Medicine Annual Symposium. Marriott Buckhead Hotel, Atlanta, GA; March 20-21, 2015.

Emory University Game Day Athletic Trainers Symposium, Marriott Courtyard Hotel. Atlanta, GA; September 7, 2014

Emory Sports Medicine Annual Symposium. Westin Atlanta Perimeter North, Atlanta, GA; March 28-29, 2014.

Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; September 15, 2013

Combined Emory Sports Medicine and Southeast Athletic Trainers Association Annual Meeting. Crown Plaza Hotel, Atlanta, GA; March 8-10, 2013.

Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; October 4, 2012

Combined Emory Sports Medicine and Southeast Athletic Trainers Association Annual Meeting. Renaissance Waverly Hotel, Atlanta, GA; March 16-18, 2012.

Combined Emory Sports Medicine and Southeast Athletic Trainers Association Annual Meeting. Grand Hyatt Buckhead, Atlanta, GA; March 11-13, 2011.

"Emory Sports Medicine Symposium: An Interactive Approach". The Omni Hotel and Convention Center, Atlanta, GA; March 5-6, 2010.

Hawkins Shoulder Society Annual Meeting. Hilton Head, SC. May 13-16, 2009.

"Emory Sports Medicine Symposium: An Interactive Approach". Buckhead Grand Hyatt Hotel, Atlanta, GA; March 20-21, 2009.

"Southeastern Sports Medicine Symposium". Emory University Hotel and Conference Center, Atlanta, GA. August 1-2, 2008.

"Contemporary Concepts in Shoulder Arthroplasty". Atlanta, GA; May 6 2008.

"The Athlete's Shoulder" Emory Healthcare Sports Medicine Center Continuing Medical Education Program. Atlanta Courtyard Marriott Hotel, Atlanta, GA; March 3, 2006.

"Reverse Shoulder Arthroplasty". H & H Medical Surgical Skills Course. Silverado Hotel, Napa, CA; January 28, 2006.

# 18. Grant Support:

- Cellular Characterization of Rotator Cuff Muscle Atrophy in Patients with Rotator Cuff Tears (Principal Investigator)
- Synthes Corporation, \$37,000. *Biomechanical Evaluation of Locked Subacromial Hook Plating for Acromioclavicular Joint Reconstruction*, 2010 (Principal Investigator)
- Wright Medical, \$15,000. Outcomes of Dermal Allograft Matrix for Irreparable Rotator Cuff Tear, 2009 (Principal Investigator)
- Arthrex Corporation, \$30,000. Yearly Grant for Sports Medicine Fellowship research program.
- Encore Medical, \$85,000. Yearly grant for Emory Sports Medicine and Shoulder Fellowship Program.
- Smith-Nephew Orthopaedics, \$10,000. *Biomechanical Evaluation of Endobutton Distal Biceps Repair*, 2004 (Principal Investigator).
- UNC Medical Alumni Endowment Fund, \$2000. *Biomechanical Testing of Fixation Methods for Biceps Tendon Repair*, 2004 (Co-investigator).
- Holderness Medical Fellowship Program, \$6,000. *Scapular Kinematic Patterns in Individuals with Glenohumeral Internal Rotation Deficit*, 2004 (Coinvestigator).
- Arthrocare Corporation, \$30,000. FDA Multi-center clinical trial: "Thermal Microdebridement for the Management of Lateral Epicondylitis", 2003-2005 (Principal investigator).
- National Institutes of Health T35 Short Term Research Training Grant #DK07386; \$4,161. *Scapular Kinematics in Rotator Cuff Rehabilitation*, 2003 (Co-investigator).

- Encore Orthopaedics, \$25,000. FDA Clinical Trial of the Reverse Shoulder prosthesis, 2002-2003 (Co-investigator).
- Arthrocare Corporation, \$10,000. *Biomechanical Analysis of Human Tendons Treated with Thermal Microdebridement*, 2002 (Principal investigator).
- National Institutes of Health T35 Short Term Research Training Grant #DK07386; \$4,161. *Biomechanical Properties of Braided Soft Tissue Grafts*, 2002 (Co-investigator).
- Arthrocare Corporation, \$3,000. *Clinical Outcome of Patients Treated with the Capsure Thermal Capsulorrhaphy Device*, 2001 (Co-investigator).
- National Institutes of Health T35 Short Term Research Training Grant #DK07386-21; \$3,127. *Cyclic Load to Failure in Three-Peg versus Four-Peg Glenoid Prosthetic Implants*, 2001 (Co-investigator).

# 19. Teaching and Preceptorship:

- Lecturer Emory University Department of Physical Medicine and Rehabilitation 2005-2007
- Established and direct Emory Department of Orthopaedics Sports Medicine Fellowship Program 2005-
- Advisor- UNC Medical Student Sport Medicine Interest Group 2003-2004
- Established and directed UNC Orthopaedic Sports Medicine Fellowship Program 2001-2004
- Established the UNC Shoulder Service 2002-2004
- Established Shoulder Surgery Outcomes Database- UNC Hospitals 2001-2004
- Doctoral Thesis Committees:
  - Stephen M. Goldman Doctoral Thesis Committee: Microfluidic Hydrogels for Osteochondral Tissue Engineering, 2012
- Advisor Georgia Tech Department of Biomedical Engineering Senior Thesis Students:
  - Song Seto. Evaluation of Cathepsin Activity in Injured Rotator Cuff Tissue. 2011-12
  - Helen Yu, Gary Trakham, Vasily Buharin. A Suture Passing Device for Arthroscopic Rotator Cuff Repair, 2006-2007.

# • NIH RO1 Consultant:

Injectable Biomaterials to Modulate Protease Activity in Tendinopathy
 PI: Johnna Temenoff, PhD. 2012

 Resident/Fellow Research Preceptor- Emory University Department of Orthopaedics

Timothy Ghattas MD PGY-6, Spencer Romine MD PGY-6. *Cathepsin Expression in Rotator Cuff Tears*. 2012-2013

Raj Shani MD PGY-6, Blake Shockley MD PGY-6. Functional Movement Screen Score and Injury History Correlation in NFL Combine Participants. 2012

Michael Gottschalk MD, PGY-4. Foot Bolster vs. Lithotomy Position in ACL Reconstruction: A Comparison of Complication Rates. 2012.

Harlan Starr MD, PGY-4; Steven Brantley MD, PGY-6. *Locking Subacromial Hook Plate for AC Joint Separations and Type II-B Distal Clavicle Fractures*. 2011.

Kyle Hammond, PGY-4; Brian Dierckman, PGY-5. *Locking Hook Plate vs. Coracoclavicular Braid for Acromioclavicular Joint Reconstruction*. 2010.

Steven Hamilton MD, PGY-3; Ed Jackson MD, PGY-6. Effect of Axial Drill Angle on Femoral Tunnel Length in ACL Reconstruction, 2009-2010

Albert Pendleton MD, PGY-2. *Arthroscopic Scapulothoracic Debridement-Technique and Results*, 2008.

Brian Dierckman MD, PGY-2. *Medial Row Anchor Strain in Dual Row Rotator Cuff Repair*, 2008-.

Brad Register MD, PGY-4; Kyle Hammond MD, PGY-4. *Outcomes of Allograft Dermal Matrix for the Management of Large and Massive Rotator Cuff Tears*, 2007-2008.

Tim Greene MD, PGY-3. Anatomic Relationships and Neurovascular Risk During Arthroscopic Coracoid Decompression: A Comparison of Intraarticular and Subdeltoid Approaches, 2006-2008.

Brett Sweitzer MD. PGY-4. Torsional Properties of Five Types of Humeral Stems: A Biomechanical Analysis of Loosening and Failure Characteristics, 2006-2008.

Eric McLeod MD, PGY-3. Epidemiology of Kayaking Injuries, 2005-2007.

• Preceptor for Emory University School of Medicine Medical Student Research:

Arun Kumar, MS4. Does Gabapentin Improve Postoperative Pain after ACL Reconstruction? 2017.

Justin Gordon, MSII. Biomechanical Evaluation of Dual Row Rotator Cuff Repair-Implications on the Medial Row, 2008.

Heidi Reich, MSI. Outcomes of Allograft Dermal Matrix for the Management of Large and Massive Rotator Cuff Tears, 2007.

Jay R. Desai, MSII. Anatomic Relationships and Neurovascular Risk During Arthroscopic Coracoid Decompression: A Comparison of Intraarticular and Subdeltoid Approaches, 2006.

• Preceptor for Medical Student NIH funded Summer Research Fellowship:

Emily Chang, MSII. Scapular Kinematic Patterns in Individuals with Glenohumeral Internal Rotation Deficit, 2004.

Arun Aneja, MSII. Suture Plication, Thermal Shrinkage, and Sclerosing Agents: Effects on Rat Patellar Tendon Length and Biomechanical Strength, 2003.

Nicholas Morgan, MS II. Scapular Kinematics in Rotator Cuff Rehabilitation, 2003.

Nilpesh Patel MS II. *Biomechanical properties of Braided Soft Tissue Grafts*, 2002.

Matthew Raynor, MS II. Cyclic Load to Failure in Three-Peg versus Four-Peg Glenoid Prosthetic Implants, 2001.

 Masters Thesis Committees, University of North Carolina Department of Exercise and Sports Science:

Kevin Bunn, BS. The Effects of Muscle Fatigue on the Sensorimotor System and Joint Kinematics of the Shoulder, 2004-2005.

Mike DeStefano, BS. Comparison of Hip and Trunk Kinematics During a Side-Step Cutting Maneuver Between Male and Female Division I Collegiate Soccer Players, 2003-2004.

Jennifer Layton, BS. Scapular Strength and Postural Measurements in Collegiate Swimmers, 2003-2004.

Charles T. Thigpen, MS. *Reliability of Three-Dimensional Scapular Rotation Measures*, 2002-2003.

Michelle Smith, MS. *Three-Dimensional Scapular Kinematics in Shoulder Instability*, 2002-2003.

Jamie R. Birkelo, MS. *Effects of Prolonged Overhead Throwing on Three-Dimensional Scapulohumeral Rhythm in Baseball Pitchers*, 2001-2002.

- Lecturer, Biomedical Engineering Course (BM 212) University of North Carolina- Chapel Hill 2002-2004
- UNC School of Medicine Musculoskeletal Course- Instructor 2000-2004
- UNC Orthopaedic Core Curriculum in Sports Medicine- Instructor 2000-2004
- UNC Orthopaedic Core Curriculum in Upper Extremity- Instructor 2000-2004
- UNC Orthopaedic Core Curriculum in Trauma- Instructor 2000-2004
- UNC Third Year Medical Student Surgical Core Course- Instructor 2000-2004
- UNC Third Year Medical Student Physical Diagnosis Course- Instructor 2000-2004
- Teaching Fellow, Steadman Hawkins Clinic- Coordinated weekly conferences, anatomic dissections, and daily topics for physical therapy and athletic training students, fellows, and attendings. 19990-2000
- Instructor for Duke University Medical Students surgical subspecialty in orthopaedics. 1997
- Teaching resident Duke Division of Orthopaedics, April-June, 1997.
- Supervised medical student research in the Nike Human Performance Lab, Duke University Medical Center, 1997-98.

#### 20. Publications:

#### a. Refereed:

Schwartz A, Karas SG. ""Arthroscopic Repair of an Isolated Teres Minor Tear with Associated Posterior Glenohumeral Ligament Avulsion". JSES Open Access. In press.

Younan Y, Wong PK, Karas S, Umpierrez M, Gonzalez F, Jose J, Singer AD. "The Glenoid Track: A Review of the Clinical Relevance, Method of Calculation and Current

Evidence Behind this Method". Skeletal Radiol. 2017 Dec;46(12):1625-1634. doi: 10.1007/s00256-017-2687-5. Epub 2017 Jun 8.

Premkumar A, Samady H, Slone H, Hash R, **Karas S**, Xerogeanes J. "Liposomal Bupivacaine for Pain Control After Anterior Cruciate Ligament Reconstruction: A Prospective, Double-Blinded, Randomized, Positive-Controlled Trial." *American Journal of Sports Medicine* 2016. Jul;44(7):1680-86

Pecha FQ, Nicolello TS, Xerogeanes JW, Karas S, Labib SA. "Patient Perceptions of Athletic Trainers and Orthopaedic Medical Residents as Primary Clinical Support Staff in Sports Medicine Practice: A Randomized, Double-Blinded Prospective Survey." J Allied Health. 2015. Winter;44(4):225-8.

Tayrose GA, **Karas SG**, Bosco J. "Biceps Tenodesis for Type II SLAP Tears". Bull Hosp Jt Dis (2013). 2015 Jun;73(2):116-21

Seto SP, Parks AN, Qiu Y, Soslowsky LJ, **Karas S**, Platt MO, Temenoff JS. "Cathepsins in Rotator Cuff Tendinopathy: Identification in Human Chronic Tears and Temporal Induction in a Rat Model". Ann Biomed Eng. 2015 Sep;43(9):2036-46.

Gottschalk MB, Ghasem A, Todd D, Daruwalla J, Xerogeanes J, **Karas S**. "Posterior shoulder instability: does glenoid retroversion predict recurrence and contralateral instability? Arthroscopy". 2015 Mar;31(3):488-93.

Gottschalk M, **Karas SG**, Ghattas T, Burdette R. "Biceps Tenodesis for the Management of Type II and IV SLAP Tears". *American Journal of Sports Medicine* 2014. Sep;42(9):2128-35

Hammond K, Dierckman B, Brantley S, **Karas SG**. "Locking Hook Plate vs. Coracoclavicular Braid for Acromioclavicular Joint Reconstruction". *J Surg Orthop Adv*, 2014. Fall;23(3):147-54.

Pecha FQ, Xerogeanes JW, **Karas SG**, Himes ME, Mines BA. "Comparison of the effect of medical assistants versus certified athletic trainers on patient volumes and revenue generation in a sports medicine practice". *Sports Health*. Volume 5 (4), pp 337-9, 2013.

Dierckman BD, Goldstein JL, Hammond KE, **Karas SG**. "A Biomechanical Analysis of Point of Failure During Lateral-Row Tensioning in Transosseous-Equivalent Rotator Cuff Repair". *Arthroscopy*. Volume 28 (1), pp 52-8, 2012.

Hamilton S, Jackson E, **Karas SG**. "Effect of Sagittal Plane Drilling Angle on Femoral Tunnel Length in ACL Reconstruction". *Arthroscopy*. Vol 27 (4), pp 522-525, 2011

Joshi MJ, Karas SG, Padua DA, Thigpen C. "Shoulder External Rotation Fatigue affects Scapular Muscle Activation and Kinematics in Overhead Athletes". *J Athl Train*. 46(4), pp 349-57, 2011.

Hoffler CE, **Karas SG**. Transacromial Erosion of a Locked Subacromial Hook Plate: Case Report and Review of Literature. *J Shoulder Elbow Surg*. Apr;19(3):e12-5. 2010.

Pearsall AW, Madanagopal SG, **Karas SG**. "Transfer of the Latissimus Dorsi as a Salvage Procedure for Failed Debridement of Attempted Repair of Massive Rotator Cuff Tears." *Orthopedics*. Vol 30 (11), pp 943-949, 2007.

Mullis BH, **Karas SG**, Kelley SS. "Characterization of a Consistent Radiographic Finding in Chronic Anterior Cruciate Ligament Deficiency: The Posteromedial Osteophyte". *Am J Orthop*. Vol 36 (9), pp 494-97, 2007.

Krishnan SG, **Karas SG**, Horan MP, Noonan TJ, Hawkins RJ. "Electrothermal Arthroscopic Shoulder Capsulorrhaphy: A MinimumTwo-Year Follow-Up". *American Journal of Sports Medicine*, Vol 35 (9), pp 1884-1888, 2007.

Spang JT, Weinhold PS, **Karas SG**. "A biomechanical comparison of Endobutton vs. suture anchor repair of distal biceps tendon injuries". *J Shoulder Elbow Surg*, Vol 15, pp 509-514, 2006.

Thigpen CA, Padua DA, Morgan N, Kreps C, **Karas SG**. "Scapular kinematics during supraspinatus rehabilitation exercise: A comparison of full-can versus empty-can techniques". *American Journal of Sports Medicine*, Vol 34, pp 644-52, 2006.

Thigpen CA, Gross MT, **Karas SG**, Garrett WE, Yu B. "The repeatability of scapular rotations across three planes of humeral elevation". *Research in Sports Medicine*, 13:181-189, 2005.

Aneja A, **Karas SG**, Weinhold PS, Afshari H, Dahners LE. "Stress Protection Suture, Thermal Shrinkage, and Sclerosing Agents: Effects on Rat Patellar Tendon Length and Biomechanical Strength". *American Journal of Sports Medicine*, Vol 33, No 11, 2005. pp 1729-34.

Spang JT, **Karas SG**. "The HAGL Lesion: An arthroscopic technique for repair of humeral avulsion of the glenohumeral ligaments". *Arthroscopy*, Vol 21, No. 4 (April), 2005. pp 498-502.

Creighton RA, Triantafillopoulos IK, Silver WP, Devkota AC, Weinhold PS, Garrett WE, **Karas SG**. "Thermal Microdebridement does not affect the 'Time Zero' Biomechanical Properties of Human Patellar Tendons". *American Journal of Sports Medicine*, Vol 32, No. 8 (December), 2004. pp 1946-52.

IK Triantafillopoulos, M Maloney, WE Garrett, AJ Banes, **SG Karas**. "Nandrolone Decanoate and Load Increase Remodeling and Strength in Human Supraspinatus Bioartificial Tendons". *American Journal of Sports Medicine*, Vol 32, No 4 (June), 2004. pp 934-43

Luke TA, Rovner AD, **Karas SG**, Hawkins RJ, and Plancher KD. "Volumetric Change in the Shoulder Capsule After Open Inferior Capsular Shift Versus Arthroscopic Thermal Capsular Shrinkage: A Cadaveric Model". *Journal of Shoulder and Elbow Surgery*, Vol 13. No 2, 2004. pp 146-149.

**Karas SG,** Creighton RA, DeMorat GJ. "Glenohumeral volume reduction in shoulder instability: A cadaver analysis of arthroscopic suture plication and thermal capsulorrhaphy". *Arthroscopy*, Vol 20. No. 2 (February) 2004. pp. 179-184.

Albritton MJ, Barnes CJ, Basamania CJ, **Karas SG**. "Relationship of the axillary nerve to the proximal screws of a flexible humeral nail system: An anatomic study". *Journal of Orthopaedic Trauma*, Vol 17. No. 6 (July), 2003. pp. 411-414.

Steadman JR, Miller BS, **Karas SG**, Schlegel TS, Briggs KK, Hawkins RJ. "The microfracture technique in the management of full-thickness chondral lesions of the knee in National Football League players". *The Journal of Knee Surgery*, Vol 16. No. 2 (April), 2003, pp 1-12.

**Karas SG.** "Arthroscopic Rotator Interval Repair and Anterior Portal Closure: An Alternative Technique". *Arthroscopy*, Vol 18, No. 4 (April), 2002. pp. 436-39.

#### b. Non-refereed:

**Karas SG.** "Shoulder Fractures- Commentary". *In Instructional Course Lectures: Shoulder and Elbow2*. Sperling (Ed.) AAOS 2010, pp 132-134.

Larson CM, Almekinders LC, **Karas SG**, Garrett, WE, Jr. "Evaluating and Managing Muscule Contusions and Myositis Ossificans". *Phys Sport Med*. Vol. 30, No. 2 (February), 2002, pp.41-50.

**Karas SG**, Hawkins RJ. "Arthroscopic Bankart Repair with Thermal Capsulorrhaphy: The Role of Immobilization and Rehabilitation", in Sim, FH (ed): *Instructional Course Lectures*. Chicago, IL, American Academy of Orthopaedic Surgeons, 2001, pp 13-15.

# **Published Abstracts:**

Thigpen CA, Padua DA, **Karas SG**, "Reliability of Scapular Anterior/Posterior Tipping for Dynamic Humeral Rotation. *Medicine and Science in Sports & Exercise* 36(5):S300, 2004.

**SG Karas**, IK Triantafillopoulos, M Maloney, KF Bowman, AJ Banes. "Anabolic Steroids Enhance the Remodeling and Mechanical Properties of Bioengineered Human Supraspinatus Tendons". *Journal of Shoulder and Elbow Surgery*. Vol. 13, No. 5(Supplement), p E19.

Thigpen CT, Padua DA, Morgan N, Kreps C, **Karas SG**. "A Three-Dimensional Analysis of Scapular Kinematics in Rotator Cuff Rehabilitation: A Comparison of 'Full Can' vs. 'Empty Can' Exercise Techniques". *Journal of Shoulder and Elbow Surgery*. Vol. 13, No. 5(Supplement), p E49.

**SG Karas**, JR Birkelo, DA Padua, KM Guskiewicz. "Throwing fatigue and scapular kinematics: Implications for injury in overhead athletes". *J Surg Orthop Adv*, Vol 13, No. 2, 2004, p 129. (Title only- for full abstract visit <a href="www.datatrace.com/medical/orthopaedics/">www.datatrace.com/medical/orthopaedics/</a>).

**SG Karas**, IK Triantafillopoulos, M Maloney, WE Garrett, AJ Banes. "Nandrolone Decanoate and Load Increase Remodeling and Strength in Human Supraspinatus Bioartificial Tendons". *J Surg Orthop Adv*, Vol 13, No. 2, 2004, p 129. (Title only-for full abstract visit www.datatrace.com/medical/orthopaedics/).

Birkelo JR, Padua DA, Guskiewicz KM, **Karas SG**. "Prolonged overhead throwing alters scapular kinematics and scapular muscle strength". *Journal of Athletic Training*, Vol. 38, No. 2, Supplement, 2003. p 10.

D.A. Padua, J.R. Birkelo, **S.G. Karas**, K.M. Guskiewicz, C.T. Thigpen. "Reliability of scapulo-humeral rhythm during dynamic shoulder motion". *Official Journal of the American College of Sports Medicine*, Vol. 35, No. 5, Supplement, 2003. p S62.

Creighton RA, Demorat GJ, **Karas SG**, Plancher K, Hawkins, RJ. "Shoulder capsule volumetric change after arthroscopic capsular plication and thermal capsulorrhaphy: A Cadaveric Model". *J South Orthop Assoc*. Vol. 10, No. 2, Summer, 2001.

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# **Textbook Chapters:**

Bookatz GB, Karas SG. "Clavicle Fractures in Athletes". In *Clavicle Injuries- A Case Based Guide to Diagnosis and Treatment*. Groh (Ed.). Springer 2016. *In press*.

Slone H, **Karas SG.** "Arthroscopic Treatment of Acromioclavicular Joint Pathology". In *Operative Techniques in Orthopaedic Surgery* Wiesel (Ed.) Williams and Wilkins 2014.

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**Karas SG.** "Shoulder Fractures- Commentary". *In Instructional Course Lectures: Shoulder and Elbow2*. Sperling (Ed.) AAOS 2010, pp 132-134.

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Greene TR, **Karas SG.** "Arthroscopic Treatment of Impingement. In *Operative Techniques in Orthopaedic Surgery* Wiesel (Ed.) Williams and Wilkins 2010.

Decker R, **Karas SG.** "Muscle Transfers for Management of Massive Rotator Cuff Tears. In *Rotator Cuff Deficiency of the Shoulder*. Frankle (Ed.) Thieme, 2008.

Spang JT, **Karas SG**. Multidirectional Instability. In: *Clinical Sports Medicine*. Johnson and Mair (Eds.) Mosby, 2005.

Banes AJ, Tsuzaki M, Wall M, Qi J, Yang X, Bynum DK, **Karas SG**, Hart D, Nation A, Fox AM, Almekinders LC. "The Molecular Biology of Tendinopathy: Signaling and Response Pathways in Tenocytes". In: *Basic Science of Tendon Pathology*. Woo S, Renstrom P, Arnoczky (Eds.) IOC Press, 2005.

**SG Karas**, IK Triantafillopoulos, M Maloney, KF Bowman, AJ Banes. "Anabolic Steroids Enhance the Remodeling and Mechanical Properties of Bioengineered Human Supraspinatus Tendons". In: *Surgery of the Shoulder and Elbow: An International Perspective*. JD Zuckerman (Ed.) AAOS, 2005.

Thigpen CT, Padua DA, Morgan N, Kreps C, **Karas SG**. "A Three-Dimensional Analysis of Scapular Kinematics in Rotator Cuff Rehabilitation: A Comparison of 'Full Can' vs. 'Empty Can' Exercise Techniques". In: *Surgery of the Shoulder and Elbow: An International Perspective*. JD Zuckerman (Ed.) AAOS, 2005.

## **Video & Multimedia:**

"Hard Knocks- Atlanta Falcons". Home Box Office (HBO) television series. August 19, 2014.

Pendleton A, **Karas SG.** "Scapulothoracic Bursectomy and Superomedial Scapular Border Resection". AAOS Electronic Media Presentation. 76<sup>th</sup> Annual Meeting of the AAOS. Las Vegas, NV; February 25-28, 2009.

**Karas SG,** Pearsall AW, Labib S, Madanagopal S. "Latissimus Dorsi Transfer for the Management of Massive Rotator Cuff Tear". AAOS Electronic Media Presentation. 73<sup>rd</sup> Annual Meeting of the AAOS. Chicago, IL; March 22-26, 2006.

Labib S, Kimmerly S, **Karas SG**. Lateral Ankle Reconstruction for the Mangement of Ankle Instability". 73<sup>rd</sup> Annual Meeting of the AAOS. Chicago, IL; March 22-26, 2006.

**Karas SG,** Tasto J, Warne JB. "New Horizons in Radiofrequency: Minimally Invasive Treatments for Chronic Tendon and Fascia Injuries". Cogent Communications Webcast November 10, 2004. May be viewed at: <a href="https://www.tendonwebcast.com/">www.tendonwebcast.com/</a>

**Karas SG.** "Early US Experience of Reverse Shoulder Arthroplasty: Indications, Technique, and Results". AAOS Electronic Media Presentation. 72<sup>nd</sup> Annual Meeting of the AAOS. Washington, DC; February 23-27, 2005.

**Karas SG.** "Shock Away Tendonitis". Ivanhoe Medical Website, Spring 2004.

**Karas SG**. "Arthroscopic suture plication, interval closure, and thermal capsulorrhaphy for the treatment of shoulder instability". AAOS Electronic Media Presentation. American Academy of Orthopaedic Surgeons 70<sup>th</sup> Annual Meeting. New Orleans, LA; February 5-9, 2003.

**Karas SG.** "A Less Invasive Approach to Shoulder Instability". NBC Health Matters. Television syndication nationally, Summer 2003.

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**Karas SG**. "Arthroscopic suture plication, interval closure, and thermal capsulorrhaphy for the treatment of shoulder instability". American Academy of Orthopaedic Surgeons Videotape Library Series, 2003

**Karas SG**, Hawkins RJ, Steadman JR. "Repair of Injuries to the Extensor Mechanism: Quadriceps and Patellar Tendons." American Academy of Orthopaedic Surgeons Videotape Library Series, 2001.

**Karas SG.** "Shoulder Arthritis module". LeadingMD Web Page. www.leadingMD.com.

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# **Product Design:**

DJO Surgical Turon Shoulder Prosthesis System February 2005- 2010

# **Visiting Professor**:

**Karas, SG.** "Management Options for Irreparable Rotator Cuff Tears". 39<sup>th</sup> Annual Raney Lectureship, University of North Carolina Department of Orthopaedics. Chapel Hill, NC; May 22, 2010.

- **Karas, SG.** "Management of Large and Massive Rotator Cuff Tears". Vail Valley Medical Center/Steadman Hawkins Clinic Orthopaedic Grand Rounds. Vail, CO; April 5, 2010.
- **Karas, SG.** "Arthroscopic Management of Shoulder Instability". University of Western Ontario Department of Orthopaedics. London, Ontario; July 24, 2009.
- **Karas, SG.** "The Rotator Cuff Deficient Shoulder: Current Concepts". University of Kentucky Orthopaedic Grand Rounds. Lexington, KY; February 15, 2006.
- **Karas SG**. "Reverse Shoulder Arthroplasty". University of Utah Department of Orthopaedics. Salt Lake City, UT; October 17, 2005.
- **Karas, SG.** "Surgical Management of the Massive Rotator Cuff Tear: Repair, Reconstruction, and Arthroplasty". Asklepion of Voula Department of Orthopaedics. Athens, Greece. November 22, 2003.
- **Karas, SG.** "Surgical Aspects of Anterior Shoulder Reconstruction". University of Athens Department of Orthopaedics, KAT Hospital. Athens, Greece. November 23, 2003.
- **Karas, SG.** "Contemporary Mangement of Massive Rotator Cuff Tears". Emory University Department of Orthopaedics Grand Rounds. Atlanta, GA; June 3, 2003.
- **Karas, SG.** "Arthroscopic Management of Shoulder Instability". University of South Alabama Department of Orthopaedics Visiting Lecture Series. March 23, 2002.
- **Karas, SG.** "Management of Large and Massive Rotator Cuff Tears". University of South Alabama Department of Orthopaedics Grand Rounds. March 24, 2002.

# **Peer Review Presentations/ Invited Lectureships/ CME Course Faculty:**

Premkumar A, Godfrey W, Gottschalk MB, **Karas SG**, Xerogeanes, JW, Samady H. "Adductor Canal Block vs. Femoral Nerve Block in Anterior Cruciate Ligament Reconstruction: Randomized Control Trial". American Academy of Orthopedic Surgeons Annual Meeting. New Orleans, LA. February 7, 2018.

**Karas SG**, Malasitt P. "Revision Rottor Cuff Repair". Orthopedic Surgery Emerging Technologies Annual Course, Las Vegas, NV. December 9, 2017.

- **Karas SG**. "Management of Type II SLAP Lesion in a Scholastic Softball Player". Orthopedic Surgery Emerging Technologies Annual Course, Las Vegas, NV. December 9, 2017.
- **Karas SG.** "Performance, Recovery, and Prevention- What Can We Learn from the NFL?". Chinese Olympic Committee Symposium. Georgia State University, Atlanta, GA; November 3, 2017.
- **Karas SG**. "Anatomic Rotator Cuff Repair: Tips for Getting it Right". Smith Nephew Shoulder Symposium. New Orleans, LA. October 27, 2017.
- **Karas SG**. "Management of Distal Third Clavicle Fractures". Georgia Shoulder and Elbow Society Annual Meeting. Atlanta, GA. April 22, 2017.
- **Karas SG**. "Management of Complex Clavicle Non-Union". Georgia Shoulder and Elbow Society Annual Meeting. Atlanta, GA. April 22, 2017.
- **Karas SG.** "Posterior Shoulder Instability: How I Examine the Shoulder". Orthopedic Surgery Emerging Technologies Annual Course, Las Vegas, NV. December 8, 2016.
- **Karas SG.** "Case Reports in Rotator Cuff Repair". Southern Orthopedic Association Annual Meeting. Naples Grande Hotel, Naples, FL. July 29, 2016.
- **Karas SG**, Haigler R. "Controversies in Rotator Cuff Repair". Southern Orthopedic Association Annual Meeting. Naples Grande Hotel, Naples, FL. July 29, 2016.
- **Karas SG.** "Performance, Recovery, and Prevention- What Can We Learn from the NFL?". Emory Sports Medicine Annual Symposium. Emory John's Creek Hospital, John's Creek, GA; April 23, 2016.
- **Karas SG.** "Functional Movement Screen and Prior Injury in NFL Combine Athletes". Emory Sports Medicine Annual Symposium. Emory John's Creek Hospital, John's Creek, GA; April 23, 2016.
- **Karas SG.** Shoulder Instability- State of the Art in 2016". Emory Sports Medicine Annual Symposium. Emory John's Creek Hospital, John's Creek, GA; April 22, 2016.
- **Karas SG.** "Rotator Cuff- Surgical Decision Making". Emory Sports Medicine Annual Symposium. Emory John's Creek Hospital, John's Creek, GA; April 22, 2016.
- **Karas SG.** "Why You Need the Hook Plate". Arthroscopy Association of North America Specialty Day. Orlando, FL. March 5, 2016.

- Slone HS, **Karas SG**, Shani RH, East M, Barfield WR. "Functional Movement Screen and Prior Injury in National Football League Combine Athletes". American Orthopedic Society of Sports Medicine Specialty Day. Orlando, FL. March 5, 2016
- **Karas SG.** "You Have to Use the Hook Plate". Orthopedic Surgery Emerging Technologies Annual Course. The Bellagio Hotel, Las Vegas, NV. December 4, 2015.
- **Karas SG**. "Sports Performance and Injury Prevention". Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; October 11, 2015 (Course Director)
- **Karas SG.** "Patellofemoral and Meniscus Review". AOSSM/AAOS Combined Board Review Course. The Westin Chicago River North, Chicago, IL; August 14, 2015
- **Karas SG.** "Not Even Anatomy Will Save You: Why You Need the Hook Plate" Arthroscopy Association of North America Specialty Day. Las Vegas, NV. March 28, 2015.
- **Karas SG.** "The Subacromial Hook Plate for AC Joint Reconstruction". Instructional Course Lecture 229, American Academy of Orthopedic Surgeons Annual Meeting. Las Vegas, NV. March 25, 2015.
- Gillis D, **Karas SG**, Slone HS, Lauzon M, Shani RH, East M, Barfield WR. "Functional Movement Screen and Prior Injury in National Football League Combine Athletes". NFL Physician Society Annual Meeting. Indianapolis, IN. February 19, 2015
- **Karas SG**. "Injury Management and Return to Play in the In Season Athlete". Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; September 7, 2014 (Course Director)
- **Karas SG.** "Patellofemoral and Meniscus Review". AOSSM/AAOS Combined Board Review Course. The Fairmont Hotel, Chicago, IL; August 7, 2014
- **Karas SG.** "Shoulder Injuries: A Primer for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 25, 2014.
- **Karas SG.** "Examination of the Shoulder". Emory Sports Medicine 7<sup>th</sup> Annual Meeting. Westin Atlanta Perimeter Hotel, Atlanta, GA; March 29, 2014. (Course Director)
- **Karas SG.** "ACL Injury Prevention". Emory Sports Medicine 7<sup>th</sup> Annual Meeting. Westin Atlanta Perimeter Hotel, Atlanta, GA; March 29, 2014. (Course Director)

- **Karas SG.** "Anterior Shoulder Instability in the Athlete". Emory Sports Medicine 7<sup>th</sup> Annual Meeting. Westin Atlanta Perimeter Hotel, Atlanta, GA; March 29, 2014. (Course Director)
- **Karas SG.** "Management of ACL Injury- Prevention to Repair". Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; September 15, 2013 (Course Director)
- **Karas SG.** "Surgical Management of the Rotator Cuff Deficient Shoulder". American Society of Shoulder and Elbow Therapists Annual Meeting. Mercer University, Atlanta, GA; August 17, 2013
- **Karas SG.** "Physical Examination of the Shoulder". American Society of Shoulder and Elbow Therapists Annual Meeting. Mercer University, Atlanta, GA; August 17, 2013
- **Karas SG.** "Patellofemoral and Meniscus Review". AOSSM/AAOS Combined Board Review Course. The Westin Chicago Riverfront, Chicago, IL; August 10, 2013
- **Karas SG.** "Bicep Tenodesis for the Management of Type II SLAP Lesions". Hawkins Society Annual Meeting. Omni Hotel. Hilton Head, SC. May 17, 2013.
- **Karas SG.** "Shoulder Injuries: Diagnosis and Management for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 26, 2013.
- **Karas SG.** "Best of The AAOS Annual Meeting- Shoulder and Elbow". American Academy of Orthopedic Surgeons Annual Meeting, Chicago, IL; March 22, 2013.
- **Karas SG.** "Examination of the Shoulder". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 6<sup>th</sup> Annual Meeting. Crown Plaza Hotel, Atlanta, GA; March 9, 2013. (Course Director)
- **Karas SG.** "ACL Injury Prevention". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 6<sup>th</sup> Annual Meeting. Crown Plaza Hotel, Atlanta, GA; March 9, 2013. (Course Director)
- **Karas SG.** "Return to Play After Shoulder Injury". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 6<sup>th</sup> Annual Meeting. Crown Plaza Hotel, Atlanta, GA; March 8, 2013. (Course Director)
- **Karas SG,** Ghattas T. "Injury Management and Return to Play in the In Season Athlete". Emory University Game Day Athletic Trainers Symposium, Emory Orthopedics and Spine Center, Atlanta, GA; October 4, 2012 (Course Director)

- **Karas SG,** Romine SE. "An Evidence Based Approach for the Management of Shoulder Instability". Georgia Shoulder and Elbow Society Annual Meeting. Callaway Gardens, GA. April 28, 2012.
- **Karas SG,** Shockley BE. "Biceps Labral Complex Injuries: A Changing Paradigm for the Management of SLAP Lesions". Georgia Shoulder and Elbow Society Annual Meeting. Callaway Gardens, GA. April 28, 2012.
- **Karas SG.** "Shoulder Injuries: Diagnosis and Management for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 27, 2012.
- **Karas SG.** "Best of The AAOS Annual Meeting- Shoulder and Elbow". American Academy of Orthopedic Surgeons Annual Meeting, San Francisco, CA; March 10, 2012.
- **Karas SG.** "Examination of the Shoulder". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 5<sup>th</sup> Annual Meeting. Renaissance Waverly Place Hotel, Atlanta, GA; March 17, 2012. (Course Director)
- **Karas SG.** "Anterior Shoulder Instability in the Athlete". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 5<sup>th</sup> Annual Meeting. Renaissance Waverly Place Hotel, Atlanta, GA; March 16, 2012. (Course Director)
- **Karas SG.** "Allografts in the Management of Irreparable Rotator Cuff Tear". Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 15, 2012.
- **Karas SG.** "Outcomes of Reverse Total Shoulder Arthroplasty". Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 14, 2012.
- **Karas SG.** "ACL Reconstruction- The Anatomic Approach". Steadman Hawkins Clinic of the Carolinas Annual Sports Medicine Symposium. Greenville, SC. June 10, 2011.
- **Karas SG.** "Evidence Based Approach to the Management of Anterior Shoulder Instability". Steadman Hawkins Clinic of the Carolinas Annual Sports Medicine Symposium. Greenville, SC. June 10, 2011.
- **Karas SG.** "Allograft Bridge Technique for Irreparable Rotator Cuff Tear". Hawkins Society Annual Meeting. Hilton Head, SC. May 6, 2011.
- **Karas SG.** "Shoulder Injuries: Diagnosis and Management for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 29, 2011.

- **Karas SG.** "Examination of the Shoulder". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 4<sup>th</sup> Annual Meeting. Renaissance Waverly Place Hotel, Atlanta, GA; March 17, 2012. (Course Director)
- **Karas SG.** "Anterior Shoulder Instability in the Athlete". Combined Emory Sports Medicine and Southeast Athletic Trainers Association 4th Annual Meeting. Renaissance Waverly Place Hotel, Atlanta, GA; March 11, 2011. (Course Director)
- **Karas SG.** "Allografts in the Management of Irreparable Rotator Cuff Tear". Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 22, 2011.
- **Karas SG.** "Subacromial Hook Plate for Clavicle and AC Joint Injury". Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 23, 2011.
- **Karas SG.** "Outcomes of Reverse Total Shoulder Arthroplasty". Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 23, 2011.
- **Karas SG.** Presidential Keynote Speaker: "Treatment Options for the Irreparable Rotator Cuff Tear". North Carolina Orthopaedic Association Annual Meeting. Asheville, NC; October 9, 2010.
- **Karas SG.** "Rationale for Dual Row Rotator Cuff Repair". Notre Dame Orthopaedic Society Annual Meeting. September 10, 2010.
- **Karas SG.** "Biomechanical Comparison of Reverse Shoulder Implant Designs- Medial Offset Concept". Hawkins Shoulder Society. Hilton Head, SC; May 14, 2010.
- **Karas SG.** "Shoulder Injuries: Diagnosis and Management for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 24, 2010.
- **Karas SG.** "Is Dual Row Rotator Cuff Repair the Answer?". Georgia Shoulder and Elbow Society Annula Meeting. Atlanta, GA; April 24, 2010.
- **Karas SG.** "Treatment of Biceps-Labral Complex Injuries". Georgia Shoulder and Elbow Society Annual Meeting. Atlanta, GA; April 24, 2010.

- Reverse Shoulder Arthroplasty Instructional Course Lecture. American Academy of Orthopaedic Surgeons Annual Meeting. New Orleans, LA; March 12, 2010.
- Symposium Moderator: Rotator Cuff I. American Academy of Orthopaedic Surgeons Annual Meeting. New Orleans, LA; March 11, 2010.
- **Karas SG**. "Traumatic Anterior Shoulder Instability". Emory Healthcare 3<sup>rd</sup> Annual Sports Medicine Symposium, Atlanta, GA; February 4, 2010. (Course Director)
- **Karas SG**. "Injuries to the Rotator Cuff and Biceps Tendon". Emory Healthcare 3<sup>rd</sup> Annual Sports Medicine Symposium, Atlanta, GA; February 4, 2010. (Course Director)
- **Karas SG**. "Labral Injuries- Diagnosis and Imaging". Emory Healthcare 3<sup>rd</sup> Annual Sports Medicine Symposium, Atlanta, GA; February 4, 2010. (Course Director)
- **Karas SG.** Allografts in the Management of Irreparable Rotator Cuff Tear. Current Solutions In Shoulder and Elbow Surgery Annual Meeting. Renaissance International Hotel, Tampa, Fl. January 9, 2010.
- **Karas SG**. Treatment Algorithms for Massive Rotator Cuff Tear. 46th Argentine Association for Orthopaedics and Traumatology Annual Meeting. Salta, Argentina. December 1, 2009.
- **Karas SG**. Dual Row Rotator Cuff Repair: Is it the Answer? 46th Argentine Association for Orthopaedics and Traumatology Annual Meeting. Salta, Argentina. December 2, 2009.
- **Karas SG**. Arthroscopic Management of Anterior Shoulder Instability. 46th Argentine Association for Orthopaedics and Traumatology Annual Meeting. Salta, Argentina. December 2, 2009.
- **Karas SG**. Reverse Shoulder Arthroplasty: Pearls and Pitfalls. 46th Argentine Association for Orthopaedics and Traumatology Annual Meeting. Salta, Argentina. December 3, 2009.
- **Karas SG**. "Double Bundle ACL Reconstruction: How Do You Decide in 2009?" Southern Orthopaedic Association Annual Meeting. Amelia Island, Florida; July 19, 2009.
- **Karas SG**. "Dual Row Rotator Cuff Repair is Superior to Single Row Repair". Southern Orthopaedic Association Annual Meeting. Paradise Island, Bahamas; July 16, 2009.

- **Karas SG**. "Elbow Scientific Session and Case-Based Reports" (Moderator). American Orthopaedic Society for Sports Medicine Annual Meeting. Keystone, CO; July 11, 2009.
- **Karas SG**. "Double Bundles and Double Rows: Belt and Suspenders or is Two Really Better Than One?" (Moderator) Eastern Orthopaedic Association Annual Meeting. Paradise Island, Bahamas; June 18, 2009.
- **Karas SG**. "Ulnar Collateral Ligament Injuries in the Throwing Athlete". Emory Healthcare 2<sup>nd</sup> Annual Sports Medicine Symposium, Atlanta, GA; March 21, 2009.
- **Karas SG**. "Traumatic Anterior Shoulder Instability". Emory Healthcare 2<sup>nd</sup> Annual Sports Medicine Symposium, Atlanta, GA; March 20, 2009.
- **Karas SG**. "Injuries to the Rotator Cuff and Biceps Tendon". Emory Healthcare 2<sup>nd</sup> Annual Sports Medicine Symposium, Atlanta, GA; March 20, 2009.
- **Karas SG**. "Labral Injuries- Diagnosis and Imaging". Emory Healthcare 2<sup>nd</sup> Annual Sports Medicine Symposium, Atlanta, GA; March 20, 2009.
- **Karas SG**. "Injuries to the Throwing Athlete's Shoulder". Emory Healthcare 2<sup>nd</sup> Annual Sports Medicine Symposium, Atlanta, GA; March 20, 2009.
- Reverse Shoulder Arthroplasty Instructional Course Lecture. American Academy of Orthopaedic Surgeons Annual Meeting. Las Vegas, Nevada; February 26, 2009.
- **Karas SG,** Register B. "Biologic Augmentation of Rotator Cuff Repairs". AAOS/ASES Combined Shoulder Course. Orthopaedic Learning Center; Rosemont, IL; January 23, 2009.
- **Karas SG** "Dual Row Rotator Cuff Repair" AAOS/ASES Combined Shoulder Course. Orthopaedic Learning Center; Rosemont, IL; January 22, 2009.
- **Karas SG.** "Management of Rotator Cuff Arthropathy: Reverse Shoulder Arthroplasty". Notre Dame Orthopaedic Society. South Bend, IN; October 3, 2008.
- **Karas SG.** "Technical Pearls in Reverse Shoulder Arthroplasty". DJO Surgical Reverse Shoulder Arthroplasty Series. Las Vegas, NV; September 12, 2008.
- **Karas SG.** "Recent Advances in the Management of Rotator Cuff Tears". Southeastern Sports Medicine Symposium. Atlanta, GA; August 1-2, 2008.
- **Karas SG.** "Innovative Concepts for SLAP Lesions". Southeastern Sports Medicine Symposium. Atlanta, GA; August 1-2, 2008.

- Karas SG. "Ulnar Collateral Ligament Injuries: Diagnosis and Management". Southeastern Sports Medicine Conference. Carrolton, GA; July 26, 2008.
- **Karas SG.** "Advanced Pathologies in Reverse Shoulder Arthroplasty". Advanced Shoulder Training Institute. Austin, TX; May 12, 2008.
- **Karas SG.** "Technique, Pearls, and Pitfalls of Reverse Shoulder Prosthetic Replacement." Donjoy Orthopaedic Surgical Reverse Shoulder Arthroplasty Seminar. Vista, CA; May 30, 2008
- **Karas SG.** "Shoulder Injuries: Diagnosis and Management for the Primary Care Physician". Emory Orthopaedics Primary Care Symposium. Atlanta, GA; April 26, 2008.
- **Karas SG.** "Acromioclavicular Joint Injuries: Pathophysiology and Management". Georgia Shoulder and Elbow Society Annula Meeting. Atlanta, GA; April 19, 2008.
- **Karas SG,** Kercher J. "Pathophysiology of Shoulder Instability and Normal Anatomic Variants". AAOS/ASES Combined Shoulder Course. Orthopaedic Learning Center; Rosemont, IL; January 19, 2008.
- **Karas SG,** Ugbo J. "Glenoid Resurfacing in Total Shoulder Arthroplasty". Orthopaedic Education Summit. Park City, UT. January 5, 2008.
- **Karas SG**. "Reverse Shoulder Arthroplasty: Avoiding Complications". Encore Surgical Skills Symposium. Las Vegas, NV; October 26, 2007.
- **Karas SG.** Reconstruction of Massive Rotator Cuff Tears: Transfer, Graft, or Arthroplasty?" Notre Dame Orthopaedic Society, South Bend, IN; August 30, 2007.
- **Karas, SG.** "Pearls and Avoiding Pitfalls in Reverse Shoulder Arthroplasty". AAOS Orthopaedic Learning Center. Rosemont, IL; June 29, 2007.
- **Karas SG.** "Training and Injury Avoidance for the Peachtree Road Race". Big Peach Running Store. Atlanta, GA. June 21, 2007.
- **Karas SG.** "Hemicap Resurfacing for Chondral Defects of the Humeral Head". Savannah, GA. May 14, 2007.
- **Karas SG**. "Arthroscopic Skills for the Sales Representative". Conmed Linvatec Sales Force Training. Largo, FL. April 16, 2007.

- **Karas SG**, Martin MK. "Outcomes of Arthroscopic Instabilty Reconstruction". Second Annual Georgia Shoulder and Elbow Society Spring Meeting. Atlanta, GA; March 24, 2007.
- Karas SG. "Bone Deficiencies in Shoulder Instability". Second Annual Georgia Shoulder and Elbow Society Spring Meeting. Atlanta, GA; March 24, 2007.
- Karas SG. "Management of Multidirectional Instability in the Athlete". Southeastern Conference Shoulder Symposium. Atlanta, GA. March 9, 2007.
- **Karas SG,** Ugbo J. "Glenoid Resurfacing in Total Shoulder Arthroplasty". Orthopaedic Education Summit. Bachelor Gulch, CO. January 6, 2007.
- **Karas SG.** "Indications and Decision Making in Reverse Shoulder Arthroplasty", Georgia Shoulder and Elbow Society Meeting, Sea Island, GA; October 14, 2006.
- **Karas SG.** Arthroscopic Rotator Cuff Repair" Linvatec Lunchtime Symposium. Eurpean Shoulder and Elbow Society. September 21, 2006.
- **Karas SG.** "Arthroscopic Instability Reconstruction". Linvatec Lunchtime Symposium. Eurpean Shoulder and Elbow Society. September 21, 2006.
- **Karas, SG.** "Reverse Shoulder Arthroplasty for the Management of Rotator Cuff Arthropathy". Encore Medical Central Region Training Symposium. Minneapolis, MN; May 6, 2006,
- **Karas SG,** Greene T. "Pathophysiology of Rotator Cuff Disease". Georgia Shoulder and Elbow Society Annual Meeting. Atlanta, GA; April 29, 2006.
- **Karas SG,** Bullington A. "Rotator Cuff Repair- Outcomes of Operative Treatment". Georgia Shoulder and Elbow Society Annual Meeting. Atlanta, GA; April 29, 2006.
- **Karas SG.** "Reverse Total Shoulder Arthroplasty". Encore Medical Western Region Training Symposium. Phoenix, AZ; April 22, 2006.
- **Karas SG.** "Diagnosis and Management of Common Shoulder Problems". Emory Orthopaedics and Spine Center Primary Care Symposium. Atlanta, GA; April 1, 2006.
- **Karas SG**. "Biomechanics and Kinematics of the Shoulder Girdle". Emory Healthcare 1<sup>st</sup> Annual Athlete's Shoulder Symposium, Atlanta, GA; March 3, 2006.
- **Karas SG.** "Anterior Shoulder Instability in the Athlete". Emory Healthcare 1<sup>st</sup> Annual Athlete's Shoulder Symposium, Atlanta, GA; March 3, 2006.

- **Karas SG**. "The Rotator Cuff and Biceps Tendon". Emory Healthcare1st Annual Athlete's Shoulder Symposium, Atlanta, GA; March 3, 2006.
- **Karas SG**. "Shoulder Injuries in the Throwing Athlete". Emory Healthcare 1<sup>st</sup> Annual Athlete's Shoulder Symposium, Atlanta, GA; March 3, 2006.
- **Karas, SG.** "Reverse Shoulder Arthroplasty for the Management of Rotator Cuff Arthropathy". Encore Medical Central Region Training Symposium. Minneapolis, MN; February 25, 2006
- **Karas, SG.** "Reverse Shoulder Arthroplasty for the Management of Rotator Cuff Arthropathy". Cape Cod Hospital Orthopaedic Grand Rounds. Cape Cod, MA; February 22, 2006
- **Karas, SG.** "Technical Issues in Avoiding Complications During Reverse Shoulder Arthroplasty". Orthopaedic Learning Center. Rosemont, February 17, 2006.
- **Karas SG.** "Reverse Total Shoulder Arthroplasty". Encore Medical Western Region Training Symposium. Napa, CA; January 28, 2006.
- **Karas SG.** "New Frontiers in the Management of Chronic Tendinopathy". Nashville, TN; January 23, 2006.
- **Karas, SG.** "Complications and Complex Issues in Reverse Shoulder Arthroplasty". Encore Total Joint Arthroplasty Symposium. Bachelor Gulch, CO; January 6, 2006.
- **Karas, SG.** "Technical Issues in Avoiding Complications During Reverse Shoulder Arthroplasty". Orthopaedic Learning Center. Rosemont, IL; December 9, 2005.
- **Karas, SG.** "Technical Issues in Avoiding Complications During Reverse Shoulder Arthroplasty". Orthopaedic Learning Center. Rosemont, IL; October 24, 2005.
- **Karas, SG.** "Reverse Shoulder Arthroplasty for the Management of Rotator Cuff Arthropathy". Healthstream Total Joint Arthroplasty Symposium. Laguna Niguel, CA; October 1, 2005
- **SG Karas.** "Surgical management of large and massive rotator cuff tears: Arthroscopy to Arthroplasty" Philippines University Hospital Orthopaedic Grand Rounds. Manilla, The Philippines. August 11, 2005.

- **SG Karas.** "Arthroscopic management of shoulder instability". Philippine Orthopaedic Society for Sports Medicine Traveling Fellows Symposium. Manilla, The Philippines. August 10, 2005.
- **SG Karas.** "Surgical management of large and massive rotator cuff tears: Arthroscopy to Arthroplasty" City wide orthopaedic grand rounds. Auckland, New Zealand. August 4, 2005.
- **SG Karas.** "Current concepts in the arthroscopic management of shoulder instability". University of Otago Medical School Grand Rounds. Christchurch, Canterbury, New Zealand. August 3, 2005.
- **SG Karas**, JR Birkelo, DA Padua, KM Guskiewicz. "Prolonged overhead throwing alters scapular kinematics and scapular muscle strength". Brisbane Orthopaedics Grand Rounds. Brisbane, QNL, Australia, July 30, 2005.
- **Karas SG.** "Orthopaedic Research 'Three Minute Drill'". Brisbane Orthopaedic Clinic Research Symposium. Brisbane, QNL, Australia, July 27, 2005.
- **Karas SG,** Thigpen CA, Padua DA. "A Three Dimensional Analysis of Shoulder Kinematics in Patients with Multidirectional Shoulder Instability". Royal North Shore Hospital. Sydney, NSW, Australia; July 26, 2005.
- **Karas, SG.** "Technical Issues in Avoiding Complications During Reverse Shoulder Arthroplasty". Orthopaedic Learning Center. Rosemont, IL; June 28, 2005
- **Karas, SG.** "Reverse Shoulder Arthroplasty: Indicatins, Technique, and Outcomes". Encore Medical Total Joint Arthroplasty Symposium. Amelia Island, FL; June 3, 2005
- **Karas, SG.** "Diagnosis and Management of Shoulder Pathology: A Primer for Primary Care Specialists". Emory University Department of Orthopaedics Musculoskeletal Course. Atlanta, GA; April 16, 2005
- **Karas, SG.** "Reverse Shoulder Arthroplasty". Total Joint Arthroplasty Symposium. Bachelor Gulch, CO; January 6, 2005.
- **Karas, SG**. "Reverse Shoulder Prosthetic Replacement: Indications, Technique, and Early Outcomes". Interurban Orthopaedic Society Annual Meeting. Chapel Hill, NC; October 1, 2004.
- **Karas, SG.** "Meeting Today's Challenges in a Sports Medicine Practice". American Orthopaedic Society for Sports Medicine Young Sports Medicine Specialist's Workshop. Quebec City, Canada; June 24, 2004.

- **Karas, SG.** "Management of Chronic Tendinopathy: The Role of Surgical Intervention". ArthroCare Lecture Series. Ft. Meyers, FL; April 1, 2004.
- **Karas, SG.** "Diagnosis and Management of Shoulder Pathology in the Overhead Athlete". Mid Atlantic Athletic Trainers Association Annual Meeting. Virginia Beach, VA, May 22, 2004.
- **Karas, SG**. "Managing Knee Arthritis in the Active Patient: Alternatives to Arthroplasty" University of North Carolina Athletic Trainers Course. Chapel Hill, NC, February 7, 2004.
- **Karas, SG**. "Glenoid bone Impingement as a cause of Glenosphere Dissociation in Reverse Shoulder Arthroplasty- A Case Report". Encore Orthopaedics Reverse Shoulder Prosthesis Study Group. Tampa, FL, January 14, 2004.
- **Karas, SG.** "Rotator Interval Closure: Indications and Techniques". International Symposium in Athletic Injuries: Prevention and Treatment. Larissa, Greece; November 29, 2003.
- **Karas, SG.** "The Role of Thermal Capsulorrhaphy in Multidirectional Instability". International Symposium in Athletic Injuries: Prevention and Treatment. Larissa, Greece; November 29, 2003.
- **Karas, SG.** "Management of Chronic Tendinopathy: The Role of Surgical Intervention". ArthroCare Lecture Series. Denver, CO; August 21, 2003.
- **Karas, SG.** "Arthroscopic Repair of the Labrum and Rotator Cuff". Arthrex Bioskills Course. Raleigh, NC; August 9, 2003.
- **Karas, SG.** "Management of Chronic Tendinopathy: The Role of Surgical Intervention". ArthroCare Lecture Series. Dallas, Texas; August 7, 2003.
- **Karas, SG.** "Relevant Anatomy of the Rotator Cuff Interval". American Orthopaedic Society for Sports Medicine Annual Meeting. San Diego, CA; July 23, 2003.
- **Karas, SG.** "Arthroscopic Shoulder Reconstruction: Focus on Labral Repair". UNC Department of Orthopaedics Bioskills Lab. Raleigh, NC; June 21, 2003.

**Karas, SG.** "Pearls and Pitfalls in the Arthroscopic Management of Glenohumeral Instability" Combined UNC-Duke Regional Sports Medicine Symposium. Durham, NC. May 15, 2002.

**Karas, SG.** Hurst, JD; Garrett, WE. "The Role of the Trail Foot in Cutting Skills". Duke Medical Center "K Lab" Human Performance Center Symposium. Durham, NC; April 26, 1999.

**Karas, SG**. "Gunshot Wounds to the Musculoskeletal System: Ballistics, Physiology, and Management". Duke University Medical Center Continuing Education Trauma Symposium, Durham, NC; March 9, 1999.

**Karas, SG**. "Gunshot Wounds to the Musculoskeletal System: Ballistics, Physiology, and Management". Duke University Medical Center Continuing Education Trauma Symposium, Durham, NC; May 14, 1997.

# **Presentations:**

#### **International:**

**Karas SG.** "Management of Massive Rotator Cuff Tear". 4<sup>th</sup> Panhellenic Congress of the Hellenic Association of Arthroscopy. Rethymno, Crete. June 24, 2011.

**Karas SG.** "Rationale for Dual Row Rotator Cuff Repair". 4<sup>th</sup> Panhellenic Congress of the Hellenic Association of Arthroscopy. Rethymno, Crete. June 24, 2011.

**Karas SG**. Allograft Reconstruction of Irreparable Rotator Cuff Tears With Allograft Human Dermal Matrix. 46th Argentine Association for Orthopaedics and Traumatology Annual Meeting. Salta, Argentina. December 2, 2009.

Sweitzer BA, **Karas SG**, Brown S, Hawkins RJ, Frankle MA, Watson KC, Schlegel TF, Mighell MA. "Torsional Properties of Five Types of Humeral Stems: A Biomechanical Analysis of Loosening and Failure Characteristics". Southern Orthopaedic Association-Eastern Orthopaedic Association Annual Combined Meeting. Victoria, British Columbia. August 4, 2007.

- Spang JT, Weinhold PS, **Karas SG.** "Biomechanical Evaluation of Endobutton Distal Biceps Repair". European Society for Shoulder and Elbow Annual Meeting, Athens, Greece. September 20-24, 2006.
- **Karas SG**. Early US Experience of Reverse Total Shoulder Arthroplasty. European Society for Shoulder and Elbow Annual Meeting, Athens, Greece. September 20-24, 2006.
- Birkelo JR, Padua DA, Guskiewicz KM, **Karas SG**. "Prolonged overhead throwing alters scapular kinematics and scapular muscle strength". European Society for Shoulder and Elbow Annual Meeting, Athens, Greece. September 23, 2006.
- Thigpen CA, Padua DA, **Karas SG**. A 3-Dimensional Analysis of Scapular Kinematics in Patients with Multidirectional Instability. European Society for Shoulder and Elbow Annual Meeting, Athens, Greece. September 22, 2006.
- **Karas SG**, Triantafillopoulos IK, Maloney M, Banes AJ. "The Effects of Anabolic Steroids on the Intra and Intercellular Properties of Bioengineered Supraspinatus Tendons. Australian Orthopaedic Association Sports Medicine Continuing Orthopaedic Education. Melbourne, Victoria, Australia; July 22, 2005.
- **SG Karas**, IK Triantafillopoulos, M Maloney, KF Bowman, AJ Banes. "Anabolic Steroids Enhance the Remodeling and Mechanical Properties of Bioengineered Human Supraspinatus Tendons". 9th International Congress on Surgery of the Shoulder. Washington, DC; May 2-5, 2004.
- Thigpen CT, Padua DA, Morgan N, Kreps C, **Karas SG**. "A Three-Dimensional Analysis of Scapular Kinematics in Rotator Cuff Rehabilitation: A Comparison of 'Full Can' vs. 'Empty Can' Exercise Techniques". 9th International Congress on Surgery of the Shoulder. Washington, DC; May 2-5, 2004.
- **Karas SG.** "Optimizing Outcomes in Rotator Cuff Repair: The Role of Anabolic Agents". 1<sup>st</sup> Annual International Symposium for the Treatment of Complex Shoulder Problems. Tampa, FL; January 17, 2004.
- Triantafillopoulos IK, Banes AJ, Elfervig MK, Garrett WE, **Karas SG.** "Nandrolone Decanoate and Loading Enhance Intercellular Calcium Signaling in Human Supraspinatus Tendon Cells." Hellenic Association of Orthopaedic Surgery and Traumatology. Athens, Greece. October 16, 2003.
- Triantafillopoulos IK, Banes AJ, Bowman KF, Garrett WE, **Karas SG.** "The Synergistic Effect of Anabolic Steroid and Load on the Matrix Remodeling and Biomechanical

Properties of Bio-artificial Tendons." Hellenic Association of Orthopaedic Surgery and Traumatology. Athens, Greece. October 16, 2003.

Birkelo JR, Creighton RA, Padua DA, Guskiewicz KM, **Karas SG**. "A Three Dimensional Analysis of Fatigue Effects on Scapular Kinematics in the Overhead Athlete". 4<sup>th</sup> Academic Congress of the Asian Shoulder Association. Seoul, Korea; October 31, 2002

Creighton RA, Demorat GJ, **Karas SG**. "Evaluating Volume Reduction in Arthroscopic Shoulder Instability Surgery: A Comparison of Three Techniques". 4<sup>th</sup> Academic Congress of the Asian Shoulder Association. Seoul, Korea; November 1, 2002.

# **National:**

Gottschalk M, Ghattas T, Burdette R, **Karas SG**. "Biceps Tenodesis for the Management of Superior Labral Tears". American Orthopedic Society for Sports Medicine Annual Meeting. Seattle, WA. July 11, 2014.

Ghattas T, Gottschalk M, Burdette R, **Karas SG**. "Biceps Tenodesis for the Management of Type II and IV SLAP Tears". Arthroscopy Association of North America Annual Meeting. Hollywood, FL. May 1, 2014.

Starr HM, Brantley S, **Karas SG.** "Hook Plate Fixation for AC Separations and Type IIB Distal Clavicle Fractures". American Shoulder and Elbow Surgeons Closed Meeting. Sea Island, GA. October 12, 2012. (poster)

Hammond K, Dierckman B, Brantley S, **Karas SG**. "Locking Hook Plate vs. Coracoclavicular Braid for Acromioclavicular Joint Reconstruction". American Orthopedic Society for Sports Medicine Annual Meeting. Baltimore, MD. July 12-15, 2012. (poster)

Thigpen CA, Padua DA, **Karas SG**. A 3-Dimensional Analysis of Scapular Kinematics in Patients with Multidirectional Instability. Piedmont Orthopaedic Meeting. Naples, FL; May 13, 2006.

**Karas SG,** Pearsall AW, Labib S, Madanagopal S. "Latissimus Dorsi Transfer for the Management of Massive Rotator Cuff Tear". Piedmont Orthopaedic Meeting. Naples, FL; May 13, 2006.

**Karas SG**. Early US Experience of Reverse Total Shoulder Arthroplasty. Piedmont Orthopaedic Meeting. Naples, FL; May 12, 2006.

Brandon K, **Karas SG**. Total Shoulder Arthroplasty: Normal and Abnormal Findings (Scientific Exhibit). American Roentgen Ray Society Annual Meeting, Vancouver, Canada; April 30-May 5, 2006.

Thigpen CA, Padua DA, **Karas SG**. A 3-Dimensional Analysis of Scapular Kinematics in Patients with Multidirectional Instability. AAOS 73<sup>rd</sup> Annual Meeting, Chicago, IL; March 22, 2006.

Thigpen CA, Padua DA, Xu NM, **Karas SG.** Comparison of Serratus and Trapezius Muscle Activation between Subjects With and Without Shoulder MDI (Poster). AAOS 73<sup>rd</sup> Annual Meeting, Chicago, IL; March 22-26, 2006.

Thigpen CA, Padua DA, **Karas SG.** Three Dimensional Coordination Analyses of Scapulohumeral Motion between Subjects With and Without Multidirectional Shoulder Instability". American Physical Therapy Association Combined Sections Meeting, San Diego, CA; Feb 2006.

Joshi MA, Padua DA, Thigpen CA, Guskiewicz KM, **Karas SG**. "Posterior Rotator Cuff Fatigue affects Scapular Muscle Activation during a Diagonal Movement Task". American Physical Therapy Association Combined Sections Meeting. San Diego, CA; February 3, 2006.

Wellman D, Weinhold PS, Raynor M, **Karas SG**. "Three Versus Four Pegged Glenoid Components: A Biomechanical Evaluation Of Fixation Stability With Cyclical Loading" 20<sup>th</sup> Annual International Society of Bioengineering and 29<sup>th</sup> Annual American Society of Bioengineering Combined Meeting. Cleveland, OH; 2005.

Thigpen CA, Padua DA, **Karas SG**. "A Three Dimensional Analysis of Shoulder Kinematics in Patients with Multidirectional Shoulder Instability". American Orthopaedic Society for Sports Medicine 30<sup>th</sup> Annual Meeting. Keystone, CO; July 15, 2005.

Distefano M, Van Doren A, Prentice WE, Padua DA, **Karas SG**. "Gender Differences in Trunk and Hip Kinematics and Muscle

Activation During a Cutting Task: A Comparison of Elite Soccer Athletes". American Orthopaedic Society for Sports Medicine 30<sup>th</sup> Annual Meeting. Keystone, CO; July 15, 2005.

- Thigpen CA, Xu NM, **Karas SG**, Padua DA. "Comparison of Serratus Anterior and Upper Trapezius Muscle Activation between Subjects With and Without Multidirectional Shoulder Instability" American Physical Therapy Association Combined Sections Meeting. New Orleans, LA; February 27, 2005.
- Clarke JP, Hermsen K, Renner JB, **Karas SG**. "Feasibility of MR virtual arthroscopy in demonstrating intra-articular pathology: Arthroscopic and imaging correlates". Society of Skeletal Radiology 2005 Annual Meeting, Orlando, FL; March 14, 2005.
- DiStefano MJ, Padua DA, Blackburn T, Prentice W, **Karas SG**. "Gender Differences in Trunk Kinematics During a Cutting Task: An Evaluation of Elite Soccer Players". AAOS 72<sup>nd</sup> Annual Meeting, Washington, DC; February 24, 2005.
- Aneja A, **Karas SG**, Weinhold PS, Afshari H, Dahners LE. "Stress Protection Suture, Thermal Shrinkage, and Sclerosing Agents: Effects on Rat Patellar Tendon Length and Biomechanical Strength". International Symposium on Ligaments & Tendons V, Washington, DC. Feb.19, 2005.
- **Karas SG**, Goitz HT, Martineau PA, Sell. "ACL Injuries and the Female Athlete: Prevention, Gender Differences and Reconstruction". AAOS Communications Committee Media Briefing. AAOS 72<sup>nd</sup> Annual Meeting, Washington, DC; February 24, 2005.
- Banes AJ, **Karas SG**. "Regulated MMP Production in Response to IL-1b in Tenocytes" (Poster). Biomedical Engineering Society Annual Meeting. Philadelphia, PA; October 13-16, 2004.
- **SG Karas**, IK Triantafillopoulos, M Maloney, KF Bowman, AJ Banes. "Anabolic Steroids Enhance the Remodeling and Mechanical Properties of Bioengineered Human Supraspinatus Tendons". Fourth Biennial AAOS/ASES Meeting. Monterey, CA; October 14, 2004.
- Thigpen CT, Padua DA, Morgan N, Kreps C, **Karas SG**. "A Three-Dimensional Analysis of Scapular Kinematics in Rotator Cuff Rehabilitation: A Comparison of 'Full Can' vs. 'Empty Can' Exercise Techniques" (Poster). American Orthopaedic Socity for Sports Medicine 29<sup>th</sup> Annual Meeting. Quebec City, Canada; June 24-27, 2004.
- Thigpen CA, Padua DA, **Karas SG**. "Reliability of scapula anterior/posterior tipping for dynamic humeral rotation". American College of Sports Medicine 51<sup>st</sup> Annual Meeting, Indianapolis, IN, 2004.

- Bensen CV, Spang JT, **Karas SG**. "The HAGL Lesion: An arthroscopic technique for repair of humeral avulsion of the glenohumeral ligaments". Linvatec Residents and Fellows Course. Fort Meyers, FL; May15, 2004.
- Thigpen CT, Padua DA, **Karas SG**. "Repeatability of Scapular Rotations for Three Planes of Humeral Elevation". American Physical Therapy Association Combined Sections Meeting. Nashville, TN; February 4-8, 2004.
- **SG Karas**, IK Triantafillopoulos, M Maloney, WE Garrett, AJ Banes. "Effect of Anabolic Steroids on the Biomechanical and Matrix Remodeling Properties of Human Supraspinatus Bioartificial Tendons". Hawkins Shoulder Society Annual Meeting. Hilton Head, SC; May 16, 2003.
- **SG Karas**, JR Birkelo, DA Padua, KM Guskiewicz. "Prolonged overhead throwing alters scapular kinematics and scapular muscle strength". Hawkins Shoulder Society Annual Meeting. Hilton Head, SC; May 16, 2003.
- **SG Karas**, IK Triantafillopoulos, M Maloney, WE Garrett, AJ Banes. "Nandrolone Decanoate and Load Increase Remodeling and Strength in Human Supraspinatus Bioartificial Tendons". Piedmont Orthopaedic Society Annual Meeting. Sea Island, GA; May 10, 2003.
- Birkelo JR, Padua DA, Guskiewicz KM, **Karas SG**. "Prolonged overhead throwing alters scapular kinematics and scapular muscle strength". National Athletic Trainers' Association 54th Annual Meeting, St. Louis, MO; 2003.
- D.A. Padua, J.R. Birkelo, K.M. Guskiewicz, **S.G. Karas**, C.T. Thigpen. "Reliability of scapulo-humeral rhythm during dynamic shoulder motion". American College of Sports Medicine 50th Annual Meeting, San Francisco, CA; 2003.
- Creighton RA, Triantafillopoulos IK, Silver WP, Devkota AC, Weinhold PS, Garrett WE, **Karas SG**. "Thermal Microdebridement of Human Tendons: A Biomechanical Study" (Poster). American Orthopaedic Socity for Sports Medicine 29<sup>th</sup> Annual Meeting. San Diego, CA; July 20, 2003.
- Creighton RA, Triantafillopoulos IK, Silver WP, Devkota AC, Weinhold PS, **Karas SG**. "Biomechanical Integrity of Human Tendons Treated with Thermal Microdebridement: An *Ex Vivo* Analysis". Poster. Arthroscopy Association of North America 22<sup>nd</sup> Annual Meeting. Phoenix, AZ; April 24-27, 2003.

Bowman KF, Triantafillopoulos IK, Yang Xi, **Karas SG**, Banes AJ. "Cyclic tensile strain and anabolic steroid increase Connexin 43 expression and signaling in avian tendon cells". Poster. 49<sup>th</sup> Annual Meeting of the Orthopaedic Research Society. New Orleans, LA; February 2-3, 2003.

**Karas SG**. "Arthroscopic suture plication, interval closure, and thermal capsulorrhaphy for the treatment of shoulder instability". Video. American Academy of Orthopaedic Surgeons 70<sup>th</sup> Annual Meeting. New Orleans, LA; February 5-9, 2003.

Triantafillopoulos IK, **Karas SG**, Bowman KF, Yang X, Evans GA, Banes AJ. "Anabolic steroid and load enhance matrix remodeling and biomechanical strength of bio-artificial tendons". Poster. 49<sup>th</sup> Annual Meeting of the Orthopaedic Research Society, New Orleans, LA; February 2-3, 2003.

Hawkins RJ, Krishnan SG, **Karas SG**, Horan MP, Kim YK, Noonan TJ. "Electrothermal arthroscopic shoulder capsulorrhaphy: A minimum two-year follow-up". Scientific exhibit. American Academy of Orthopaedic Surgeons 70<sup>th</sup> Annual Meeting. New Orleans, LA; February 5-9, 2003.

Birkelo JR, Padua DA, Guskiewicz KM, **Karas SG**. "Effects of prolonged overhead throwing on scapular kinematics: A Computerized, electromagnetic, three dimensional analysis". American Orthopaedic Society for Sports Medicine Specialty Day. New Orleans, LA; February 8, 2003.

Patel N, Silver W, Weinhold P, **Karas S.** "A Biomechanical Analysis of Braided Soft Tissue Grafts" (Poster). International Symposium on Ligaments and Tendons III. New Orleans, LA; February 1, 2003.

Krishnan SG, Hawkins RJ, **Karas SG**, Horan MP, Noonan TJ. "Electrothermal arthroscopic shoulder capsulorrhaphy: A minimum two-year follow-up". American Orthopaedic Socity for Sports Medicine 28<sup>th</sup> Annual Meeting. Orlando, FL; June 30, 2002.

Hawkins RJ, Krishnan SG, **Karas SG**, Horan MP, Kim YK, Noonan TJ. "Electrothermal arthroscopic shoulder capsulorrhaphy: A minimum two-year follow-up". American Orthopaedic Association Annual Meeting. Victoria, BC; June 2, 2002.

**Karas SG,** Creighton RA, Demorat GJ. "Glenohumeral volume reduction in shoulder instability: A cadaveric analysis of thermal capsulorrhaphy and arthroscopic suture plication". Arthroscopy Association of North America 21<sup>st</sup> Annual Meeting. Washington, DC; April 27, 2002.

- **Karas SG**, Weinhold P, Patel NP. "Braiding does not affect the tensile properties of quadrupled tendon ACL grafts". Arthroscopy Association of North America 21<sup>st</sup> Annual Meeting. Washington, DC; April 25-28, 2002.
- Demorat GJ, Creighton A, **Karas SG**. "Shoulder capsule volumetric change after arthroscopic capsular plication and thermal capsulorrhaphy: A Cadaveric Model". American Orthopaedic Society for Sports Medicine 27<sup>th</sup> Annual Meeting, Keystone, CO; June 28-July 1 2001.
- **Karas SG**, Booth E, Spooner K, Decker M, Torry M. "Proprioceptive and kinesthetic differences in anterior cruciate reconstructed knees: Effects of graft choice and postoperative stability". American Orthopaedic Society for Sports Medicine 27<sup>th</sup> Annual Meeting, Keystone, CO; July 1, 2001.
- Steadman JR, **Karas SG**, Hawkins RJ. "The Microfracture Technique for Resurfacing Full Thickness Chondral Lesions of the Knee: Experience in National Football League Players". American Orthopaedic Society for Sports Medicine 27<sup>th</sup> Annual Meeting, Keystone, CO; June 30- July 1, 2001.
- **Karas SG**, Noonan TJ, Horan ME, Hawkins RJ. "Thermal capsulorrhaphy for the treatment of shoulder instability: Two year follow up". American Academy of Orthopaedic Surgeons Annual Meeting, San Francisco, CA; February 28-March 4, 2001.
- **Karas SG**, Noonan TJ, Horan ME, Hawkins RJ. "Electrothermal arthroscopic shoulder capsulorrhaphy: A minimum two year follow up". Arthroscopy Association of North America Specialty Day, San Francisco, CA; March 3, 2001.
- **Karas SG**; Wright, JM; Steadman, JR; Hawkins, RJ. "Repair of Extensor Mechanism Injuries: Patellar and Quadriceps Tendons". (Video presentation) American Academy of Orthopaedic Surgeons Annual Meeting, San Francisco, CA; February 24 March 8, 2001.
- **Karas SG**, Booth E, Spooner K, Decker M, Torry M. "Proprioceptive and kinesthetic differences in anterior cruciate reconstructed knees: Effects of graft choice and postoperative stability". 11<sup>th</sup> Annual Steadman Hawkins Fellows Meeting. Vail, CO; December 8, 2000.
- Johnson JT, Mathews PV, **Karas SG**, Hawkins RJ. Effect of Size and Location of Rotator Cuff Tears on Superior Humeral Head Migration. 11<sup>th</sup> Annual Steadman Hawkins Fellows Meeting. Vail, CO; December 8, 2000.

- **Karas SG**, Noonan TJ, Horan ME, Hawkins RJ. "Thermal capsulorrhaphy for the treatment of shoulder instability: Two year follow up". American Orthopaedic Society for Sports Medicine Annual Meeting. Sun Valley, ID; June 19, 2000.
- Rovner, AD; Luke, TA; **Karas, SG**; Plancher, KD; Hawkins, RJ. "Shoulder Capsule Volumetric Change after Open Inferior Capsular Shift versus Thermal Capsulorrhaphy: A Cadaveric Model". American Orthopaedic Society for Sports Medicine Annual Meeting. Sun Valley, ID; June 19, 2000.
- **Karas SG**, Noonan TJ, Horan ME, Hawkins RJ. "Outcomes of Shoulder Instability Treated with Radiofrequency Thermal Capsulorrhaphy: A Minimum Two Year Follow-Up". Arthroscopy Association of North America 19<sup>th</sup> Annual Meeting. Miami, FL; April 16, 2000.
- **Karas SG**, Hawkins RJ, Schlegel TS, Steadman JR. "The Microfracture Technique for Resurfacing Full Thickness Chondral Lesions of the Knee: Experience in National Football League Players". NFL Physicians Society Sports Science Symposium. Indianapolis, IN; February 25, 2000.
- Hawkins RJ, **Karas SG**, Noonan TJ, Horan ME. "Thermal Capsulorrhaphy for the Treatment of Shoulder Instability: Pro". Symposium at the American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, FL; March 18, 2000
- **Karas SG**, Noonan TJ, Horan ME, Hawkins RJ. "Electrothermal Capsulorrhaphy for the Treatment of Shoulder Instability: Two Year Follow-Up". Steadman Hawkins Fellows Meeting. Vail, CO; December 11, 1999.
- Hawkins RJ, **Karas SG**. "Thermal Capsulorrhaphy: Science, Rationale, and Outcomes". Arthroscopy Association of North America 18<sup>th</sup> Fall Course. San Diego, CA; November 19-20, 1999
- **Karas SG**, Hurst JM, Garrett WE. "Reaction Time and Injury Avoidance: The Role of Anticipation Skills". Poster presented at the annual meeting of the American College of Sports Medicine. Orlando, Florida, June 1998.
- **Karas SG**, DeLorenzi RJ, Kernek CB, Pierce RO, Ambrose TA. "Unreamed Nailing of Tibial Fractures: A Prospective Study" American Fracture Association Annual Meeting, St. Louis, MO; April 4, 1993.

# Presentations Regional:

**Karas SG**, Brantley SP, Starr H. "Subacromial Hook Plating for Type II-B Clavicle Fracture and Acromioclavicular Separations". Georgia Orthopaedic Society. Sea Island, GA; September 23, 2011.

Hammond K, Register B, Terk M, **Karas SG.** "The Allograft Bridge Procedure for Irreparable Rotator Cuff Tear". Southern Orthopaedic Association Annual Meeting. Fajardo, Puerto Rico; June 17, 2010.

Hamilton S, Jackson E, **Karas SG**. "Effect of Sagittal Plane Drilling Angle on Femoral Tunnel Length in ACL Reconstruction" (Poster). Southern Orthopaedic Association Annual Meeting. Fajardo, Puerto Rico; June 16-19, 2010.

Hammond K, Dierckman B, Goldstein J, **Karas SG.** "Characterization of Medial Row Strain and Load to Failure in Dual Row Rotator Cuff Repair". Southern Orthopaedic Association Annual Meeting. Fajardo, Puerto Rico; June 17, 2010.

**Karas SG**. Treatment Algorithms for Massive Rotator Cuff Tear. Georgia Athletic Trainers Association Annual Meeting. Peachtree City, Georgia. January 16, 2010.

Pendleton A, **Karas SG.** "Scapulothoracic Bursectomy and Superomedial Scapular Border Resection: Technique and Results". Eastern Orthopaedic Association Annual Meeting. Paradise Island, Bahamas; June 18, 2009.

Register B, Reich H, Pendleton AM, Terk M, **Karas SG.** "Reconstruction of Irreparable Rotator Cuff Tears with Human Dermal Allograft Matrix". Eastern Orthopaedic Association Annual Meeting. Paradise Island, Bahamas; June 18, 2009.

**Karas SG.** "Reverse Total Shoulder Arthroplasty- Indications, Technique, and Outcomes". Iowa Orthopaedic Society Spring Meeting. Des Moines, Iowa; April 28, 2006.

**Karas SG.** "The Early US Experience of Reverse Total Shoulder Arthroplasty". Maine Orthopaedic Society Annual Meeting. Sugarloaf, ME; February 11, 2006.

**Karas SG,** Decker R, Hawkins RJ, Frankle M. Reverse Shoulder Prosthesis for the Management of Rotator Cuff Arthropathy (Poster). Eastern Orthopaedic Association Annual Meeting, Chesapeake, VA. October 8, 2005.

Distefano M, Decker R, Van Doren A, Prentice WE, Padua DA, **Karas SG**. "Gender Differences in Trunk and Hip Kinematics During a Cutting Task: A Comparison of Elite

Soccer Athletes" (Poster). Eastern Orthopaedic Association Annual Meeting, Chesapeake, VA. October 8, 2005.

Decker R, Thigpen CA, Padua DA, **Karas SG**. A 3-Dimensional Analysis of Scapular Kinematics in Patients with Multidirectional Instability. Eastern Orthopaedic Association Annual Meeting, Chesapeake, VA. October 8, 2005.

Decker R, Spang JT, Weinhold PS, **Karas SG.** "Biomechanical Evaluation of Endobutton Distal Biceps Repair". Eastern Orthopaedic Association Annual Meeting, Chesapeake, VA. October 8, 2005.

**Karas SG**. Reverse Shoulder Prosthesis for the Management of Rotator Cuff Arthropathy. Georgia Orthopaedic Association Annual Meeting, Greensboro, GA. October 8, 2005.

Spang JT, Weinhold PS, **Karas SG.** "Biomechanical Evaluation of Endobutton Distal Biceps Repair". North Carolina Orthopaedic Association Annual Meeting, Asheville, NC. October 10, 2004.

**Karas SG.** "Early Results of Reverse Total Shoulder Arthroplasty: The University of North Carolina Experience". North Carolina Orthopaedic Association Annual Meeting, Asheville, NC. October 10, 2004.

**SG Karas**, IK Triantafillopoulos, M Maloney, WE Garrett, AJ Banes. "Effect of Anabolic Steroids on the Biomechanical and Matrix Remodeling Properties of Human Supraspinatus Bioartificial Tendons". South Carolina-North Carolina Orthopaedic Society Combined Meeting. Charelston, SC; September 7, 2003.

Patel NP, Weinhold P, **Karas SG**. "Braiding does not affect the tensile properties of quadrupled tendon ACL grafts". North Carolina Orthopaedic Association Annual Meeting, Asheville, NC. October 6, 2002.

**Karas SG**, Creighton RA, Demorat GJ. "Evaluating Volume Reduction in Arthroscopic Shoulder Instability Surgery: A Comparison of Three Techniques". North Carolina Orthopaedic Association Annual Meeting, Asheville, NC. October 6, 2002

Creighton A, Demorat GJ, **Karas SG**. "Shoulder capsule volumetric change after arthroscopic capsular plication and thermal capsulorrhaphy: A Cadaveric Model". Southern Orthopaedic Association 18<sup>th</sup> Annual Meeting, Coeur d'Alene, ID; July 19, 2001.

**Karas, SG**; Hurst, JD; Garrett, WE. "Reaction Time and Injury Avoidance: Evidence for a Cognitive Model". J. Leonard Goldner Visiting Professor Program. Durham, NC; April 19, 1999.

# **Presentations**

#### Local:

**Karas SG.** "Management of Rotator Cuff Problems". Emory University Department of Physical Medicine and Rehabilitation Grand Rounds. February 21, 2006.

**Karas SG.** "Pain Management Algorithms in Outpatient Shoulder Surgery". Continuing Medical Education Lecture Series. Chapel Hill, NC; January 26, 2003.

**Karas SG.** "Surgical Techniques in the Shoulder". UNC Ambulatory Care Center In-Service Lecture Series. Chapel Hill, NC; January 8, 2003.

**Karas SG**. "Update on Shoulder Surgery: New Concepts and Principles of Rehabilitation". The Triangle Orthopaedic Specialty Group. Chapel Hill, NC; November 26, 2002.

**Karas SG.** "Diagnosis, Management, and Rehabilitation of Injuries to the Shoulder Girdle". UNC Department of Physical Medicine and Rehabilitation Grand Rounds. Chapel Hill, NC; September 4, 2002.

**Karas, SG**. "Shoulder Pain: Diagnosis and Management for the Primary Care Specialist". Greensboro Primary Care Visiting Lecture Series. Greensboro, NC; July 25, 2002.

**Karas, SG**. "Disorders and Injuries of the Shoulder". Rex Hospital Grand Rounds. Raleigh, NC; February 21, 2002.

**Karas SG.** "Diagnosis, Management, and Rehabilitation of Injuries to the Shoulder Girdle". UNC Department of Physical Medicine and Rehabilitation Grand Rounds. Chapel Hill, NC; May 9, 2001.

**Karas, SG**. "Shoulder pain: A primer for primary care specialists". UNC Hospitals Symposium for Primary Care Management of Orthopaedics. Chapel Hill, NC; November 11, 2000.

- **Karas, SG**; Sterret, WI; "A Comparison of Anterior Cruciate Ligament Examinations: The Office Exam versus Exam Under Anesthesia". Presented to the Steadman Hawkins Scientific Advisory Committee Annual Meeting. Vail, CO; July 28, 2000.
- **Karas, SG**; Torry, MR; Steadman, JR. "Proprioceptive Differences in ACL Reconstructed Knees: A Comparison of Patellar Tendon and Gracilis Semitendinosus Techniques". Presented to the Steadman Hawkins Scientific Advisory Committee Annual Meeting. July 28, 2000.
- **Karas, SG.** "Human Performance: Odds and Ends". Vail Valley Medical Center Grand Rounds, September 30, 1999.
- **Karas, SG.** Hurst, JD; Garrett, WE. "The Role of the Trail Foot in Cutting Skills". Duke Medical Center "K Lab" Human Performance Center Symposium. Durham, NC; April 26, 1999.
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