

HARVARD

CURRICULUM VITAE AND BIBLIOGRAPHY

Jon J.P. Warner, M.D.

PART I: **General Information**

DATE PREPARED: July 28, 2013

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Education

Year	Degree	Institution
1978	BA	Colgate University, Hamilton, NY
1982	M.D.	University of Rochester School of Medicine Rochester, NY

Postdoctoral Training

Year	Title	Specialty/Discipline	Place of Training
1982-1983	Internship	Dept. of Surgery	Strong Memorial Hospital University of Rochester, Rochester, NY

1983-1984	Residency	Dept. of Surgery	Strong Memorial Hospital University of Rochester, Rochester, NY
1984-1987	Residency	Combined Harvard Orthopaedic Surgery Residency	Mass. General, Brigham and Women's, Children's, and Beth Israel Hospitals Boston, MA.
1979-1980	Research Fellow	Immunology & Behavioral Medicine Psychoneuroimmunology (Med. School)	University of Rochester School of Medicine
7-12/85	Research Fellow	Orthopaedic Research Laboratories Nontraumatic Osteonecrosis of Femoral Head	Brigham and Women's Hospital Harvard Medical School
7-12/88	Clinical Fellow,	Dept. of Orthopaedic Surgery, Division of Sports Medicine (<i>Lyle J. Micheli, M.D.</i>)	Children's Hospital
1-6/89	Cave Traveling Fellowship Award	Awarded by Dept. of Orthopaedic Surgery, Massachusetts General Hospital	Inselspital, University of Bern, Switzerland
1-3/89	Clinical Fellow- A.O. organization	Dept. of Orthopaedic Surgery, Knee Service (Professor <i>Roland P. Jakob</i>)	Inselspital, University of Bern, Switzerland
3-4/89	Clinical Fellow	Dept. of Orthopaedic Surgery, Shoulder Service (<i>Christian Gerber, M.D.</i>)	Inselspital, University of Bern, Switzerland
4/26- 5/12/89	Research Fellow	Suprascapular nerve anatomy study (<i>Professor Alain Masquelet</i>)	École de Chirurgie Ampitheatre du Anatomie University of Paris, France
5/15- 6/1/89	Clinical Fellow	Sports Medicine (<i>Professor Jan Gilquist</i>)	Institutioned for Ortopedi University Hospital, Linkoping, Sweden
7/89-8/90	Clinical Fellow	Sports Medicine & Shoulder (<i>Russell F. Warren, M.D.</i>)	Hospital for Special Surgery Cornell University Medical College, New York, N.Y.
5-6/93	Traveling Fellow	First ASES/SECEC European Exchange Fellow	American Shoulder & Elbow Surgeons
11/3-15/02	Harvard Leadership Program	Two-week intensive executive Leadership Development Course for physicians in academic health centers	Harvard Public Health, Dept. of Health Policy and Management and Center For Continuing Professional Education
1/9-13, 2012	Harvard Business School	One-week intensive s Health Care Delivery Course (Michael Porter PhD, MD)	Harvard Business School (participant)

List here all internships, residencies, clinical and research fellowships.

Licensure and Certification

Year	Type of License or Certification
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07-29-88	Passed Part I of the A.B.O.S. Examination
07-10-92	Passed Part II of the A.B.O.S. Examination
07-01-83	New York State License
04-17-85	Massachusetts State License
12-14-87	California State License
03-09-90	Pennsylvania State License
08-31-01	Passed 2001 Recertification Examination of the A.B.O.S. (<i>valid through December 31, 2012</i>)
01-01-13	Passed 2012 Recertification Examination of the A.B.O.S. (<i>valid through December 31, 2022</i>)

Academic Appointments

Year	Academic Title	Institution
1-6/88	Instructor and Assistant in Orthopaedic Surgery	Harvard Medical School, Boston, MA Brigham and Women's Hospital, Boston, MA (Ward Trauma and Reconstructive Service)
'90-'97	Assistant Professor	University of Pittsburgh, School of Medicine, Dept. of Orthopaedic Surgery
'97-'98	Associate Professor	University of Pittsburgh, Dept. of Orthopaedic Surgery
4/98-7/99	Visiting Associate Professor	Partners Dept. of Orthopaedic Surgery Harvard Combined Orthopaedic Harvard Medical School
7/99-6/04	Associate Professor	Partners Dept. of Orthopaedic Surgery Harvard Combined Orthopaedic Program MGH & BWH, Boston, MA
6/2004-Present	Professor	Partners Dept. of Orthopaedic Surgery Harvard Combined Orthopaedic Program MGH & BWH, Boston, MA

Hospital or Affiliated Institution Appointments:

Year	Title	Hospital/Affiliated Institution
7-12/88	Assistant, Sports Medicine Service	New England Baptist Hospital, Boston, MA
7/89-8/90	Junior Attending Physician	Hospital for Special Surgery Cornell University Medical College, New York, NY
'90-'98	Assistant Medical Director, Sports Medicine Center Director, Shoulder Service	Center for Sports Medicine University of Pittsburgh
9/90-4/98	Director, Shoulder Service	Veterans Administration Hospital University of Pittsburgh
'93-'98	Director, Shoulder Service	University of Pittsburgh, Dept. of Orthopaedic Surgery

4/98- Present	Chief, Harvard Shoulder Service (at Partners)	Partners Dept. of Orthopaedic Surgery Harvard Combined Orthopaedic Program MGH & BWH, Boston, MA
5/06- 1/08	Vice Chairman, Out-Patient Service	Department of Orthopaedics MGH.
2011- present	Committee Member	Partners HealthCare Service (PHS) International Physician Advisory Committee

Other Professional Positions and Major Visiting Appointments

Year	Position/Title	Institution
1983- 1984	Surgical Emergency Primary Care Physician (Part-time)	Rochester General Hospital, Rochester, NY
1983- 1984	Surgical Emergency Physician (Part- time)	Highland Community Hospital, Rochester, NY
1983- 1984	Emergency Dept. Surgeon (Part-time)	Newark Community Hospital, Newark, NY
1985- 1986	Emergency Dept. Physician (Part-time)	Beth Israel Hospital, Harvard Medical School, Boston MA
1985- 1986	Emergency Dept. Physician (Part-time)	Children's Hospital, Harvard Medical School, Boston MA
7/88- 12/88	Disability Medical Examiner (Part- time)	Medical Evaluation Specialists, Boylston Street, Brookline, MA

List only those positions that are related to the appointee's professional field.

Hospital and Health Care Organization Service Responsibilities

Year	Role	Institution/Organization
2006- Present	Chair of Executive Committee	The Mass General West Ambulatory Care Center
		(See Committees- MGH)

Major Administrative Responsibilities

Year	Title	Institution (local, government, foundation)
	(see Boards)	

Major Committee Responsibilities

National:

<u>Year</u>	<u>Name of Committee</u>	<u>Role</u>	<u>Institution</u>
1996-1997	Committee on Exchange Fellowships	Member, Chairman (1998-2001)	American Shoulder and Elbow Surgeons
1997-2000	Research and Awards Committee	Member	American Shoulder and Elbow Surgeons
1997	Committee on the First Open Meeting	Member	American Shoulder and Elbow Surgeons
1997-2000	Research and Awards Committee	Member	Arthroscopy Association of North America
1998	Program Committee	Member	Orthopaedic Research Society
1998-2001	AAOS Committee on Shoulder and Elbow	Member	American Academy of Orthopaedic Surgeons
1998-2003	AAOS C.M.E. Committee	Member	American Academy of Orthopaedic Surgeons
1998-2003	AAOS Educational Program Committee, Liason from American Shoulder and Elbow Surgeons	Member	American Academy of Orthopaedic Surgeons
1999-2000	Committee for Zimmer Annual Travel Awards Competition for Residents	Member	American Orthopaedic Association
2000-2004	Orthopaedic Research and Education Foundation (O.R.E.F.)	Award Committee, Member	Orthopaedic Research and Education Foundation
2001	Orthopaedic Research Society	Program Committee, Member	O.R.S.
2001-2005	Program Committee, AAOS Annual Meeting	Program Committee, Chairman for 2004 Annual Meeting	American Academy of Orthopaedic Surgeons
2002-Present	Arthroscopy Association of North America (AANA)	Research Committee, Member	Arthroscopy Association of North America
2003-2006	Arthroscopy Association of North America (AANA)	Education Committee, Member	Arthroscopy Association of North America
2004 - Present	New England Shoulder and Elbow Society (NESES)	Head Shoulder Section, Founding Member of NESES, current President	New England Shoulder and Elbow Society
2004	Arthroscopy Association of North America (AANA)	Research Committee, Chairman	Arthroscopy Association of North America
2004-2007	ASES Membership Committee	Member	American Shoulder and Elbow Surgeons

Major Committee Responsibilities (Cont'd)

National:

<u>Year</u>	<u>Name of Committee</u>	<u>Role</u>	<u>Institution</u>
2007	Zimmer Presidential Advisory Board on Health Economics	Member	Zimmer Presidential Advisory Board on Health Economics.
2007	ASES Nominating Committee	Member	American Shoulder and Elbow Surgeons
2008 – Present	San Diego Shoulder Institute	Board of Directors, Member at Large	San Diego Shoulder Insitutue
2009-2012	American Shoulder and Elbow Society (ASES):	Elected into Presidential Line Vice President - 2010 President Elect- 2011 President - 2012	American Shoulder and Elbow Society
2010	Shoulder & Elbow Surgeons	Delegate to Int'l Congress, (Selection Committee for Tri-annual Meeting)	American Shoulder & Elbow Surgeons
2010	ASES	Chair, Web Page Re-Design Committee	American Shoulder and Elbow Surgeons
2012-present	ASES	Value-Based Care Committee (Ad Hoc member)	American Shoulder and Elbow Surgeons

Medical School and Affiliated Institution:

<u>Year</u>	<u>Name of Institution</u>	<u>Role</u>	<u>Institution</u>
1992-1998	Committee on Core Curriculum for Orthopaedic Residency Program	Chairman	University of Pittsburgh
1992-1998	Committee on Medical Photography Utilization	Chairman	University of Pittsburgh
1992-1994	Committee on Third Year Medical Student Rotation in Orthopaedics	Chairman	University of Pittsburgh
1993-1998	Ad Hoc Committee on Clinical Practice	Member	University Orthopaedics Inc., University of Pittsburgh
1994-1998	Committee on Institutional Review Board (IRB) Protocols	Member	University of Pittsburgh
1995-1998	Orthopaedic Education Committee	Member	University of Pittsburgh
1998	Committee on Mission and Vision Statement	Member	Massachusetts General Orthopaedic Associates

1998-2002	Operating Room Improvement Committee	Co-Chairman	Massachusetts General Hospital
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Medical School and Affiliated Institution (Cont'd):

Year	Name of Institution	Role	Institution
1998-1999	CIMIT (Center for Innovative Minimally Invasive Therapies)	Representative from Orthopaedic Surgery	Massachusetts General Hospital
1998-2002	Psychomotor Skills Committee on Resident Education	Member	Harvard Combined Orthopaedic Program
1998-2002	Information Technology Committee	Member	Partner's Dept. of Orthopaedics
1998-2002	Arthroscopy Committee	Co-Chairman	Brigham and Women's Hospital
1999-2002	Operating Room Orthopaedic Equipment Committee	Chairman	Massachusetts General Hospital
2000-2004	Committee on Web Page Development and Internet Presence	Chairman	Massachusetts General Orthopaedic Associates
2001-2002	Orthopaedic Service Line Planning Leadership Committee	Member	Partner's Department of Orthopaedics
2001-2004	Compensation Committee	Member	Massachusetts General Orthopaedic Associates
2002-2006	Billing Oversight Committee (B.O.C.)	Chairman	Massachusetts General Orthopaedic Associates
2002-2008	Executive Committee, MGH Orthopaedic Surgery Dept.	Member (Senior governance committee for department)	Massachusetts General Orthopaedic Associates
2012-2015	SPRI and SAC	Member	Steadman Philippon Research Institute (SPRI) Scientific Advisory Committee (SAC)

Professional Societies

Year	Society	Role (e.g. member, officer, committee assignment)
1990-1994	American Academy of Orthopaedic Surgeons	Candidate Member
1990-1998	Interstate Orthopaedic Society (I.O.S.)	Member
1990-1998	Pennsylvania Orthopaedic Society (P.O.S.)	Associate Member
1990-Present	Eastern Orthopaedic Society (E.O.A.)	Active Member
1992-Present	American Board of Orthopaedic Surgery (A.B.O.S.)	Diplomat
1992-Present	Academic Orthopaedic Society (A.O.S.)	Member

Professional Societies (Cont'd)

Year	Society	Role (e.g. member, officer, committee assignment)
1994-Present	American Academy of Orthopaedic Surgeons (A.A.O.S.)	Member
1994-Present	American College of Sport Medicine (A.C.S.M.)	Member
1994-Present	Arthroscopy Association of North America (A.A.N.A.)	Member
1994-Present	American Shoulder and Elbow Surgeons	Associate Member (1994-1997) Active Member (1998-Present)
1995-Present	Orthopaedic Research Society (O.R.S.)	Member
1995-1998	American Orthopaedic Society for Sports Medicine (A.O.S.S.M.)	Associate Member
1998-Present	American Orthopaedic Society for Sports Medicine (A.O.S.S.M.)	Active Member
1999-Present	American College of Physician Executives	Associate Member
1999-Present	American Orthopaedic Association (AOA)	Member
2002-Present	New England Orthopedic Society (NEOS)	Member
9/15/02	Australian Shoulder and Elbow Society (SESA)	Corresponding Member
2003-present	New England Shoulder and Elbow Society (NESES)	Founder, President Elect (2008)
2008-present	Liasion from ASES to AAOS ICL Committee	Representative
2009-present	Shoulder and Elbow (the new official journal of the British Elbow and Shoulder Society (BESS)	Editorial Board Member
2009-2012	American Shoulder and Elbow Society (ASES)	Elected into Presidential Line: Vice President - 2010 President Elect- 2011 President - 2012
2013-2015	Steadman-Philippon Research Institute	Scientific Advisory Board Member: -

Community Service Related to Professional Work

Year	Position/Title	Role	Institution
5/21/91	Seminar for Cyclists	Lecturer	Funnybone Club, Pittsburgh, PA
5/22/91	Radio Interview, Cycling Injuries	Guest speaker	WPXI, Channel 11, News at Noon
6/15/91	Radio Interview, Cycling Injuries	Guest speaker	3WS (FM 94.5/AM 970) Pittsburgh

Community Service Related to Professional Work (Cont'd)

Year	Position/Title	Role	Institution
6/21/91	Presentation: "Repair of Massive Rotator Cuff Tears" Pfizer's 1991 Health In Action Day	Presenter	QuickSilver Golf Club, Midway, PA
1989-1990	Assistant Team Physician	NFL New York Giants	The Meadowlands Sports Complex, New Jersey
1990	Head Physician	Grand Masters Olympic Wrestling Competition	Civic Arena, Pittsburgh, PA
1991	Supporting Physician	Giant Eagle/City of Pittsburgh Marathon	City of Pittsburgh
1991-1992	Head Physician	Thrift Classic Professional Cycling Competition	City of Pittsburgh
1991-1998	Head Team Physician	High School Football Team	Central Catholic High School, Pittsburgh, PA
1992-1993	Head Team Physician	Pittsburgh Golden Triangles, Junior Olympic Volleyball Club	Pittsburgh Golden Triangles Volleyball Club
1993-1994	Head Team Physician	Pittsburgh Marauders Semi-Professional Football Team	Pittsburgh Marauders Team
1993-1998	Head Team Physician	University of Pittsburgh Swim Team	University of Pittsburgh
1993-1998	Orthopaedic Consultant	University of Pittsburgh Volleyball Team	University of Pittsburgh
1993-1998	Head Team Physician	Point Park Junior College Tennis Team	Point Park Junior College
2001-Present	Consultant, Shoulder Problems	Professional Hockey Team	New York Islanders Professional Hockey Team
2007-present	Consultant Specialist	National Hockey League (NHL)	NHL
2008	Current concepts teacher-Shoulder Pathology	High School Seniors Anatomy & Physiology Course	Weston High School, Weston, MA

Boards:

Year	Role	Organization
2006-present	Board of Directors	San Diego Shoulder Institute (SDSI)
2013-present	Scientific Advisory Committee	The Steadman-Philippon Institute

Editorial Boards

Year	Role (e.g. editor, member ad hoc reviewer)	Name of Journal
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Editorial Boards (Cont'd)

Year	Role (e.g. editor, member ad hoc reviewer)	Name of Journal
3/92-Present	Consultant reviewer	Clinical Orthopaedics and Related Research
4/92-Present	Consultant reviewer	Complications in Orthopaedics
7/93-6/98	Consultant reviewer	The Journal of Bone and Joint Surgery
5/94-Present	Consultant reviewer	Medicine and Science in Sports Medicine and Exercise
3/94-Present	Consultant reviewer Editorial Board Member	Journal of the American Academy of Orthopaedic Surgeons
11/94-Present	Consultant reviewer	American Journal of Sports Medicine
11/94-Present	Consultant reviewer	Journal of Orthopaedic Research
5/96-Present	Consultant reviewer	Journal of Biomechanical Engineering
11/96-3/02	Consultant reviewer	Journal of Shoulder and Elbow Surgery
4/97-Present	Consultant reviewer	The Lancet
7/93-7/99	Consultant reviewer	Journal of Arthroscopy
6/97-Present	Consultant reviewer	The Journal of Musculoskeletal Medicine
6/97-Present	Editorial Board Member	The Journal of the American Academy of Orthopaedic Surgeons
1/00-Present	Editorial Board Member	Techniques in Shoulder and Elbow Surgery

Awards and Honors

Undergraduate:

<u>Year</u>	<u>Name of Award</u>
1978	Phi Beta Kappa Honor Society
1978	Magna Cum Laude
1978	Beta Biology Honor Society
1976	Lawrence McGregory Award for Excellence in Organic Chemistry (Top Student)

Graduate:

<u>Year</u>	<u>Name of Award</u>
1982	Alpha Omega Alpha Honor Society
1982	Graduation with Degree of Doctor of Medicine with Honor (Top 4%)

Postgraduate:

<u>Year</u>	<u>Name of Award</u>
1987	Annual Frank Stinchfield Award of the Hip Society , (<i>Studies of Non-Traumatic Osteonecrosis of the Femoral Head</i>)
1989	Annual Award of the Orthopaedic Trauma Association in category of Best Paper on Upper Extremity Fractures (<i>Closed Reduction and Percutaneous Pinning of Unstable Proximal Humerus Fractures</i>)
1990	Annual Resident/Fellow Scholar Award of the Eastern Orthopaedic Association (<i>Scapulothoracic Motion in Normal Shoulders and Shoulders with Glenohumeral Instability and Impingement. A Study Using Moire Topographic Analysis</i>)
1991	Nomination for the Annual Neer Award of the American Society of Shoulder and Elbow Surgeons in the category of research (top 5 papers) (<i>Anatomy of the Suprascapular Nerve and Anatomic Constraints to Mobilization of the Supraspinatus and Infraspinatus for Management of Massive Rotator Cuff Tears</i>)
1991	Annual O'Donoghue (Sports Medicine Research- Best Paper) Award of the American Society of Sports Medicine (<i>Static Capsuloligamentous Restraints to Superior-Inferior Translation of the Glenohumeral Joint</i>)
1991	Annual Resident/Fellow Scholar Award of the Eastern Orthopaedic Association (<i>Static Capsuloligamentous Restraints to Superior-Inferior Translation of the Glenohumeral Joint</i>)
1992	Annual Resident/Fellow Scholar Award of the Eastern Orthopaedic Association (<i>Dynamic Capsuloligamentous Anatomy of the Glenohumeral Joint</i>)
1992	Third Place Resident Paper, Pennsylvania Orthopaedic Society (<i>Dynamic Shoulder Model</i> . McMahon, P., Warner, J.J.P., Debski, R., Fu, F.H.) Pennsylvania Orthopaedic Society, Fall Meeting, Pittsburgh, PA,
1993	Selected as First European Exchange Traveling Fellow representing the American Shoulder and Elbow Surgeons. A.S.E.S./S.E.C.E.C (May-June)
1993	Annual Resident/Fellow Scholar Award of the Eastern Orthopaedic Association (<i>Massive Rotator Cuff Tears: A Clinical and Radiographic Study</i>)
1993	Resident Prize - Best Research Paper (McMahon, P.: <i>Rotator Cuff Muscle Forces: A Dynamic Study</i>). 1st Annual Residents and Fellows Research Day, University of Pittsburgh , Department of Orthopaedic Surgery (04/27/93)
1993	John J. Joyce Award of the International Arthroscopy Association. (Best Paper of Meeting) - <i>Dynamic Capsuloligamentous Anatomy of the Glenohumeral Joint</i>), Hong Kong (June)
1994	Nomination for the Annual Neer Award of the American Shoulder and Elbow Surgeons in the category of Clinical Paper (Top 5 papers in category) (<i>The Concept of a "Selective Capsular Shift" for Management of Anterior-Inferior Instability of the Shoulder</i>)
1994	Winner of the Annual Neer Award of the American Shoulder and Elbow Surgeons in the category of Research (<i>Proprioception in Normal Shoulders and in Shoulders with Anterior Instability and Following Capsulolabral Repair</i>)

Awards and Honors (Cont'd)

Postgraduate:

<u>Year</u>	<u>Name of Award</u>
1994	Winner of the Best Fellow Clinical Paper, Annual Resident/Fellow Thesis Day (Fellow: G.A. Caldwell, Faculty Preceptor: Jon J.P. Warner: <i>Transosseous Suture-to-Bone Fixation: The Weak Link in Rotator Cuff Repair? A Biomechanical Study</i>), University of Pittsburgh , Department of Orthopaedic Surgery
1994	Winner of the Herodicus Award for Best Resident Paper presented at the Annual AOSSM Meeting (Resident: William O. Thompson, M.D.; Faculty Preceptor: Jon J.P. Warner, M.D.) <i>Force Couples about the Glenohumeral Joint in Rotator Cuff Defects</i> . Presented at the Annual Meeting of the American Society for Sports Medicine, Palm Desert, CA (June 26-29)
1994	Second Place Award of the International Mechanical Engineering Congress and Exposition. Amsterdam, Netherlands, (Debski, R.E., McMahon, P.J., Warner, J.J.P., Fu, F.H., Woo, S.L.Y.: <i>Measurement of Muscle Force and Glenohumeral Joint Kinematics During Scapular Plane Abduction</i>) Summer, 1994
1995	Second Place Award for Best Resident Paper. Annual Pennsylvania Orthopaedic Society Spring Meeting (Resident: Robert Goitz; Preceptor: J.J.P. Warner). " <i>Arthroscopic-assisted RCT Repair: Patient Selection and De-selection.</i> " Williamsburg, VA (April 6-8)
1996	Winner Kappa Delta (Young Investigator) Award of the American Academy of Orthopaedic Surgeons and Orthopaedic Research Society (Best Research contribution over a minimum 5 year period): " <i>A Dynamic Model for Motion and Stability of the Glenohumeral Joint.</i> "
1996	Nomination for the Annual Neer Award of the American Shoulder and Elbow Surgeons in the Category of Basic Research (top 5 papers): " <i>Functional Relationships of the Glenohumeral Ligaments: A Quantitative Study</i> (February)
1996	Nomination for the Annual Neer Award of the American Shoulder and Elbow Surgeons in the Category of Basic Research (Top 5 papers): " <i>Anatomy and Function of the Coracohumeral and Superior Glenohumeral Ligaments.</i> " (February)
1996	Winner of the Resident/Fellow Research Award of the Arthroscopy Association of North America (A.A.N.A.). Fellows: John Ticker, Gloria M. Beim; Faculty Advisor: Jon. J.P. Warner, M.D.: " <i>Recognition and treatment of isolated refractory posterior capsular contracture</i> " Presented at the AANA Mtg. Washington, D.C. April 13. 1996.
1996	Second Prize Resident/Fellow Paper Competition. Pennsylvania Orthopaedic Society Meeting. Fellow: Ronald A. Navarro, M.D.; Faculty Advisor: Jon J.P. Warner, M.D.: " <i>Serratus anterior dysfunction: Recognition and treatment.</i> " April 18-20, 1996. Aventura, Florida.
1996	First Prize Best Research Paper by a Fellow. Dept. of Orthopaedic Surgery, University of Pittsburgh. Fellow: Gloria M. Beim, M.D.; Faculty Advisor: Jon J.P. Warner, M.D.: " <i>Recognition and treatment of refractory posterior capsular contracture of the shoulder.</i> " Resident and Fellow Thesis day. (April 17) Pittsburgh, PA
1996	Second Place Paper, Didier Patte Award of the S.E.C.E.C. (Eupean Society for Surgery of the Shoulder and Elbow). Nottingham, England. (September). (Imhoff, A.B, Warner, J.J.P., Debski, R.E., Demirhan, M., Patel, P.R., Fu, F.H., and Woo, S. L-Y: <i>Functional relationships of the glenohumeral ligaments: A quantitative study.</i>)

Awards and Honors (Cont'd)

Postgraduate:

<u>Year</u>	<u>Name of Award</u>
1996	Selected as Host for SECEC/ASES (European/American Shoulder and Elbow Societies) Traveling Fellows. Dept. of Orthopaedic Surgery, University of Pittsburgh. (Sept. 25-29)
1997	First Prize Best Research Paper by a Fellow. Dept. of Orthopaedic Surgery, University of Pittsburgh. Resident: Robert Goitz; Faculty Advisor: Jon J.P. Warner, M.D. : <i>Arthroscopic-Assisted Rotator Cuff Repair</i> . Presented at Resident and Fellow Thesis Day. (May 7)
1997	Selected as one of Best 15 Papers of Meeting. Annual Meeting of the European Society of Surgery of the Shoulder and Elbow. Salzberg, Austria. (Sept 15-17): <i>A Dynamic Model of Capsuloligamentous Injury in the Shoulder</i> .
1998	Nominated for the Neer Award of the American Shoulder and Elbow Surgeons in Category of Research (Best 5 papers). (Debski, R.E., Sakane, E., Warner, J.J.P., Fu, F.H., and Woo, S. L-Y: <i>The Role of the soft tissues in Stability of the Glenohumeral Joint. A robotic study.</i>) New Orleans, (March)
1998	Teaching Award from Graduating Senior Orthopaedic Residents, University of Pittsburgh
1999	Winner for the Annual Neer Award of the American Shoulder and Elbow Surgeons. (Warner, J.J.P., Parsons, I.M.: <i>Lattisimus Dorsi tendon: Comparative analysis for treatment of failed prior rotator cuff repairs and primary reconstruction of irreparable rotator cuff tears</i>). Anaheim, LA, (March)
2000	Elected Member of American Orthopaedic Association (AOA) (4% of all orthopaedic surgeons in North America)
2000	Selected as Chairman of the Comprehensive Shoulder Course of the American Academy of Orthopaedic Surgeons, and the Open Meeting for the American Shoulder and Elbow Surgeons (2000-2003).
2001	Winner of Annual O'Connor Award (Best Research Paper) of the Arthroscopy Association of North America (AANA). Apreleva, M., Ösbydar, M., Fitzgibbons, P., Warner, JJP: "A quantitative Three-dimensional analysis of Rotator cuff anatomy after surgical repair." Presented at Annual AANA Meeting. Seattle, WA. April 20, 2001.
2001	Selected as Program Chairman for 2004 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS)
2002	Awarded Corresponding Membership in the Australian Shoulder and Elbow Society (SESA), Australia
2003	Nominated For Neer Award of the American Shoulder and Elbow Surgeons ("Glenoid Reconstruction for Recurrent Post Traumatic Anterior Shoulder Dislocation" J. Warner, T. Gill, P. Millett, J. O'Holleran, N. Pathare)
2004	Selected to the Central Program Committee for 2004 Annual Meeting of the American Academy of Orthopaedic Surgeons (AAOS)
2004	Elected as a Member of the International Delegates to the 9th International Congress on Surgery of the Shoulder (Elected by the American Shoulder and Elbow Surgeons (ASES) to represent the USA in selection of the 2010 venue for the 11 th ICSS Meeting)

Awards and Honors (Cont'd)

Postgraduate:

<u>Year</u>	<u>Name of Award</u>
2004	Nominated for the 2003-2004 Excellence in Mentoring Award Harvard Medical School
2004	Selected as Host for European Shoulder and Elbow Traveling Fellows , October 7-8, 2004
2004	Chairman and Course Director , AAOS 2004 Biennial Shoulder and Elbow Meeting, Monterey, CA, October 14-17, 2004.
2004	Kilfoyle Award of New England Orthopaedic Society for Best Paper of 2004 : Chen, Millett, PJ, Warner, JJP: <i>“Transfusion Requirement after Total Shoulder Replacement”</i>
2004	Honorary Degree of Masters of Arts : Harvard University, Cambridge, Massachusetts. December 15, 2004
2005	Nominated For Neer Award of the American Shoulder and Elbow Surgeons Open Meeting . Clavert, P, Millett, PJ, Warner, JJP, <i>“What are the Limits of Reconstruction of Glenoid Erosion in Shoulder Arthroplasty?”</i>
2005	Awarded a Blue Ribbon for Best Scientific Exhibit at AAOS Annual Meeting, 2005 . Millett, PJ, Ponce, B, Mazzocca, A, Ahluwalia, R, Warner, JJP, <i>“Subscapularis Dysfunction after Total Shoulder Arthroplasty: A Biomechanical and Clinical Evaluation of a Novel Lesser Tuberosity Osteotomy Repair Technique”</i>
2006	Elected to the Board of Directors of the San Diego Shoulder Institute and Shoulder Course, 2006 . <i>(The oldest and largest Shoulder CME Course in the United States)</i>
2006	Selected as Host for 2006 American Orthopaedic Association (AOA) Austrian-Swiss-German (ASG) Exchange Traveling Fellowship . Massachusetts General Hospital (March 13, 2006)
2006	President’s Guest Speaker, 17th Annual Scientific Meeting, British Elbow and Shoulder Society, Edinburgh, Scotland, May 31-June 2, 2006 . Presidential Lecture: <i>“Management of shoulder arthritis in the young, active patient: science, science-fiction, patient satisfaction ...”</i>
2006	Selected as Host for 2006 ASES Exchange Fellowship , October 2-3, 2006
2006	President’s Guest Speaker, 20th Congress of the European Society for Surgery of the Shoulder and the Elbow (ESSSE), Athens, Greece, September 20-23, 2006 Presidential Lecture: <i>“Management of Arthritis and Chondral injuries in the Young Patient: anatomical Reconstruction - Proof of Concept”</i>
2006	Partners in Excellence Award for the MGH Orthopaedic Ambulatory Surgical Center . Awarded December 19, 2006 <i>“For Leadership and Innovation and Teamwork”</i>
2007	Nominated for The Mel Post Award for Excellence in Clinical Research . <i>“Biological Resurfacing of the Glenoid in Shoulder Arthritis”</i> . The ASES Research Committee selected five nominees to be considered for this award, will review the recommended manuscripts and select the 2008 Post Award(s). Final decision will be in early January 2008.
2008	Elected President of the New England Shoulder and Elbow Society . (www.neses.com) January 2008

Awards and Honors (Cont'd)

Postgraduate:

<u>Year</u>	<u>Name of Award</u>
2008	Nominated for Charles S. Neer Award for Excellence in Clinical Research . " <i>Management of glenohumeral arthritis in young patients with biological resurfacing of the glenoid</i> ". Warner, J.P., Higgins, L.D., Ozbaydar, M., El Hassan, B., Massimini, D. Presented at Annual Meeting of the American Shoulder and Elbow Surgeons, San Francisco, CA March 8, 2008.
2009	Elected into Presidential Line of the American Shoulder and Elbow Society (ASES) : Vice President - 2010 President Elect - 2011 President - 2012
2010	Nominated for Charles S. Neer Award for Excellence in Clinical Research . " <i>The Timing of Rotator Cuff Repair</i> ". Singh, A., Sanofsky, B., Kim, J., Warner, J.P., Higgins, L.D. To be presented at the Annual Meeting of the American Shoulder and Elbow Surgeons, New Orleans, LA March 13, 2010.
2010	Nominated for Charles S. Neer Award for Excellence in Clinical Research . " <i>Regional Interscalene Block Anesthesia for Shoulder Arthroscopy: A Prospective Study of 1333 Patients.</i> " Singh, A., Kelly, C., O'Brien, T., Wilson, J., Warner, J.P. To be presented at the Annual Meeting of the American Shoulder and Elbow Surgeons, New Orleans, LA March 13, 2010.
2010	Inaugural Recipient of the American Academy of Orthopaedic Surgeons (AAOS) Achievement Award.
2011	AAOS Award Video Program: MEC03 "Scapulothoracic Fusion: Indications, Technique and Outcome" Jon JP Warner, Jessica Wells, Danny Goel, James Romanowski, Ifedayo Kuye, Laurence D Higgins (AAOS Multimedia Education Center and Featured Presentation Theatre)
2013	4th International Congress of Shoulder and Elbow Therapists Best Paper Award: " <i>Increased long Thoracic Nerve Tension with Excessive Scapular Motion: Proof of Concept for Neuropraxia as a Cause of Dyskinesia</i> " Seitz AL, Massimini DF, Warner JP. Nagoya Japan April 12, 2013
2013	Harvard Combined Orthopaedic Residency Program Thesis Day 2013 Best Thesis Award: " <i>Neurmonitoring the Latarjet Procedure</i> " Author: Ruth A. Delaney, Advisors: Jon J.P. Warner, Laurence D. Higgins. Boston, Massachusetts June 15, 2013

PART II: Research, Teaching, and Clinical Contributions

A. Narrative report of Research, Teaching, and Clinical Contributions.:

Research:

Historical: While at the University of Pittsburgh I was the Director of the Shoulder Biomechanics Laboratory, which developed a dynamic model for normal and abnormal shoulder function. Our work won the prestigious Kappa Delta Award of the American Academy of Orthopaedic Surgeons and the Orthopaedic Research Society and was recognized as the only Shoulder Research to be so honored by these organizations until that time. I was also a member of the Neuromuscular Research Laboratory which extensively studied the effect of instability and its repair on shoulder proprioception. For this work we were awarded the Neer Award for the best research by the American Shoulder and Elbow Surgeons.

Since coming to Harvard I have developed the Shoulder Biomechanics Group (SBG) which had its laboratory situated in the Orthopaedic Biomechanics Laboratories at the Beth Israel Hospital from 1998-2001. The SBG developed a novel method to determine three-dimensional anatomy of tendon insertions. This method was used to evaluate the anatomy of different types of rotator cuff repair methods. This work was honored by the Arthroscopy Association of North America as it was selected for the prestigious O'Connor Award (2001), given annually for the best research relevant to arthroscopy. Insight gained from this work has subsequently influenced the methods of tendon to bone repair, especially the evolving techniques of arthroscopic rotator cuff repair.

More recently, this model has been applied to study the anatomy of tendon transfers about the shoulder for reconstruction in the setting of irreparable rotator cuff tears. We have also used this method to study proximal humeral reconstruction of fractures and have developed an accurate anatomic reference system which surgeons may use when performing surgical replacement of proximal humerus fractures. Our findings have been the basis for the development of fracture stem methods of reconstruction, including specific length assessment jigs which are part of several systems currently marketed by orthopaedic equipment companies.

Current: In 2002 the SBG moved to its new home in the Jackson Building at the Massachusetts General Hospital. Our **Shoulder Biomechanics Laboratory (SBL)** is strategically positioned adjacent to the joint biomechanics laboratory and across from the materials laboratory and joint replacement laboratory. We have been fortunate to develop a model which allows for three dimensional assessment of in vivo shoulder motion using a novel biplanar fluoroscopic system. Our recent work has provided the first insight into normal joint kinematics in vivo and has shown that shoulder motion is not a perfect ball-in-socket but a combination of rotation and translation which are coupled. Our future work will be directed at analyzing the kinematic consequences of various shoulder surgeries including total shoulder arthroplasty, instability repair, and rotator cuff repair. This work will have very important implications for surgical treatment strategies in arthritis, shoulder instability, and rotator cuff disease.

Surgical Skill Training Program: We have developed a research program designed to validate the use of a Shoulder Arthroscopy Simulator System as a useful training tool for resident surgical skill sets. Our prior work which has been published in

the American Journal of Sports Medicine documented that Surgical experience correlates with measured performance using the Arthroscopic Shoulder Simulator. Subsequent work published in the same journal has documented an improved performance in residents progressing from junior to senior level of training. Our current work seeks to prove the hypothesis that training on a shoulder arthroscopy simulator will improve surgical skill in junior residents when compared to a matched control group where such training was not offered. We believe that in the future such surgical simulator training will be an important component of resident education in much the same fashion it plays a role in training of airline pilots.

Prospective Database: We have developed three prospective databases which will allow not only improved resident and fellow education, but also prospective study of the outcome of surgical treatment of shoulder problems. Our first database is a collection of all patients preoperative, postoperative and intraoperative findings documented by photo and video. This will allow us to access case examples of the outcome of a variety of treatments. Currently this information is maintained in a 2-terabyte server system with off-site back-up.

Our second database is a patient outcome database as all patients answer a questionnaire and undergo an extensive examination which is documented in this database. Subsequent follow-up through internet questionnaire and office examination will document outcome of treatment.

Our third database is an operative database which allows us to record all operative findings and all treatment aspects at the time of surgery. This is an internet-based system.

Teaching:

While at the University of Pittsburgh I was in charge of Fellow and Resident education on the Shoulder Service. I organized all conferences and developed a curriculum for clinical rotations as well.

Harvard Shoulder Fellowship: Since coming to Harvard I founded an International Shoulder Fellowship which was partnered with the University of Zurich. This program trained twelve fellows through 2007 at which time it was discontinued in favor of a more extensive fellowship based entirely at Harvard (MGH and BWH). At the time it was the only available international postgraduate educational program in Shoulder surgery. Currently the Harvard Shoulder Fellowship accepts 3-4 Fellows as part of a match program administered through the American Shoulder and Elbow Surgeons (ASES).

The Visiting International Shoulder Scholar Program allows foreign physicians with an academic interest in shoulder problems to come and participate in research as well as observe clinical cases. This is a minimum six month commitment. Fellows have been selected from over 20 countries since 2000. Countries represented Finland, France, Turkey, Korea, Japan, Taiwan, Hong Kong, Italy, Jordan, China, Colombia, Germany, and Brazil.

Clinical:

In the past ten years I have contributed to the clinical practice of shoulder surgery by the development of new surgical techniques as well as refinement and analysis of established treatment methods. These have included the following:

1. The first peer review description of a method of arthroscopic release of shoulder contractures and report of outcome of this treatment
2. The refinement of the technique of tendon transfers for management of irreparable rotator cuff tears.
3. Analysis of the anatomy and biomechanics of shoulder arthroplasty. This has led to insights into design of shoulder arthroplasty components. This has also contributed to the development of a novel shoulder arthroplasty system, the Anatomical Shoulder marketed and sold by Zimmer Company.
4. The refinement of techniques of arthroscopic repair for shoulder instability and surgical management in an outpatient setting. This includes research as cost-effectiveness of outpatient orthopaedic shoulder reconstructions.
5. Our recent analysis into the three-dimensional anatomy of rotator cuff tears has led to insights into methods of tendon repair to bone.

B. Funding Information (note if for research, education, or clinical applications):

<u>TYPE</u>	<u>Years Covered</u>	<u>Funding Source</u>	<u>PI/Co-PI</u>	<u>Grant Title</u>
Research	1992-1993	Bristol-Myers, Squibb, & The Commonwealth Fund (\$5,000)	Fellowship Program in Academic Medicine 1993 Nat'l Medical Fellowships, Inc. (Co-P.I.)	Material Properties of the Superior Glenohumeral Ligament.
Research	1994-1996	DePuy Research Grant Award (\$100,000.00/2 years)	O.R.E.F. Research Grant – P.I.	A Dynamic Shoulder Model of Rotator Cuff and Ligament Function
Research	1996	A.A.O.S. (\$20,000)	Young Investigator Award (P.I.)	KAPPA DELTA
Research	1997	Smith And Nephew Endoscopy. (\$17,100).	Institutional Grant (P.I.)	EMG Evaluation of the shoulder after rotator cuff repair
Educational	2000-2003	Smith and Nephew Endoscopy (\$240,000/3 years)	Institutional Grant	Shoulder Fellowship Support
Research	2000	O.R.L.A.C. Summer Grants Program. (Award of \$3000 to Markus Tingart, M.D.)	Shoulder Biomechanics Group, Orthopaedic Biomechanics Laboratory, Beth	Bone Mineral Density and Trabecular Microarchitecture of The Proximal

			Israel Hospital, Boston, MA (Preceptor, JP Warner)	Humerus and Their Relevance to Rotator Cuff Repair
Education	2001-2002	Mitek, Johnson & Johnson (\$100,000/2 yrs)	Institutional Grant to Carter Rowe Fellowship Fund	Shoulder Fellowship Support
Education	2001	Sulzer Orthopaedics (\$50,000)	Institutional Grant to Carter Rowe Fellowship Fund	Shoulder Fellowship Support
Education	2002	Arthrex (\$90,000)	Institutional Grant to Carter Rowe Fellowship Fund	Shoulder Fellowship Support
Education	2002	Aircast Corp. (\$35,000)	Institutional Grant to Carter Rowe Fellowship Fund	Shoulder Fellowship Support
Research	2003-2005	Arthroscopy Association of North America (AANA) (\$3,500)	Research Grant	Interobserver variability for SLAP lesions of the shoulder
Research	2003	Arthroscopy Association of North America (AANA) (\$2,500)	Resarch Grant	Interobserver variability in arthro- scopic determination of Superior Labrum Injuries
Education	2003	Tornier (\$10,000)	Institutional Grant to Carter Rowe Fellowship Fund	Shoulder Fellowship Support
Research	2005-7/30/06	Pfizer Inscope Orthopaedic Fellowship Award (\$50,000)	Reuben Gobezie Co-PI: Lisa Warren, Peter Millett, Jon Warner	Development of a Web-based Interactive Patient Database for the Harvard Shoulder Service
Research	2005	Arthroscopy Association of North America (AANA) \$15,000)	Reuben Gobezie	Proteomics
Research	2005	Harvard Partners Center for Genomics and Genetics: (\$25,000)	Reuben Gobezie	Proteomics
Education	2005-2009	Industry Grants (available on request)		Support of Carter Rowe Shoulder Fellowship
Research	2009	AANA (\$???)	Jon Warner/	An In-Vitro Study

		NIH, as an RO3 grant (# 1 R03 AR057199-01)	Andreas Gomoll	Correlating Performance on a Shldr Arthroscopy Simulator With a Cadaver Model
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C. Report of Current Research Activities (bench, research, clinical trials, outcome studies, efficacy studies as applicable):

Type	Project	Role
Basic Research	Analysis of Surface Area of Rotator Cuff Insertion with different methods of tendon Repair	Senior Investigator (Visiting Fellow Project)
Basic Research	Analysis of Bone density of the Proximal Humerus and Glenoid: Relevance to Fracture management, Arthroplasty and Tendon repair	Senior Investigator (Visiting Fellow Project)
Basic Research	Anatomic Landmarks for Proximal Humeral Reconstruction in Fractures	Senior Investigator (Shoulder Fellow Project)
Basic Research	Three-dimensional anatomy of arthroscopic rotator cuff repair	Senior Investigator (Shoulder Fellow Project)
Clinical Outcome Research	Arthroscopic vs Open Bankart Repair: A retrospective, cohort study of cost and outcome	Senior Investigator (Resident Project) (Co-Investigator: Bertram Zarins, M.D.)
Clinical Outcome Research	Arthroscopic vs Open Bankart Repair: A prospective outcome study including cost analysis and patient satisfaction (IRB Approved at MGH)	Senior Investigator (Resident Project) (Co-Investigator: Bertram Zarins, M.D.)
Clinical Research	Management of the painful snapping scapula: Arthroscopic treatment	Senior Investigator (Visiting Fellow Project)
Clinical Research	Superior labrum tears: Arthroscopic repair with and without knot tying	Senior Investigator (Shoulder Fellow Project)
Clinical Research	Arthroscopic rotator cuff repair – Enhanced strength with a transfixing device	Senior Investigator (Shoulder Fellow Project)
Clinical Research	Thermal Capsulorrhaphy for the Treatment of Shoulder Instability without a Bankart lesion: A multicenter study	Senior Investigator (Visiting Fellow Project) (Collaborative study with Duke University Dept. of Orthopaedic Surgery)
Basic Research	Vector and force analysis of tendon transfers about the shoulder	Senior Investigator (Shoulder Fellow Project)
Basic Research	Volumetric Assesment of Rotator cuff muscle and tendon (MRI analysis and correlation with laboratory assesment)	Senior Investigator (Visiting Fellow Collaborative project with 3-D Imaging Lab. At MGH and MRI Division at MGH)
Basic Research	Analysis of Contractile Cells in patients	Participant (Dr. Myron Spector’s laboratory)

	with Frozen Shoulder	at BWH is performing study)
Clinical Research	The Degree of Glenoid Erosion following Hemiarthroplasty for Fracture or AVN	Principal Investigator
Clinical Research	Anatomical Reconstruction of the Proximal Humerus: A Critical Radiographic Analysis	Principal Investigator
Clinical Research	Approximately 30 Retrospective and Prospective studies (list available on request)	Principal Investigator
Basic Research	3-Dimensional Fluoroscopic In-vivo Analysis of normal and abnormal shoulder motion	Principal Investigator
Basic Research	The value of Arthroscopic Simulator Training in Improving Skill sets in Residents in Orthopaedic Training Programs	Co-Investigator

D. Report of Teaching (use only those categories that are applicable):

1. Local contributions

- a. For each Medical School/School of Dental Medicine/Division of Medical sciences course** (for medical/dental/Ph.D. students), describe the following::

<u>Year(s) taught</u>	<u>Name of course or laboratory</u> (e.g. HMS II Rental Pathophysiology, HSDM Restorative Dentistry) Description of teaching role (attending, lecturer, tutor, or other) Type of students and average number each year (e.g. 6 medical students, 25 residents) Amount of preparation and contact time involved (e.g. months, weeks, hours, as appropriate)
1994	Student Health Service Lecture, University of Pittsburgh. December 14, 1994. Lecture (one hour) "The Painful Shoulder: Exam, Diagnosis and Treatment" given to Medical Students and staff (approximately 20)
1995	Rehabilitation Rounds. Presbyterian-Monefiore University Hospitals. Pittsburgh, PA. February 7, 1995. Lecture on "Surgical Management of Shoulder Problems". Two hour conference given to Physical Therapists and Physical Medicine Physicians (Approximately 15).
1995	Advanced Masters Program in Physical Therapy. Univeristy of Pittsburgh. Center for Sports Medicine. June 26, 1995: Lecture on "Biceps Tendon Problems". One hour lecture given to Athletic Trainer Students (Approximately 15)
1996	Problem Based Learning Module for 2 nd Year Medical Students (10 students/group; once/week for two months)

- b. For each graduate medical course, describe the following:**

<u>Year(s) taught</u>	<u>Name of course/presentation</u> Description of teaching role (attending, lecturer, tutor, or other) Type of students (residents, postdoctoral fellows, etc.) and average number each year Amount of
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	<i>preparation and contact time involved.</i>
1990-1998	Shoulder Core Curriculum Lecture and Interactive Teaching Series for Residents (My role: Organizer, Facilitator for other faculty, and lecturer. This was a component of the overall resident core curriculum educational program. Total of about 50 residents. There were approximately 3-4 sessions of 2-3 hours each during the academic year.)
1990-1998	Shoulder Service Conference Schedule Program (My role: Organizer, facilitator for other faculty, and lecturer. This conference was held every Wednesday morning for one hour and was a component of the combined conference schedule for the Sports Medicine and Shoulder Services. There were approximately 8 attendings, 3 fellows, 6 residents, and up to 10 foreign visiting orthopaedic surgeons present for each meeting.)
1991-1998	Lectures to Physical Therapists at University of Pittsburgh, Montifiore Hospital. (My role: Organizer and lecturer. This was an hour lecture given about twice each year to about 15 therapists on topics of shoulder disorders.)
1992	“An Update on ACL, MCL, and Meniscal Pathology and Rehabilitation” (My role: Lecturer. This was a 2 hour lecture given to the University of Pittsburgh School of Physical Therapy, Class of 1992.)
1991-1998	University of Pittsburgh, Orthopaedic Residency Anatomy Course Program and Tutorial (My role: Lecturer and preceptor for anatomy dissection. This was an annual half day educational exercise consisting of first lectures and then anatomical cadaver dissection. Approximately 50 residents were involved.)
1998-Present	Harvard Orthopaedic Residency Core Curriculum Program on Shoulder. (My role: Lecturer. This is a component of the core curriculum taught each week. This involves approximately one morning of lectures and interaction with about 50 residents).
1998-Present	Shoulder Service Conference Schedule (My role: Program organizer, facilitator for other lecturers, lecturer. This is the conference schedule for the Shoulder Service which is a component of the Sports Medicine and Shoulder Service Combined Conferences. During the year this involves about 7 one hour session. Present are usually 4-5 fellows, up to 6 attendings, 5-6 physical therapists, an MRI radiologist, 3 residents, and other foreign visiting orthopaedic surgeons.)

c. For local invited teaching presentations, (e.g., seminars, grand rounds) describe the following:

<u>Year(s) taught</u>	<u>Name of course/presentation</u> Description of teaching role (attending, lecturer, tutor, or other) Type of students (residents, postdoctoral fellows, etc.) and average number each year. Amount of preparation and contact time involved
1987	Orthopaedic Grand Rounds at Brigham and Women’s Hospital. Harvard Medical School. February, 1987: “Studies of Nontraumatic Osteonecrosis of the Femoral Head.”
1987	Orthopaedic Grand Rounds at The New England Baptist Hospital. Tufts Medical School. April 1987: “Studies of Nontraumatic Osteonecrosis of the Femoral Head.”
1988	Seminar for Emergency Technicians, Police and Fire Personnel. Marrimak College, MA, Sept. 1988. Lecture on “Management of Sports-related Emergencies.” (Two hour lecture and discussion with approximately 20-30 Emergency Personnel.)
1988	Thesis in Orthopaedic Surgery, Harvard Combined Orthopaedic Program Thesis Day. Boston, MA. November 1988. Lecture on “Studies of Nontraumatic Osteonecrosis of the Femoral Head.” (Presented at the MGH to all faculty and residents.)

1988	Lecture to the Annual Meeting of the New England Chapter of the American College of Sports Medicine: "Triage of Field Injuries." Boston, MA, November 1988.
1988	Lecture to the Milton Academy General Assembly (All students and teachers.): "General Fitness, Steroid use, and Prevention of Sports-Related Injuries." November 1988.
1990	Fellowship Thesis Lecture (one hour with discussion), presented at Hospital for Special Surgery, Cornell University Medical College, N.Y., N.Y.: "Factors Affecting Superior-inferior Translation of the Glenohumeral Joint." June 1990.
1991	Open Seminar to the public: "Common Cycling Injuries." Presented at the Funnybone Club, Pittsburgh, PA. May 25, 1991.
1991	Grand Rounds in Orthopaedic Surgery at Armstrong County Memorial Hospital, Kittaning, PA. May 1991: "Sports-related Injuries."
1991	Knee Injuries in Runners. Pittsburgh Marathon Workshop. Sports Medicine Seminar Series. Sports Medicine Institute. University of Pittsburgh (March 1991). (My role: Lectuere. This was given to athletic trainers, and residents and fellows and involved one hour.)
1991	Shoulder Disorders. 1-hour Lecture to Orthopaedic Nurses at Montefior Hospital, University of Pittsburgh, March 1991.
1991	Rotator Cuff Tears and Shoulder Instability. 1-hour Lecture to Athletic Training Students. University of Pittsburgh, April 1991.
1991	Orthopaedic Research Seminar, "Introduction to Sports Medicine." 1-hour lecture and discussion to ph.D.'s in biomechanics laboratory and to residents at University of Pittsburgh.
1992	Visiting Professor and Orthopaedic Grand Rounds Lecturer at Brigham and Women's Hospital, April 16, 1992: "Anatomic and Biomechanical Rationale for Shoulder Instability Surgery."
1993	Lectures to Residents, physical therapists, athletic trainers and Staff in Sports Medicine and Shoulder at University of Pittsburgh. 3-hours: Sports Rehabilitation Update 1993- Rotator cuff, Instability. March 20-21, 1993.
1993	First Annual Resident and Fellow Research Day, Dept. of Orthopaedic Surgery. University of Pittsburgh. April 27, 1993. Faculty Advisor for Fellow Presentation: Miller, M.D., Marks, P., Warner, J.J.P.: "Anatomy of arthroscopic Bankart Repair with the Suretac Device. Clinical and experimental observations."
1994	2 nd Annual Resident and Fellow Research Day, Dept. of Orthopaedic Surgery. University of Pittsburgh. May 18, 1994. Faculty Advisor for Fellow Presentation: Caldwell, G.A., Boardman, N.D., III, Debski, R.E., Warner, J.J.P.: "Transosseous rotator cuff repair: The Weak link?"
1994	2 nd Annual Resident and Fellow Research Day, Dept. of Orthopaedic Surgery. University of Pittsburgh. May 18, 1994. Faculty Advisor for Fellow Presentation: Allen, A.A., Marks. P.S., Wong, P., and Warner, J.J.P.: "Arthroscopic release of chronic, refractory capsular contracture of the shoulder."
1995	Invited Lecturer. Blairsville Orthopaedic Group, PA. Sponsored by G.D. Searle Co.: Jon J.P. Warner: "Total shoulder replacement."
1995	3 rd Annual Resident and Fellows Research Day, University of Pittsburgh, Dept. of Orthopaedic Surgery. May 3, 1995. Faculty Advisor: Kann, S. and Warner, J.J.P.: "The arthroscopic impingement test."
1995	3 rd Annual Resident and Fellows Research Day, University of Pittsburgh, Dept. of Orthopaedic Surgery. May 3, 1995. Faculty Advisor: Waskowitz, R.S., Warner, J.J.P.: "Massive rotator cuff tears: A clinical, radiographic, and MRI study."

1995	3 rd Annual Resident and Fellows Research Day, University of Pittsburgh, Dept. of Orthopaedic Surgery. May 3, 1995. Faculty Advisor: Ticker, J.B. and Warner, J.J.P.: “Recognition and treatment of isolated posterior capsular contracture of the glenohumeral joint.”
1995	4 th Annual Resident and Fellows Research Day, University of Pittsburgh, Dept. of Orthopaedic Surgery. May 17, 1996. Faculty Advisor: Navarro, R.A. and Warner, J.J.P.: “Serratus anterior dysfunction: Recognition and treatment.”
1997	Visiting Professor and Lecturer, The Boston University Sports Medicine Course. The Harborview Inn, Edgartown, Martha’s Vinyard, Massachusetts. July 20-25, 1997.
1997	Visiting Professor and Orthopaedic Grand Rounds Lecturer. Brigham and Women’s Hospital. March 6, 1997: “Massive Rotator Cuff Tears: Biomechanics, Evaluation, and Treatment.”
1997	Visiting Professor and Lecturer, The University of Massachusetts, Sports Medicine 1997 Update. The Sturbridge Host Hotel and Conference Center, Sturbridge, MA. Oct. 9-10, 1997. (This was a course for approximately 300 Orthopaedic Surgeons.)
1999	Visiting Professor and Orthopaedic Grand Rounds Lecturer at Baystate Medical Center and the Shriners Hospital for Children. Springfield, MA. January 21, 1999: “Management of the Stiff Shoulder Following Surgery.”
1999	Visiting Professor and Orthopaedic Grand Rounds Speaker at the Lahey Clinic, Burlington, MA. January 13, 1999: “ <i>Treatment of Massive Rotator Cuff Tears</i> ”
1999	PRIMED (Primary Care Medicine) Annual Conference. Sponsored by the Brigham and Womens’ Dept. of Primary Care Medicine. Boston, MA. January 23, 1999. Invited Lecturer: “ <i>Shoulder Injuries in Sports.</i> ”
1999	Faculty Participant Harvard Medical School Course Sponsored by BWH Primary Care Group: “ <i>Office Practice of Primary Care Medicine</i> ” Course. Marriott Copley Plaza. March 1, 1999. (2 hour symposium on “Shoulder Pain” presented to over 400 primary care physicians.)
1999	Grand Rounds Lecturer in Orthopaedic Grand Rounds at Massachusetts General Hospital, March 10, 1999. “Management of Shoulder Stiffness Following Surgery”.
1999	Lecturer at Orthopaedic Grand Rounds at Massachusetts General Hospital, Sept. 30, 1999: “ <i>Impingement Syndrome: What is it and What is there to treat? A Debate... Warner vs Zarins</i> ”
2000	Harvard Orthopaedic Radiology Course. Boston, MA. March 29, 2000. Lecture on “ <i>Athletic Injuries of the Shoulder.</i> ”
2000	Orthopaedic Surgery Grand Rounds at Boston Medical Center, October 16, 2000: “ <i>Management of Massive Irreparable Rotator Cuff Tears.</i> ”
2001	Core Curriculum at Brigham Women’s Hospital, January 3, 2001. “ <i>Instability</i> ”, “ <i>Instability—operative treatment.</i> ” Local teaching contribution.
2001	Orthopaedic Surgery Grand Rounds at Carney Hospital, Dorchester, MA, January 5, 2001. “ <i>Arthroscopic Bankart and Slap lesion repair.</i> ”
2001	Lecturer at Orthopaedic Grand Rounds at Brigham and Women’s Hospital. October. 31, 2001: “ <i>Advantages of an Adaptable Prosthesis for Shoulder Arthroscopy</i> ”
2004	Lecturer at Medical Grand Rounds at Faulkner Hospital. November 4, 2004. “ <i>Shoulder Injuries for the Internist</i> ”
2005	Lecturer at Medical Grand Rounds at Dartmouth Hospital. October 12, 2005. “ <i>Management of Rotator Cuff Disease from Arthroscope to Arthroplasty</i> ”

D. Report of Teaching (Cont'd)

1d. For each continuing medical education course (cont'd)

<u>Year(s) taught</u>	<u>Name of course</u> <i>Description of teaching role; Amount of preparation and contact time involved</i>
1989	Second Annual Meadowlands Sports Medicine Symposium. Sheraton Meadowlands Hotel, East Rutherford, NJ, November 1989: Lecture on "Management of Acromioclavicular Joint injuries."
1990	The Fourth Annual Panther Sports Medicine Symposium: Current Concepts of the Shoulder in Throwing and Racquet Sports. Pittsburgh, PA. November 1990. Lectures on "Basic Shoulder Anatomy: Glenohumeral joint and Rotator cuff"; "Current Concepts of Rotator Cuff Pathology in the Throwing Athlete"; and "Surgical Management of Shoulder Instability." Round Table Discussion and Case Presentations: "Rotator Cuff Problems."
1991	American Academy of Orthopaedic Surgeons, Instructional Course #417. Anaheim, CA. March 1991: "Arthroscopic Meniscal Repair: Outside-In Technique with Fibrin Clot." (3 hour course).
1991	American Orthopaedic Society of Sports Medicine Instructional Course. Orlando, Fl. July 1991: "Arthroscopic Meniscal Repair" (3 hour course)
1992	American Academy of Orthopaedic Surgeons Annual Meeting, Instructional Course#110. Washington, DC. February 21, 1992: "Meniscus Function and Techniques of Repair." (3 hour course)
1992	American Academy of Orthopaedic Surgeons Annual Meeting, Surgical Demonstration. Washington, DC. February 21, 1992: "Meniscus Repair: Outside-In Technique." (2 hour demonstration with video and open microphone to audience.)
1992	The Fifth Annual Panther Sports Symposium. David L. Lawrence Convention Center. Pittsburgh, PA. April 1992: Lectures on "Management of ACL Disruption with Semitendinosus-Gracilis Augmented Repair"; and "Management of Knee Dislocation and Severe Combined Ligament Injuries." Surgical Skills Workshop, Moderator (2 hours).
1992	Orthopaedic Sports Medicine Seminar for Orthopaedic Surgeons, Sponsored by the Cincinnati Sports Medicine Institute. Hilton Head, SC. July 1-4, 1992. Lectures on "Instability of the Shoulder"; "Pitfalls in Management of Proximal Humerus Fractures"; and "Applications and Pitfalls of Shoulder Arthroscopy."
1994	Team Physician's Course, American College of Sports Medicine, Dallas, TX. February 9-13, 1994. Invited Speaker. Lectures on "Rotator cuff injuries in Athletes"; "Elbow: Functional Anatomy and Biomechanics"; "Prevention and Treatment of Elbow Injuries"; "Specific Problems and Pearls in Tennis"; Workshop on Physical Examination of the Shoulder.
1994	The 7 th Annual Panther Sports Medicine Symposium. The Unstable Shoulder: An International Consensus. Pittsburgh, PA. April 14-16, 1994. Course Co-Chairman . Lecture on "Arthroscopic Bankart Repair"; Moderator session on "Anatomy/Biomechanics"; Moderator session of Surgical Demonstrations.
1994	American Academy of Orthopaedic Surgeons, Orthopaedic Learning Center Course. Rosemont, IL. November 17-19, 1994. Invited Faculty. Lecture on "Arthroscopic-assisted rotator cuff repair"; Laboratory Instructor.
1994	American Orthopaedic Society for Sports Medicine Course. Lake Buena Vista, FL. December 8-10, 1994. Invited Faculty. Lecture on "Instability of the Shoulder: Indications for Surgical Repair."
1995	Current Concepts in Shoulder Reconstructive Surgery. New York Medical College, Dept. of Orthopaedic Surgery Course. Thornwood Conference Center, Westchester County, N.Y. April 20-21, 1995: Invited Faculty. Lectures on "The role of Arthroscopic/Open Release in the Treatment

	of Stiff Shoulder”; and “Biomechanics of the Shoulder.”
1995	American Academy of Orthopaedic Surgeons Course. The Shoulder: A Comprehensive View. Washington, DC. April 28-30, 1995. Invited Faculty. Lectures on “Management of Sternoclavicular Separations: Anterior and Posterior”; “History and Complications of Proximal Humerus Fractures”; and “Classification and Management of Scapular Fractures.” Shoulder Workshop (2 hours): “Arthroscopic Acromioplasty.”
1995	American Academy of Orthopaedic Surgeons, Orthopaedic Learning Center Course. Rosemont, IL. November 10-12, 1995. Invited Faculty. Lecture on “ Proximal humerus fractures: Treatment with percutaneous pins”; Panel Discussion: “Management of Rotator Cuff Tears”; Live Video Demonstration: “Arthroscopic Bankart Repair with the Suretac.”; Videotape presentation: “Office Examination of the Unstable Shoulder.” Laboratory Instructor.
1995	The Summer Institute of the American Academy of Orthopaedic Surgeons. Boston, MA. September 11-13, 1995. Invited Faculty. Laboratory Instructor.
1996	The Robert W. Metcalf, M.D. Memorial Course on Arthroscopy of the Shoulder. Scottsdale Princess, Scottsdale, AZ. January 14-18, 1996. Invited Faculty. Lectures on “Clinically relevant biomechanics for shoulder instability”; “Suretac Technique of arthroscopic instability repair”; “Biomechanics of Impingement”; “Arthroscopic capsular release for refractory capsular contracture of the shoulder”; Panel Discussion: “Shoulder Instability and arthroscopic techniques for reconstruction”; Panel Discussion: “Rotator cuff disease and arthroscopic techniques for reconstruction”.
1996	Symposium: Failed Rotator Cuff Repairs: Evaluation and Treatment Alternatives. Annual Meeting of the American Academy of Orthopaedic Surgeons. Atlanta, Georgia. February 23, 1996. Invited Faculty (3 hour symposium): Lecture on “Management of the Stiff Shoulder after Rotator Cuff Repair.” Panel discussion.
1996	American Academy of Orthopaedic Surgeons Course. “The Shoulder: A Comprehensive View”. Dana Point, CA. March 28-31, 1996. Invited Faculty. Lectures on “Evaluation and Classification of Glenohumeral Instability”; “Treatment and Complications of Sternoclavicular Joint Separations”; and “Classification and Treatment of Scapular fractures”; Moderator: session on “Clavicle fractures”; Moderator: session on “Fractures about the shoulder”; Break-out session on “Arthroscopic instability repair”.
1996	2 nd World Congress of Sports Trauma/American Society for Sports Medicine 22 nd Annual Meeting. Lake Buena Vista, FL. June 16-20, 1996. Invited Faculty. Lecture on “Treatment of the Overconstrained Anterior Shoulder Reconstruction.”
1996	American Academy of Orthopaedic Surgeons Course. Orthopaedic Learning Center. Rosemont, IL. November 8-10, 1996. “Strategic Management of the Shoulder: Rotator Cuff, Instability, and Decompression”. Invited Faculty. Laboratory Instructor.
1996	The 15 th Fall Course of the Arthroscopy Association of North America. Palm Dessert, CA. November 21-24, 1996. Invited Faculty. Lecture on “Management of Shoulder Contractures.”
1997	Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 17, 1997. Symposium: “Shoulder Instability: Complex Problems and Failed Repairs.” Invited Faculty. Lecture on “Biomechanics of Shoulder Instability” and Panel Discussion (3 hour symposium)
1997	American Academy of Orthopaedic Surgeons Annual Meeting. San Francisco, CA. February 14, 1997. Instructional Course Invited Faculty: “Management of Proximal Humerus Fractures: Current Trends.” Lecture on “Open Reduction and Internal Fixation of Displaced Proximal Humerus Fractures” and Panel Discussion. (2 hour course).

1997	American Academy of Orthopaedic Surgeons Annual Meeting. San Francisco, CA. February 17, 1997. Instructional Course Invited Faculty: "Arthroscopic Evaluation and Treatment of Shoulder Instability- Anterior, Posterior, MDI, and SLAP lesions." Lecture on "Biomechanics of Instability of the Shoulder" and on "Arthroscopic Instability repair with the Suretac Device." (2 hour course.)
1997	American Academy of Orthopaedic Surgeons Course: "Shoulder and Knee: The Athletic Perspective to Treatment Controversies." Steamboat Springs, CO. March 18-22, 1997. Invited Faculty. Lectures on "Massive Rotator Cuff Tears"; "Surgical treatment of Multidirectional Instability"; Panels on "Tricks and Pitfalls of subacromial decompression and rotator cuff repair"; "Indications for Surgical treatment of shoulder instability"; and "Problems of rotator cuff disease: Acromial fracture, tissue graft, return to activity parameters, and anchor vs bone tunnel."
1997	American Academy of Orthopaedic Surgeons Course: "The Shoulder 1997: A Comprehensive Guide for Mainstream and Controversial Issues". Invited Faculty. Bal Harbour, FL. April 3-6, 1997. Lectures on "Percutaneous Pin Fixation of Proximal Humerus fractures"; "Glenohumeral arthritis: Treatment alternatives"; and "The Basic Science of Shoulder Instability". Panel discussions on "The Painful Prosthesis"; "The Stiff Shoulder"; "AC and SC Joint injuries"; and "Controversies in Mangement of Instability."
1997	The Eighth Panther Sports Medicine Symposium: "Current Concepts in Knee Surgery." University of Pittsburgh. April 17-19, 1997. Invited Faculty. Moderator: "Meniscal Repair and Transplantation."
1997	American Academy of Orthopaedic Surgeons. Orthopaedic Learning Center Course. "Open and Arthroscopic Shoulder Surgery: Current Concepts and Techniques." Rosemont, IL. July 11-13, 1997. Course Co-Chairman . Lecture on "Treatment of Proximal Humerus Fractures: Closed reduction and percutaneous pinning."; Live video demonstration on "Hemiarthroplasty for 4-part proximal humerus fractures." Video demonstrations on " A.C. Joint reconstruction for instability"; "Physical examination for rotator cuff tear"; and "Office evaluation of the unstable shoulder."
1997	Boston University Sports Medicine Course. The Harborview Inn. Edgartown, Martha's Vinyard, MA. July 20-25, 1997. Invited Faculty. Lectures on "Clinical biomechanics of shoulder instability"; "Diagnosis and management of multidirectional instability"; "Management of massive rotator cuff tears"; "Management of the Stiff Shoulder"; and "Diagnosis and Management of Scapular Winging".
1997	University of Massachusetts Sports Medicine 1997 Update. The Sturbridge Host Hotel and Conference Center, Sturbridge, MA. October 9-10, 1997. Invited Faculty. Lectures on "Shoulder Stability/Instability...Biomechanics and Pathomechanics"; and "Anterior glenohumeral instability: Arthroscopic treatment." Surgical Demonstration on "Arthroscopic Bankart and SLAP lesion repair."
1997	American Academy of Orthopaedic Surgeons. Orthopaedic Learning Center Course. Rosemont, IL. December 7, 1997. "Open and Arthroscopic Surgery: Current Concepts and Techniques". Invited Faculty. Lecture on "Arthroscopic and open management of the stiff shoulder." Videotape demonstraton on "Instability: Clinical evaluation." Laboratory Instructor.
1997	University of South Florida and Tampa General Hospital Course. "Current Concepts of Shoulder an Elbow Surgery". Tampa, FL. January 22-24, 1997. Invited Faculty. Lectures on "Biomechanics and Pathomechanics of Rotator Cuff Tears"; "Biomechanics and Pathomechanics of Shoulder Stability/Instability"; "Adhesive capsulitis-treatment" and "Management of Proximal Humerus Fractures." Live Surgical Demonstration: "Arthroscopic release."
1998	The American Orthopaedic Society for Sports Medicine Course: "The Athlete's Shoulder". Orlando, FL. January 30-February 1, 1998. Invited Faculty. Lectures on "Dealing with Postoperative Stiffness"; "Failure of Instabiity Surgery"; "Shoulder Mechanics: What's new".

	Laboratory Instructor: “Arthroscopic Instability Repair”.
1998	Course Sponsored by The Hospital for Special Surgery, Cornell Medical Center: “Current Concepts in Shoulder Arthroplasty and Arthroscopy”. Walt Disney World’s Buena Vista Palace, Buena Vista, FL. February 13-14, 1998. Invited Faculty. Lectures on “Arthroscopic stabilization-current status”; “Management of Adhesive Capsulitis”; “The role of Bone grafting in Shoulder Arthroplasty”. Panel Discussions on “How technique varies with pathology”; “The Rheumatoid shoulder”; and “Nonunions and their treatment”.
1998	65 th Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. March 21, 1998. Instructional Course Lecture: “Management of Proximal Humerus Fractures: Current Trends”. Invited Faculty. Lecture on “Open reduction and internal fixation of proximal humerus fractures” and panel discussion. (2 hour course).
1998	American Academy of Orthopaedic Surgeons Comprehensive Shoulder and Elbow Course and American Shoulder and Elbow Surgeons First Open Meeting. Kiawah Island, SC. April 23-26, 1998. Invited Faculty. Lecture on “Shoulder Instability: Clinical Diagnosis and imaging”; Panel discussion: “Instability”.
1998	Cincinnati Sportsmedicine and Research Foundation Course: “1998 Advances on the Knee and Shoulder. Hilton Head, SC. May 24-27, 1998. Invited Faculty. Lectures on “Diagnosis and Treatment of Impingement”; “Treatment of Massive Rotator Cuff Tears”; “The problem Shoulder: Treatment of adhesive capsulitis”; and “Multidimensional Instability of the Shoulder.” Moderator: “Operative treatment of rotator cuff tears.”
1998	Arthroscopy Association of North America, “The Masters Experience” Shoulder Course. Orthopaedic Learning Center. Rosemont, IL. May 29-31, 1998. Invited Faculty. Lectures on “Arthroscopic release for treatment of acquired shoulder stiffness”; and “Arthroscopic Bankart repair: Analysis of techniques.” Laboratory Instructor.
1998	15 th Annual San Diego Shoulder Meeting. Arthroscopy and Arthroplasty. La Jolla, CA. June 24-27, 1998. Invited Faculty. Lectures on “Shoulder Arthroscopy in the Beach Chair Position”; “Arthroscopic vs Open Bankart”; and “Treatment of the stiff shoulder”. Laboratory Instructor.
1999	American Academy of Orthopaedic Surgeons Comprehensive Shoulder Course. “The Shoulder: A Comprehensive View”. Panama City, Fl. April 15-18, 1999. Invited Faculty. Lectures on “Irreparable full thickness rotator cuff tears: The role of muscle transfers vs cuff debridement.”; “Frozen Shoulder: Surgical Management”; “Open reduction and internal fixation of proximal humerus fractures.”; Breakout session: “Fractures”
1999	American Academy of Orthopaedic Surgeons, Orthopaedic Learning Center Course: “Open and Arthroscopic Shoulder Surgery: Approaches for the New Millenium”. July 9-11, 1999: <ol style="list-style-type: none"> 1. Course Chairman 2. Lecture: Management of the Stiff Shoulder 3. Video Presentation: Examination of Rotator Cuff Tears 4. Video Presentation: Examination of Instability 5. Video Presentation: Open reconstruction of acromioclavicular joint instability. 6. Panel Discussion: Fractures, Stiff shoulders, A.C. and S.C. Joint Problems
1999	American Academy of Orthopaedic Surgeons, 66 th Annual Meeting. Symposium: “The Stiff Shoulder”. Invited Lecturer: “Management of Shoulder Stiffness following Surgery.” Anaheim, CA. Feb. 4-8, 1999.
2000	American Academy of Orthopaedic Surgeons Annual Meeting. Orlando, FL. March 15, 2000. Instructional Course Lecture #103. Invited Faculty: Lecture on “Options in Treatment of Massive Rotator Cuff Tears- Tendon Transfers vs Debridement”.

2000	American Academy of Orthopaedic Surgeons. Orthopaedic Learning Center Course: “Advanced Techniques in Open and Arthroscopic Surgery.” Rosemont, IL. April 28-30, 2000. Invited Faculty: Lecture on “Arthroscopic Anterior Shoulder Stabilisation” and Laboratory Instructor.
2000	Second Biennial Shoulder and Elbow Meeting (Jointly sponsored by the American Academy of Orthopaedic Surgeons and the American Shoulder and Elbow Surgeons). Miami, FL. May 4-7, 2000. Invited Faculty: Lectures on “Management of Shoulder Stiffness” and “Pathology and Clinical Diagnosis of Instability of the Shoulder”; “One-on-one Meet the Experts”
2000	Current Concepts in Joint Replacement. CME Course Sponsored by Case Western Reserve University. Las Vegas, NV. May 21-24, 2000. Invited Speaker. Lectures on “Labral Tears: A stitch in time?”; “Total shoulder arthroplasty” Restoring anatomy”; “Management of stiffness after shoulder arthroplasty”. Panel: “What would you do? Challenges in Shoulder Surgery.”
2001	Mitek Global Advanced Arthroscopy Knee and Shoulder Symposium. Rosemont, IL. January 20-21, 2001. Lecture on: Management of the Stiff Shoulder; Arthroscopic RC Repair Using a New Absorbable RC Tack and Panalok RC/Panacryl—Lecturer and Demonstrator. Arthroscopic Treatment of a Stiff Shoulder: Who, When, How. Faculty Panel Discussion on Sports Medicine and the Shoulder—Facilitator. Shoulder Course Chairman , Director of Shoulder Laboratory, Facilitator.
2001	Mitek Sports Medicine Symposium Advanced Arthroscopy Shoulder and Knee, Park City, Utah. Lecture: “Arthroscopic Treatment of a Stiff Shoulder: Who, When, How”, "Arthroscopic Rotator Cuff Repair”, Lab Shoulder Cadaver Arthroscopy Workshop. Program Co-Chairman , Workshop Chairman , Lecturer. March 16-18, 2001.
2001	American Academy of Orthopaedic Surgeons, San Francisco, CA. Moderator: Symposium: Management of the Stiff Shoulder. March 4, 2001.
2001	American Academy of Orthopaedic Surgeons San Francisco, CA. AAOS: Arthroscopic Management of Glenohumeral Instability. "Healing Heat and Knotless Suture Repair." Participant: Instructional Course Lecture. March 2, 2001.
2001	Annual Comprehensive Shoulder Course of the American Academy of Orthopaedic Surgeons. Albuquerque, NM, May 14-17, 2001: Course Co-Chairman . Lectures on “Management of the Stiff Shoulder”; “Management of Proximal Humeral Fractures”; Workshop on “Accurate Coding for Shoulder Surgery”
2001	American Academy of Orthopaedic Surgeons, The Shoulder: A Comprehensive Update, #3362. Santa Ana Pueblo, NM. May 17-20, 2001. Course Co-Chairman . Lecturer: "SLAP Lesions: Evaluation, Imaging, and Surgical Management", Moderator: Stiffness and Neurologic. Lecturer “Frozen Shoulder: Nonoperative and Surgical Management”, “Role of Debridement, Tendon Transfers, Fusion”, Discussor: Concurrent Breakout Sessions, Coding and Billing for Shoulder Procedures, Lecturer “ORIF and Percutaneous Pinning of Proximal Humerus Fractures: Indications and Technique”. Course Co-Chairman , Lecturer, Discussor. May 17-20, 2001
2001	Massachusetts General Hospital: Primary Care Orthopaedics Course, Cambridge, MA. May 23-24, 2001. Lecture “Common Causes of Shoulder Pain: An overview for the primary care provider”, “Common Adult Sports Injuries of the Shoulder”. Lecturer. May 23-24, 2001.
2001	American Orthopaedics of North America: AO ASIF Upper Extremity Course. Boston, MA. May 31-June 1, 2001. Chairman . Lecturer. “Pro-Open Repair Lecture: Why and how I do arthroscopic repair of instability”. Panel Discussion and Case Controversies. “Management of Failed Rotator Cuff Repair and Irreparable Situations (Debridement vs. tendon transfers)”, “Management of Refractor Stiff Shoulder (After prior surgery)”. Chairman , Lecturer. May 31-June 1, 2001.

2001	18 th Annual San Diego Meeting, San Diego Shoulder Arthroscopy Arthroplasty Fractures, San Diego, CA. June 20-23, 2001. Invited Speaker: “The Value of Anatomical Shoulders Reconstruction” “Shoulder Instability: Why Does Our Surgery Fail?”, Panel Discussion: “Arthroplasty” “Instability”, Total Shoulder Workshop: Sulzer Anatomical Shoulder. Invited Speaker. June 20-23, 2001.
2001	Knee and Shoulder Arthroscopy Workshop (University of Virginia, Dept. of Orthopaedics), Charlottesville, VA. July 13-14, 2001. Guest Faculty. Presentation: “Arthroscopic RC Repair: Decision Making and use of Cufftack”. Demonstration: “Arthroscopic Instability utilizing the Knotless Suture Anchor Technique”. Invited Faculty. July 13-14, 2001.
2001	Total Knee, Hip and Shoulder Arthroplasty Seminar (Sulzer Orthopaedics), Avon, CO. August 16-18, 2001. Invited Faculty. Presentation: “Replacing the Glenoid: What’s up with that?” Surgical Pearls: “Anatomical Shoulder System”. Invited Faculty August 16-18, 2001
2002	Metcalf Memorial Course: Arthroscopy and Reconstructive Surgery 2002, Salt Lake City, Utah. January 11-17, 2002. Faculty and Lecturer. Lecturer “Massive RCT: What Can You Do When It’s Really Irreparable?”, “Complicated Instability Repair: When You Just Can’t or Shouldn’t Fix It With a Scope – Other Options to Consider”, Management of Arthritis in the Young Patient, an “Anatomical Approach”, “Super” Shoulder Panel –Questions About Any and All Shoulder Topics, “How I Manage the ‘Stiff Shoulder’ Both Idiopathic and Post Surgical”. Faculty and Lecturer, January 11-17, 2002
2002	Global Knee and Shoulder Arthroscopy Symposium, Chicago, IL. January 19-20, 2002. (Mitek) Chairman , Faculty, Lecturer and Demonstrator. “Frozen Shoulder: Non-Operative and Operative Management”, Cadaver Demonstration: “Arthroscopic Release of a Stiff-Shoulder & SLAP”, Discussor: “Global Approach in the Shoulder & Complex Cases”, Lecturer: “Arthroscopic Release of a Stiff Shoulder”, “Arthroscopic RCR using a suture and Transfixing Technique: Belt and suspenders approach”. Chairman , Faculty, Lecturer and Demonstrator, January 19-20, 2002.
2002	Invited Faculty, Arthroscopy and Reconstructive Surgery 2002, Rosemont, IL. Robert W. Metcalf, MD, Memorial Course. Chairman , Invited Faculty, Facilitator, Lecturer, Demonstrator: “Arthroscopic Release of a Stiff Shoulder & SLAP”, Lecture “Arthroscopic Release of a Stiff Shoulder”, “Arthroscopic RCR using a suture and Transfixing Technique: Belt and suspenders approach”. January 20, 2002
2002	Arthroscopy Association of North America Specialty Day 2002, Dallas, TX. February 16, 2002. Instructor, Lecturer, . “Open repair and tendon transfers”, “Arthroscopic Management of the Refractory Stiff Shoulder: Indications and Technique”. February 16, 2002
2002	Hand Rehabilitation Foundation, Management of Upper Extremity Arthritis: An Update, Philadelphia, PA. March 9-11, 2002. Invited Faculty, Lecturer. “Shoulder Replacement with Cuff Deficiency”. March 9-11, 2002.
2002	University of Virginia Arthroscopy Sports Course (Mitek), Charlottesville, VA. March 15-16, 2002. Guest Faculty. Presentor “Arthroscopic Release of a Stiff Shoulder”, Demonstrator “Arthroscopic Instability utilizing the Knotless Suture Anchor Technique”. March 15-16, 2002
2002	AAOS Third Biennial Shoulder and Elbow Meeting, Orlando, Florida. April 4-7, 2002. Co-Chairman , Lecturer “Massive Tears: Role of Tendon Transfers” and “Arthroscopic Thermal Capsulorrhaphy: Current Clinical Results”, Panel Discussion “Arthroscopic vs. Open”, Moderator and Panel Discussion “Clinical Decision Making”, Moderator “ Glenohumeral Instability”, Moderator for Scientific Papers. April 4-7, 2002.
2002	Invited speaker, 19 th Annual San Diego Shoulder Course Meeting. San Diego, CA, June 19-22, 2002. “The Value of Anatomical Shoulder Reconstruction”, “What Works and Does Not Work for Shoulder Fractures”, “Shoulder Stability/Instability Concepts”. June 19-22, 2002

2002	Co-Chairman , Master Arthroscopy Course on Basic Shoulder. Arthroscopic Association of North America Learning Center, Chicago, IL. August 16-18, 2002.
2002	Invited Faculty, 21 st Fall Course of the Arthroscopy Association of North America, Palm Desert, CA. November 18-19, 2002. <ol style="list-style-type: none"> 1. Arthroscopic Capsule Plication for Multidirectional and Posterior Instability: Indications and Technique. 2. Focus Demonstration: Arthroscopy Bankart & Rotator Cuff Repair Utilizing Knotless Anchors.
2002	Invited Faculty: Moderator and Lecturer, 7 th Annual Lake Tahoe Knee and Shoulder Update 2002 Lake Tahoe, NV, December 5-8, 2002. <ol style="list-style-type: none"> 1. Anatomical Total Shoulder 2. Avoiding Complications in Shoulder Arthroplasty/Optimizing Results 3. Arthroplasty
2003	Arthroscopic Management of Multidirectional Instability. Instructional Course Lecture in Course 202: Advances in Arthroscopic Management of Shoulder Instability: Anterior, Posterior, Multidirectional.
2003	Invited Professor/Moderator, AOSSM Annual Meeting 29, San Diego, CA, July 20-23, 2003: <ol style="list-style-type: none"> 1. Pathophysiology and Contribution to Shoulder Surgery 2. Scientific Session: Rotator Cuff
2003	Chairman, AO ASIF Upper Extremity Course, Newport Rhode Island, August 27-29, 2003.
2003	Invited Professor/Lecturer, Boston Shoulder and Sports Symposium 2003, Waltham Woods, MA., October 17-18, 2003. “Arthroscopic Management of MDI”, “Total Shoulder Arthroplasty”.
2005	Invited Lecturer, AAOS Annual Meeting, Washington, DC, February 23-27, 2005 Instructional Course Lecture: Shoulder OA in Young Patients ➤ “The Role of Shoulder Arthroplasty” Instructional Course Lecture: Attachment of Rotator Cuff Tears ➤ “The Role of Tendon Tears: The Role of Tendon Transfer”
2005	Invited Lecturer, 24 th Annual Meeting of the Arthroscopy Association of North America, Vancouver, BC, Canada, May 12-15, 2005 Instructional Course 303: <i>Master Cases in Shoulder Surgery: Case Presentations and Management of Challenging Shoulder Pathology</i>

D. Report of Teaching (Cont’d)

1e. For advisory and supervisory responsibilities in clinical or laboratory setting (for medical or graduate students, residents or fellows:

<u>Year(s) performed</u>	<u>Description of responsibilities</u> (e.g., attending in health-care organization, supervising in ambulatory clinic, precepting in a lab), and estimate of hours per year.
1992-1998	Co-Director, Shoulder Biomechanics Laboratory, University of Pittsburgh. I was responsible for the long-term direction of the laboratory and supervised the research activities of two Ph.d.’s, 2-3 research fellows, and visiting fellows and medical students working in the Shoulder Laboratory.
1998-current	Director, Shoulder Biomechanics Study Group. I was in charge of the long range plan and daily activities of the Shoulder Biomechanics Laboratory at the Beth Israel Hospital Orthopaedic Biomechanics Laboratory. I supervise one Ph.D. and two fellows, as well as 4-6 visiting medical students and fellows during the year. This laboratory now moved to the MGH and has been renamed the Shoulder Biomechanics Laboratory (SBL).

- f. **For each teaching leadership role in department/affiliated institution Medical School/School of Dental Medicine** (organization of course, director of training programs, etc.):

<u>Year(s) performed</u>	<u>Title</u> (e.g. Director of Residency Program in Pediatrics at CH, Course Director for Pharmacology, HMS I); Primary responsibilities; Special accomplishments (described in a one-paragraph narrative)
1992-1998	Director, Shoulder Service, University of Pittsburgh. I acted as fellowship director for three postgraduate fellows each year who rotated onto the Shoulder Service for 4 months each during their combined Sports Medicine Shoulder Fellowship at the University of Pittsburgh. I also organized the resident experience on this service.
1998-present	Chief, The Harvard Shoulder Service. I am responsible for the teaching program for our annual two postgraduate fellows, as well as 2-4 Visiting foreign Shoulder Scholars each year. I also organize the teaching program for our residents in the Harvard Orthopaedic Program.

D. Report of Teaching (Cont'd)

- g. **Names of advisees or trainees: years in position under your supervision, and current position.** List only those trainees on whose careers you have made a significant impact.

<u>Position</u>	<u>Duration of Training</u>	<u>Name</u>	<u>Current Position</u>
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1992	David N. Caborn, M.D.	Associate Professor, Associate Director, Division of Sports Medicine, Dept. of Orthopaedic Surgery, University of Kentucky
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1992	Eric Olsen, M.D.	Private Practice, Connecticut
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1993	Paul Marks, M.D.	Private Practice, Toronto, Canada. Team Physician, Raptors Professional Basketball Team
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1993	Mark D. Miller, M.D.	Associate Professor of Orthopaedic Surgery, University of Virginia, Sports Medicine and Shoulder Service
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1993	Darren L. Johnson, M.D.	Professor and Chairman, Dept. of Orthopaedic Surgery, University of Kentucky. Board of Directors, American Academy of Orthopaedic Surgeons
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1994	George Caldwell, M.D.	Private Practice, Fort Lauderdale, Fl.
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1994	Marc Safran, M.D.* Elected into American Shoulder and Elbow Surgeons (A.S.E.S.)	Director, Sports Medicine and Shoulder Service, University of California, San Francisco, CA

Sports Medicine and Shoulder Fellow, University of Pittsburgh	1994	Answorth Allen, M.D.	Assistant Professor, Dept. Orthopaedic Surgery, Hospital for Special Surgery, Cornell University Medical Center, New York, N.Y.
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1995	Todd Swensen, M.D.	Private Practice, Jainesville, Wisconsin
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1995	Keri Schulte, M.D.	Private Practice, DeMoine, Iowa
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1995	Jonathan Ticker, M.D.* Elected into American Shoulder and Elbow Surgeons (A.S.E.S.)	Private Practice, Long Island, NY
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1995	James Dalton, Jr., M.D.	Private Practice, Charlston, SC
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1995	Paul Dowdy, M.D.	Private Practice, Orlando, Fl.
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1996	John L'Insalata, M.D.	Private Practice, New York, New York
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1996	Gloria Beim, M.D.	Private Practice, Campbell Clinic, Crested Butte, Colorado
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1996	Ronald Navarro, M.D.	Attending, Kaiser Permanente, Sports Medicine and Shoulder Service, Orange County, California
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1996	Andreas Imhoff, M.D.	Professor and Chairman, Technical University of Munich, Munich, Germany
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1997	Laurence D. Higgins, M.D.	Associate Professor Harvard Medical School Brigham and Women's Hospital
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1997	Mehmet Demirhan, M.D.	Prof. of Orthopaedics and Traumatology, Istanbul Medical Faculty, Istanbul University, Istanbul, Turkey,
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1997	Jorge Geroda, M.D.	Bogata, Columbia, Private Practice
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1997	Derek Jones, M.D.	Assistant Professor of Orthopaedic Surgery, Tulane University, New Orleans
Sports Medicine and Shoulder Fellow,	1998	Beno Einsman, M.D.	Sao Paulo, Brazil, Large Private Group with Specialization in Sports and

University of Pittsburgh			Shoulder
Sports Medicine and Shoulder Fellow, University of Pittsburgh	1998	Surgeon Aparcar, M.D.	Attending Orthopaedic Surgeon, Istanbul, Turkey,
Shoulder Fellow	1999	Navid Ghalambor, M.D.	Private Practice, Los Angeles, CA
Shoulder Fellow	1999	Mehmet Osbydar, M.D.	Attending Orthopedic Surgeon, Okmeydanı Social Security Hospital; Private Practice, International Hospital, Istanbul
Shoulder Fellow	2000	Alex Poon, M.D.	Pamela Youde Nethersole Eastern Hospital, Hong Kong.
Shoulder Fellow	2000	John Macy, M.D.	Private Practice, Burlington, VT.
Shoulder Fellow	2000	Ariane Gerber, M.D.	Associate Professor, Chief, Upper Extremity Service, Humboldt University, Berlin, Germany
Shoulder Fellow	2001	Patrice Tetrault, M.D.	Attending Orthopaedic Surgeon, University NotreDame Hospital, Montreal, Canada
Shoulder Fellow	2001	Thomas Holovacs, M.D.	Instructor, Orthopaedic Surgery, Harvard Shoulder Service, MGH Sports Medicine
Shoulder Fellow	2002	Sanjivendra S Ahluwalia, M.D.	Private Practice, Beverley Hills, CA
Shoulder Fellow	2002	Edward Yian, M.D.	Staff Orthopedic Surgeon, Kaiser Permanente Med. Center, Fontana, CA.
Shoulder Fellow	2003	Michael Gilbert, M.D.	Assistant Professor of Orthopaedic Surgery, University of British Columbia 3055 West Brook Mall VanCouver, BC V6T 1Z3
Shoulder Fellow	2003	Todd Atkinson, M.D.	Private Practice in Fort Meyers, Fl.
Shoulder Fellow	2004	Steffan Jehmilch, M.D.	University Practice in Hamberg, Germany
Shoulder Fellow	2004	John Costouros, M.D.	Head of Shoulder and Elbow Service, Kaiser Permanente of San Jose, CA
Shoulder Fellow	2004	George (Rick) Hatch, III, M.D.	Assistant Professor, University of Southern California, Los Angeles, CA
Shoulder Fellow	2005	Todd O'Brien, M.D.	Private Practice, Salem, MA
Shoulder Fellow	2005	Ivan Pacheco, M.D.	Private Practice, San Juan, Puerto Rico
Shoulder Fellow	2006	Reuben Gobezie, MD	Assistant Professor, Case Western Reserve University, Cleveland, OH
Shoulder Fellow	2006	John Goff, M.D.	Private Practice, Marin County, CA
Shoulder Fellow	2006	Scott Penington, M.D.	Private Practice, Atlanta, GA
Shoulder Fellow	2006	Brett Sanders, M.D.	Private Practice, Chattanooga, TN

Shoulder Fellow	2007	Nathan Endres, M.D.	Asstant Professor, University of Vermont, Burlington, MA
Shoulder Fellow	2007	Bassem ELHassan, M.D.	Assistant Professor, Mayo Clinic, Rochester, MN
Shoulder Fellow	2008	Darren Friedman, M.D.	Assistant Clinical Professor of Ortho. Surgery NYU Medical School, Surgeon, Seaport Ortho. Associates
Shoulder Fellow	2008	Robert Rolf, M.D.	Surgeon, Beacon Orthopedics and Sports Medicine
Shoulder Fellow	2008	Nata Parnes, M.D.	Extended European Fellowship
Shoulder Fellow	2009	Andrew Jawa, M.D.	Surgeon, Boston Medical Center
Shoulder Fellow	2009	Michael DeFranco, MD	Private Practice, New York, NY
Shoulder Fellow	2009	Monica Morman, MD	Surgeon, Campbell County Memorial Hospital, Gillette, WY
Shoulder Fellow	2009	Anshuman Singh, MD	Surgeon, Kaiser Permanente, San Diego
Shoulder Fellow	2010	Uma Srikumaran, M.D.	Surgeon, Johns Hopkins,
Shoulder Fellow	2010	Tyler Fox, M.D.	Surgeon, Mayo Clinic, Rochester, MN
Shoulder Fellow	2010	Jamie Monica, M.D.	Surgeon, Balance Spine and Disc Center, New Jersey
Shoulder Fellow	2010	Paul Chong, M.D.	Surgeon, Family Orthopedics & Rehabilitation , Austin, TX
Shoulder Fellow	2011	Michael Freehill	Surgeon, Medical Center Blvd, Winston-Salem, NC
Shoulder Fellow	2011	Lewis Shi, M.D.	Surgeon, University of Chicago Hospitals, Orthopaedics
Shoulder Fellow	2011	Albert Lin, M.D.	Surgeon, UPMC Center for Sports Medicine, Pittsburgh, PA
Shoulder Fellow	2011	Arnold Alqueza, MD	Surgeon, VA Boston Healthcare System and Brigham and Women's Hospital as Upper Extremity Specialist
Shoulder Fellow	2012	Timothy Hartshorn	Private Practice, Ventura, CA
Shoulder Fellow	2012	Josef Eichinger	Colonel US Army, Madigan Army Base, Tacoma, WA
Shoulder Fellow	2012	Xinning Li (Tiger)	Attending in Sports Medicine and Shoulder, Boston University
Shoulder Fellow	2012	Mena Mesiha	Private Practice, Fall River, MA

D. Regional, national, or international contributions.

2a. For each invited presentation (e.g., visiting professorship, invited lecturer, plenary presentation, seminar) describe the following:

<u>Years Performed</u>	<u>Type of Presentation and Name of Organization Extending Invitation</u>
1987	American Academy of Orthopaedic Surgeons Annual Meeting. San Francisco, CA. January 17-21, 1987. Selected Presentation: : Warner, J.J.P., Brodsdsky, G.L., and Thornhill, T.S.: "The role of core decompression in the treatment of nontraumatic osteonecrosis of the femoral head."
1987	Annual Meeting of the Hip Society. San Francisco, CA. January 21, 1987. Invited Presentation as Award winning paper, Stinchfield Award: Warner, J.J.P., Brodsdsky, G.L., and Thornhill, T.S.: "The role of core decompression in the treatment of nontraumatic osteonecrosis of the femoral head."
1989	Alumni Day, University of Wisconsin, Dept. of Orthopaedic Surgery. Madison, WI. November 10, 1989. Invited Speaker as Faculty Candidate. Lecture on "Anatomy of the Suprascapular Nerve and Rotator Cuff."
1989	University of Bern, Inselspital. Dept. of Orthopaedic Surgery. Invited Lecture at Orthopaedic Staff Meeting. Bern, Switzerland. April 12, 1989. Lecture on "Scapulothoracic motion in normal shoulders and shoulders with instability and impingement. A study using Moire topographic analysis."
1990	George Washington University, Dept. of Orthopaedic Surgery. Staff Conference. Washington, D.C.. January 11, 1990. Invited Speaker as Faculty Candidate. Lecture on "Closed Reduction and Percutaneous Pinning of Unstable Proximal Humerus Fractures."
1990	Annual Meeting of the Orthopaedic Trauma Association, Specialty Day. New Orleans, LA. February 20, 1990. Invited Presentation as the Award Winning Paper in Upper Extremity Fractures: "Jaberg, H., Warner, J.J.P., Jakob, R.P.: "Closed reduction and Percutaneous pinning of unstable proximal humerus fractures."
1990	Annual Meeting of the Herodicus (Sports Medicine Honor) Society. Traverse City, Michigan, June 30- July 1, 1990. Invited Presentation: Warner, J.J.P., Micheli, L.J., Arslanian, L., Kennedy, J., and Kennedy, R.: "Scapulothoracic motion in normal shoulders and shoulders with instability and impingement. A study using Moire topographic analysis."
1990	4 th Congress of the European Society for Surgery of the Shoulder and Elbow. Milan, Italy. October 7-9, 1990. Invited Presentation: Warner, J.J.P, Pagnani, M.J., Warren, R.F., Cavanaugh, J., and Montgomery, W.: "Arthroscopic Bankart repair utilizing an absorbable, cannulated fixation device."
1990	4 th Congress of the European Society for Surgery of the Shoulder and Elbow. Milan, Italy. October 7-9, 1990. Invited Presentation: Warner, J.J.P., Paletta, G.A., Altchek, D.W., Dines, D., Warren, R.F., O'Brien, S.J., and Wickiewicz, T.L.: "Arthroscopic-assisted repair of rotator cuff tears- Preliminary results."
1990	4 th Congress of the European Society for Surgery of the Shoulder and Elbow. Milan, Italy. October 7-9, 1990. Invited Presentation: Warner, J.J.P., Micheli, L.J., Arslanian, L., Kennedy, J., and Kennedy, R.: "Scapulothoracic motion in normal shoulders and shoulders with instability and impingement. A study using Moire topographic analysis."
1990	Annual Meeting of the Eastern Orthopaedic Association. Bermuda. October 12-14, 1990. Invited Presentation: Warner, J.J.P., Micheli, L.J., Arslanian, L., Kennedy, J., and Kennedy, R.: "Scapulothoracic motion in normal shoulders and shoulders with instability and impingement. A study using Moire topographic analysis."
1991	American Society of Hand Therapists. Course entitled Current Concepts in Shoulder Dysfunction. Park City, Utah. January 21-22, 1991. Invited Speaker. Lectures on "Rotator cuff tears- Diagnosis and Treatment"; "Glenohumeral instability and labral tears".

1991	Annual Meeting of the American Academy of Orthopaedic Surgeons. Anaheim, CA. March 21-24, 1991. Invited Presentation: “Warner, J.J.P., Pagnani, M.J., Warren, R.F., Cavanaugh, J., and Montgomery, W.: “Arthroscopic Bankart Repair Utilizing and Absorbable, Cannulated Fixation Device.”
1991	Annual Meeting of the Orthopaedic Research Society. Anaheim, CA. March 19-21, 1991. Invited Presentation: Warner, J.J.P., Deng, X.H., Warren, R.F., Torzilli, P.A., O’Brien, S.J., and Altchek, D.W.: “Static Capsuloligamentous restraints to superior-inferior translation of the glenohumeral joint.”
1991	Annual Meeting of the American Shoulder and Elbow Surgeons. Anaheim, CA. March 24, 1991. Invited Presentation: Warner, J.J.P., Deng, X.H., Warren, R.F., Torzilli, P.A., O’Brien, S.J., and Altchek, D.W.: “Factors affecting superior-inferior translation of the glenohumeral joint: A biomechanical study.”
1991	Annual Meeting of the American Shoulder and Elbow Surgeons. Anaheim, CA. March 24, 1991. Invited Presentation, paper nominated as best paper of meeting: Warner, J.J.P., Krushell, R.J., Masquelet, A., and Gerber, C.: “Anatomy of the suprascapular nerve and anatomic constraints to mobilization of the supraspinatus and infraspinatus for management of massive rotator cuff tears.”
1991	Annual Meeting of the American Academy of Orthopaedic Surgeons. Anaheim, CA. March 21-24, 1991. Invited Presentation: Cooper, D.E., Warner, J.J.P., Deng, X.H., O’Brien, S.J., Warren, R.F.: “Anatomy, histology, and function of the coracohumeral ligament: An anatomical and biomechanical study.”
1991	Annual Meeting of the American Academy of Orthopaedic Surgeons. Anaheim, CA. March 21-24, 1991. Invited Presentation: Pagnani, M.J., Warner, J.J.P., O’Brien, S.J., and Warren, R.F.: “Anatomical considerations in harvesting the semitendinosus and gracilis tendons.”
1991	Annual Meeting of the American Academy of Orthopaedic Surgeons. Anaheim, CA. March 21-24, 1991. Invited Presentation: Warner, J.J.P., Paletta, G.A., and Warren, R.F.: “Biplanar x-ray study of shoulders in patients with instability and rotator cuff tears.”
1991	University of Bern. Inselspital. Dept. of Orthopaedic Surgery. Bern, Switzerland. April 2-4, 1991. Visiting Professor. Lectures on “Biomechanics of Shoulder Stability” and “Arthroscopic Bankart Repair.”
1991	Biomechanica E. Gesto Sportivo. Universita Degli Studi di Perugia. Istituto Di Ortopedia E. Traumatologia. Terni, Italy. April 5-7, 1991. Visiting Professor. Lectures on “To Throw: Biomechanical, anatomical, and clinical factors” and “Biomechanics and pathoanatomy of shoulder instability.”
1991	Pennsylvania Orthopaedic Society. Hershey, PA. April 25-27, 1991. Invited Speaker. Lecture on “Arthroscopic Bankart for Shoulder Instability: Current Technique and Status of the Procedure.”
1991	5 th Congress of the European Society for Surgery of the Shoulder and Elbow. Wurzburg, Germany. June 7-9, 1991. Invited Presentation: Cooper, D.E., Warner, J.J.P., Deng, X.H., O’Brien, S.J., and Warren, R.F.: “Anatomy, histology, and function of the coracohumeral ligament: An anatomical and biomechanical study.”
1991	5 th Congress of the European Society for Surgery of the Shoulder and Elbow. Wurzburg, Germany. June 7-9, 1991. Invited Presentation (Poster): Warner, J.J.P., Deng, X.H., Torzilli, P.A., and Warren, R.F.: “Static capsuloligamentous restraints to superior-inferior translation of the glenohumeral joint.”
1991	5 th Congress of the European Society for Surgery of the Shoulder and Elbow. Wurzburg, Germany. June 7-9, 1991. Invited Presentation (Poster): Warner, J.J.P., Deng, X.H., Torzilli, P.A., and Warren, R.F.: “Superior-inferior translation in the intact and vented shoulder.”

1991	5 th Congress of the European Society for Surgery of the Shoulder and Elbow. Wurzburg, Germany. June 7-9, 1991. Invited Presentation (Poster): Warner, J.J.P., Paletta, G.A., and Warren, R.F.: "Biplanar x-ray evaluation of shoulders with instability and rotator cuff tears."
1991	Annual Meeting of the American Orthopaedic Society of Sports Medicine. Orlando, FL. July 8, 1991. Invited presentation as O'Donoghue Award Paper (Best Research): Warner, J.J.P., Deng, X.H., Warren, R.F., Torzilli, P.A.: "Static capsuloligamentous restraints to superior-inferior translation of the glenohumeral joint."
1991	Annual Closed Meeting of the American Shoulder and Elbow Surgeons. Seattle, WA. Sept. 4-7, 1991. Invited Presentation: Lephart, S., Warner, J.J.P., Fu, F.H.: "Proprioception in the Normal and Abnormal Shoulder."
1991	Nederlandse Vereniging Voor Fysiotherapie in De Sportgezondheidszorg (NVFS). Internationaal lustrumcongres "Overelasting in de Sport". Maastricht, Holland. September 21-24, 1991. Visiting Professor. Lecture on "Anatomy and Biomechanics of the Shoulder: Relevance to Overuse Injuries."
1991	Pennsylvania Orthopaedic Society, Fall Meeting. Philadelphia, PA. November 11-12, 1991. Invited Speaker. Panel Discussion on "Knee Injuries."
1992	Annual Meeting of the Orthopaedic Research Society. Washington, DC. February 17-20, 1992. Invited Presentation (poster): Bowen, M.K., Deng, X.H., Hannafin, J.A., Arnoczky, S.P., Warren, R.F., Warner, J.J.P. and Hashimoto, J.: "An analysis of patterns of glenohumeral joint contact and their relationship to the glenoid bare area."
1992	Annual Meeting of the Orthopaedic Research Society. Washington, DC. February 17-20, 1992. Invited Presentation (Poster): Caborn, D.N., Warner, J.J.P., Berger, R.A., Seel, M., and Fu, F.H.: "Dynamic capsuloligamentous anatomy of the glenohumeral joint."
1992	Annual Meeting of the American Academy of Orthopaedic Surgeons. Washington, DC. February 21, 1992. Invited Presentation (Poster): Warner, J.J.P., Deng, X.H., Bowen, M.K., Torzilli, P.A., Warren, R.F.: "Stability of the glenohumeral joint: The effect of dynamic compression."
1992	Annual Meeting of the American Academy of Orthopaedic Surgeons. Washington, DC. February 21, 1992. Invited Presentation (Poster): Warner, J.J.P., Warren, R.F., Deng, X.H., Torzilli, P.A.: "The vacuum-effect for stability of the glenohumeral joint."
1992	Annual Meeting of the American Academy of Orthopaedic Surgeons. Washington, DC. February 22, 1992. Invited Presentation (Poster): Bowen, M.K., Warner, J.J.P., Deng, X.H., Torzilli, P.A., and Warren, R.F.: "Kinematics of the glenohumeral joint."
1992	Annual Meeting of the American Academy of Orthopaedic Surgeons. Washington, DC. February 22, 1992. Invited Presentation: Warner, J.J.P., Caborn, D.N., Berger, R.A., Fu, F.H.: "Dynamic capsuloligamentous anatomy of the glenohumeral joint."
1992	Annual Meeting of the American Shoulder and Elbow Surgeons. Washington, DC. February 23, 1992. Invited Presentation: Warner, J.J.P., Caborn, D.N.M., Berger, R.A., and Fu, F.H.: "Capsuloligamentous anatomy of the glenohumeral joint: A dynamic model using arthroscopy and radiography."
1992	Annual Meeting of the American Shoulder and Elbow Surgeons. Washington, DC. February 23, 1992. Invited Presentation: Bowen, M.K., Deng, X.H., Warren, R.F., Torzilli, P.A., and Warner, J.J.P.: "Role of the inferior glenohumeral ligament complex in limiting inferior translation of the glenohumeral joint."
1992	American Association of Hand Therapists. Course entitled Surgical Concepts and Rehabilitation of Shoulder Problems. Washington, D.C. February 10-12, 1992. Invited Speaker. Lectures on "Diagnostic overview of shoulder pathology including radiology, MRI, arthrography, and Bone

	scan”; “Rotator cuff diagnosis and surgical management.”
1992	Alumni Meeting of the Hospital for Special Surgery Sports Medicine and Shoulder Service/UCLA Family Practice Fellowship. New York, N.Y. April 16-17, 1992. Invited Speaker. Lecture on “Dynamic Shoulder Model- In Vitro Analysis of Shoulder Function.”
1992	Pennsylvania Orthopaedic Society Spring Meeting. Naples, FL. April 30, 1992. Invited Speaker. Lecture on “Management of Traumatic Knee Dislocation.”
1992	9 th Combined Meeting of the Orthopaedic Associations of the English-Speaking World. Toronto, Ontario, CN. June 8-11, 1992. Invited Presentation (Poster): Lephart, S.M., Warner, J.J.P. and Fu, F.H.: “Normal shoulder proprioception measurements in college age individuals.”
1992	Annual Meeting of the American Orthopaedic Society for Sports Medicine. San Diego, CA. July 8, 1992. Invited Presentation: “Normal shoulder proprioception in college age individuals”.
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation: Warner, J.J.P., Krushell, R., Masquelet, A., and Gerber, C.: “Anatomy of the suprascapular nerve and anatomic constraints to mobilization of the supraspinatus and infraspinatus for management of massive rotator cuff tears.”
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation (Poster): Bowen, M.K., Warner, J.J.P., Deng, X.H., Hannafin, J.A., Arnoczky, S.P., Warren, R.F., and Hashimoto, J.: “An analysis of the patterns of glenohumeral joint contact and the relationship to the glenoid bare area.”
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation (Poster): Bowen, M.K., Deng, X.H., Warner, J.J.P., Warren, R.F., Torzilli, P.A.: “Kinematics of the glenohumeral joint: Coupled translation with rotation.”
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation (Poster): Bowen, M.K., Deng, X.H., Warner, J.J.P., Warren, R.F., Torzilli, P.A.: “The effect of joint compression on stability of the glenohumeral joint.”
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation (Poster): Warner, J.J.P., Caborn, D.N.M., Berger, R., Fu, F.H., and Seel, M.: “Dynamic capsuloligamentous anatomy of the glenohumeral joint.”
1992	5 th International Conference on Surgery of the Shoulder. Paris, France. July 12-15, 1992. Invited Presentation (Poster): Lephart, S., Fu, F.H., and Warner, J.J.P.: “Normal shoulder proprioception measurements in college age individuals.”
1992	23 rd Annual Meeting of the Eastern Orthopaedic Association. Dorado, Puerto Rico. October 14-18, 1992. Invited Presentation: McMahan, P.J. and Warner, J.J.P.: “Abnormal shoulder kinematics following isolated rupture of the biceps brachii muscle.”
1992	23 rd Annual Meeting of the Eastern Orthopaedic Association. Dorado, Puerto Rico. October 14-18, 1992. Invited Presentation: Caborn, D.N.M., Warner, J.J.P., Berger, R., Fu, F.H.: “Dynamic capsuloligamentous anatomy of the glenohumeral joint.”
1992	23 rd Annual Meeting of the Eastern Orthopaedic Association. Dorado, Puerto Rico. October 14-18, 1992. Invited Presentation: Paletta, G., Warner, J.J.P., Altchek, D.W., O’Brien, S.J., Wickiewicz, T., Warren, R.F.: “Arthroscopic rotator cuff repair: Evaluation of results and comparison of techniques.”
1992	23 rd Annual Meeting of the Eastern Orthopaedic Association. Dorado, Puerto Rico. October 14-18, 1992. Invited Presentation: Caborn, D.N.M., Warner, J.J.P., Berger, R.A., Fu, F.H., Seel, M.: “Dynamic capsuloligamentous anatomy of the glenohumeral joint.”

1992	<p>Pennsylvania Orthopaedic Society Fall Meeting. Pittsburgh, PA. November 12-14, 1992. Invited Presentation: McMahon, P.J. and Warner, J.J.P.: "Dynamic shoulder model."</p> <p>Invited Lectures on "Management of Massive Rotator Cuff Tears"; "Arthroscopic approach to shoulder instability"; and "Failed rotator cuff surgery."</p>
1993	<p>La Riabilitazione Nella Chirurgia Ortopedica Dell'Arto Superiore. Milano, Italy. March 26-27, 1993. Invited Presentation: Warner, J.J.P. and Fu, F.H.: "Recent advances in Arthroscopic treatment of shoulder problems."</p>
1993	<p>Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 17, 1993. Invited Presentation: Paletta, G.A., Warner, J.J.P., Altchek, D.W., Wickiewicz, T.L.: "Arthroscopic-assisted rotator cuff repair."</p>
1993	<p>Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 18, 1993. Invited Presentation (Poster): Kann, S., Maddox, L.M., Warner, J.J.P.: "Arthroscopic determination of subacromial space available after acromioplasty: The Arthroscopic Impingement Test."</p>
1993	<p>Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 21, 1993. Invited Presentation (Poster): Warner, J.J.P., Waskowitz, R., Marks, P.H., Thaete, L.: "Abduction biomechanics in patients with massive rotator cuff tears: A roentgenographic study."</p>
1993	<p>Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 22, 1993. Invited Presentation (Poster): Warner, J.J.P. and Warren, R.F.: "Planning and technical pitfalls of arthroscopic Bankart Repair using the Suretac Device."</p>
1993	<p>Annual Meeting of the American Academy of Orthopaedic Surgeons. San Francisco, CA. February 17-22, 1993. Invited Scientific Exhibit: McMahon, P.J., Thompson, W.O., Debski, R.E., Maddox, L.M., Warner, J.J.P., Fu, F.H., Woo, S.L-Y.: "A cadaveric model to study glenohumeral motion."</p>
1993	<p>American Orthopaedic Association 26th Annual Resident's Conference. Seattle, WA. March 17-20, 1993. Invited Presentation: McMahon, P.J., Thompson, W.O., Debski, R.E., Maddox, L.M., Warner, J.J.P., Fu, F.H., and Woo, S.L-Y.: "Muscle forces for glenohumeral abduction in the scapular plane in a simulated supraspinatus tear."</p>
1993	<p>2nd American Orthopaedic Society for Sports Medicine/Japanese Orthopaedic Society for Sports Medicine Trans-Pacific Meeting, Kapalua, Maui, HI. March 20-25, 1993. Invited Speaker. Lecture on "Stability in the Throwing Shoulder: Rotator cuff" and Moderator of Shoulder free paper session.</p>
1993	<p>University of Cincinnati Sports Medicine Center. Cincinnati, OH. March 26-27, 1993. Visiting Professor. Lectures on "Arthroscopic Bankart Repair: Current concepts and state of the art"; "Biomechanics of shoulder stability: Implications for treatment of the unstable shoulder"; "Management of massive rotator cuff tears: Clinical and Biomechanical considerations."</p>
1993	<p>Annual Meeting of the Arthroscopy Association of North America. Palm Desert, CA. April 1-4, 1993. Invited Presentation: Hester, P., Boyde, D.W., Warner, J.J.P., Caborn, D.N.M.: "The axillary, musculocutaneous, and suprascapular nerves and their relationship to arthroscopic Bankart and S.L.A.P. lesion repair using a bioabsorbable fixation device in the Beach chair position."</p>
1993	<p>American Orthopaedic Association 106th Annual Meeting. Hotel de Coronado, CA. June 6-9, 1993. Invited Presentation: McMahon, P.J., Thompson, W.O., Debski, R.E., Warner, J.J.P., Fu, F.H., Woo, S.L-Y.: "Muscle forces for glenohumeral abduction in the scapular plane in a simulated supraspinatus tendon tear."</p>

1993	Annual Meeting of the American College of Sports Medicine. Seattle, WA. June 6-9, 1993. Invited Lecture: Lephart, S.M., Warner, J.J.P., Borsa, P.A., Kocher, M.S., Harner, C.H., and Fu, F.H.: "Proprioception in athletic individuals with unilateral shoulder instability."
1993	3 rd Scandanavian-Japanese Congress on Shoulder Surgery. Aarhus, Denmark. June 7-9, 1993. Invited Presentation (Poster): Warner, J.J.P., Miller, M.D., Marks, P.: "Arthroscopic Bankart repair with the Suretac device: Clinical and Experimental Observations."
1993	Combined Congress of the International Arthroscopy Association and the International Society of the Knee. Copenhagen, Denmark. June 25-30, 1993. Invited Presentation: Fu, F.H., Caborn, D.N.M., Warner, J.J.P., Berger, R.: "Dynamic capsuloligamentous anatomy of the glenohumeral joint."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation: Warner, J.J.P., Lephart, S.M., Borsa, P.A., Kocher, M., Harner, C.D., and Fu, F.H.: "Proprioception in athletic individuals with unilateral shoulder instability."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): Warner, J.J.P., Waskowitz, R., Marks, P., and Thaete, L.: "Biomechanics of massive rotator cuff tears: A rotengenographic study."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): Warner, J.J.P., Kann, S., Maddox, L.M.: "The arthroscopic impingement test."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): Warner, J.J.P. and McMahon, P.J.: "Abnormal shoulder kinematics following isolated rupture of the long head of the biceps brachii muscle."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): Warner, J.J.P. and Warren, R.F.: "Planning and technical pitfalls of arthroscopic Bankart repair using the Suretac device."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): Warner, J.J.P., Janetta-Alpers, C., Miller, M.D.: "Correlation of glenohumeral laxity with arthroscopic ligament anatomy."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): McMahon, P.J., Debski, R.E., Thompson, W., Warner, J.J.P., Woo, S.L-Y., Fu, F.H.: "A biomechanical analysis of a simulated supraspinatus tear."
1993	7 th Congress of the European Society for Surgery of the Shoulder and Elbow. Aarhus, Denmark. June 10-12, 1993. Invited Presentation (Poster): McMahon, P.J., Debski, R.E., Thompson, W., Warner, J.J.P., Woo, S.L-Y., and Fu, F.H.: "An analysis of muscle forces and tendon excursions during abduction of the glenohumeral joint."
1993	3 rd Scandinavian-Japanese Congress on Shoulder Surgery. Aarhus, Denmark. June 7-9, 1993. Invited Presentation: Warner, J.J.P., Miller, M.D., and Marks, P.: "Arthroscopic Bankart Repair with the Suretac Device: Clinical and experimental observations."
1993	Combined Congress of the International Arthroscopy Association and the International Society of the Knee. Copenhagen, Denmark. June 25-30, 1993. Invited Presentation: Lephart, S.M., Kocher, M.S., Warner, J.J.P., Winge, S., Harner, C.D., Fu, F.H.: "Proprioception in shoulders with instability."
1993	19 th Annual Meeting of the Orthopaedic Society for Sports Medicine. Sun Valley, ID. July 12-15, 1993. Invited Presentation: Lephart, S.M., Borsa, P.A., Warner, J.J.P., Reddy, J.G., and Fu, F.H.:

	“Proprioception and kinesthesia in individuals with unstable shoulders.”
1993	19 th Annual Meeting of the Orthopaedic Society for Sports Medicine. Sun Valley, ID. July 12-15, 1993. Invited Presentation: McMahon, P.J., Thompson, W.O., Debski, R.E., Warner, J.J.P., Woo, S.L-Y., Fu, F.H.: “An analysis of muscle forces and tendon excursions during abduction of the glenohumeral joint and biomechanical analysis of a simulated supraspinatus tear.”
1993	Basic Science and Research Methods for Sports Medicine. Meeting Sponsored by the American Orthopaedic Society for Sports Medicine. Chicago, IL. July 30-August 1, 1993. Invited Lecture: Warner, J.J.P. and Fu, F.H.: “Normal shoulder kinematics and function. Basic Science and research methods for sports medicine.”
1993	Western Pacific Sports Society Annual Meeting. Sydney, Australia. September 17-21, 1993. Invited International Guest Lecturer. Lectures on “Biomechanics of Shoulder Stability”; “Biomechanics of massive rotator cuff tears”; “Arthroscopic Impingement Test.”
1993	Dept. of Orthopaedic Surgery, University of Louisville, KY. October 26, 1993. Visiting Professor. Grand Rounds Lecture on “ Biomechanical rationale for shoulder instability Surgery.”
1993	35 th Annual Meeting of the Society of Military Orthopaedic Surgeons. Colorado Springs, CO. Dec. 12-17, 1993. Invited Presentation: Miller, M.D., and Warner, J.J.P.: “The Weight-bearing radiograph of the shoulder.”
1993	35 th Annual Meeting of the Society of Military Orthopaedic Surgeons. Colorado Springs, CO. Dec. 12-17, 1993. Invited Presentation: Warner, J.J.P., Miller, M.D., Marks, P.H.: “Arthroscopic Bankart Repair with the Suretac Device: Clinical and experimental observations.”
1993	35 th Annual Meeting of the Society of Military Orthopaedic Surgeons. Colorado Springs, CO. Dec. 12-17, 1993. Invited Presentation: Warner, J.J.P., Miller, M.D., Janetta-Alpers, C.: Examination under anesthesia versus glenohumeral ligament size.”
1993	35 th Annual Meeting of the Society of Military Orthopaedic Surgeons. Colorado Springs, CO. Dec. 12-17, 1993. Invited Presentation: Miller, M.D., Warner, J.J.P., Caldwell, G.: “Rotator cuff biomechanics.”
1994	National Medical Fellowship Program in Academic Medicine. Research Symposium. Princeton, N.J.. January 20-21, 1994. Invited Presentation: Maddox, L.M., Warner, J.J.P., Woo, S.L-Y.: “Structural properties of the superior glenohumeral and coracohumeral ligaments.”
1994	Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. February 24-March 1, 1994. Invited Presentation (Poster): Johnson, D.L., Warner, J.J.P., Caborn, D.N.M., Miller, M.D.: “The concept of a selective capsular shift for anterior-inferior instability of the shoulder.”
1994	Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. February 24-March 1, 1994. Invited Presentation (Poster): Warner, J.J.P., Miller, M.D., Marks, P.H.: “Arthroscopic Bankart Repair with the Suretac device: Clinical and Experimental Observations.”
1994	Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. February 24-March 1, 1994. Invited Presentation (Poster): Miller, M.D., Warner, J.J.P., Johnson, D.L.: “The weight-bearing (abduction) radiograph of the shoulder.”
1994	Annual Open Meeting of the American Shoulder and Elbow Surgeons. New Orleans, LA. Feb. 27, 1994. Invited as annual award for best paper (Neer Award): Lephart, S.M., Warner, J.J.P., Borsa, P., and Fu, F.H.: “Proprioception of the shoulder joint in Normal, unstable, and capsulolabral reconstructed individuals.”
1994	Annual Open Meeting of the American Shoulder and Elbow Surgeons. New Orleans, LA. Feb. 27, 1994. Invited Presentation: Warner, J.J.P., Johnson, D.L., Caborn, D.N.M., and Miller, M.D.:

	“The concept of a selective capsular shift for anterior-inferior instability of the shoulder.”
1994	Annual Meeting of the American Academy of Orthopaedic Surgeons. New Orleans, LA. February 24-March 1, 1994. Invited Presentation (Scientific Exhibit): Lephart, S.M., Borsa, P.A., Fu, F.H., Harner, C.D., and Warner, J.J.P.: “Proprioception of the knee and shoulder joint in normal, athletic capsuloligamentous pathology and post-reconstruction individuals.”
1994	Annual Meeting of the Arthroscopy Association of North America. Orlando, FL. April 28-May 1, 1994. Invited Presentation: Warner, J.J.P., Miller, M.D., Marks, P.H., and Fu, F.H.: “Arthroscopic Bankart repair with the Suretac Device. A Clinical and Experimental Study.”
1994	Annual Meeting of the Arthroscopy Association of North America. Orlando, FL. April 28-May 1, 1994. Invited Presentation: Warner, J.J.P., Kann, S., and Maddox, L.: “The arthroscopic impingement test.”
1994	8 th Congress of the European Society for Surgery of the Shoulder and Elbow. Barcelona, Spain. June 16-18, 1994. Invited Presentation (Poster): Warner, J.J.P., Miller, M.D., and Johnson, D.: “The weight-bearing radiograph of the shoulder.”
1994	8 th Congress of the European Society for Surgery of the Shoulder and Elbow. Barcelona, Spain. June 16-18, 1994. Invited Presentation (Poster): Warner, J.J.P., Johnson, D., Miller, M.D.: “The concept of a selective capsular shift for anterior-inferior shoulder instability.”
1994	8 th Congress of the European Society for Surgery of the Shoulder and Elbow. Barcelona, Spain. June 16-18, 1994. Invited Presentation: Warner, J.J.P., Miller, M.D., and Marks, P.: “Arthroscopic Bankart repair with the Suretac device. Clinical and experimental observations.”
1994	20 th Annual Meeting fo the American Orthopaedic Society for Sports Medicine. Palm Dessert, CA. June 26-29, 1994. Invited Presentation: Lephart, S.M., Warner, J.J.P., Fu, F.H., and Borsa, P.A.: “Proprioception following capsulolabral reconstruction of the shoulder.”
1994	20 th Annual Meeting fo the American Orthopaedic Society for Sports Medicine. Palm Dessert, CA. June 26-29, 1994. Invited Presentation: Caborn, D.N.M., Boyd, D.W., and Warner, J.J.P.: “The long thoracic nerve and its relationship to long thoracic nerve palsy.”
1994	20 th Annual Meeting fo the American Orthopaedic Society for Sports Medicine. Palm Dessert, CA. June 26-29, 1994. Invited Presentation as Herodicus Award Winning Paper: Thompson, W.O., Boardman, N.D., Debski, R.E., Warner, J.J.P., Taskiran, E., Woo, S.L-Y., and Fu, F.H.: “The role of force couples about the glenohumeral joint in rotator cuff disease: A kinematic analysis.”
1994	20 th Annual Meeting fo the American Orthopaedic Society for Sports Medicine. Palm Dessert, CA. June 26-29, 1994. Invited Presentation: Paletta, G.A., Jr., Warner, J.J.P., Weutsch, A.: “A biplanar x-ray evaluation of the shoulder after rotator cuff repair or stabilization.”
1994	2 nd World Congress of Biomechanics. Amsterdam, Holland. July 10-15, 1994. Invited Presentation: Debski, R.E., McMahon, P.J., Thompson, W.O., Boardman, N.D., Warner, J.J.P., Woo, S.L-Y., and Fu, F.H.: “A dynamic shoulder testing apparatus to study glenohumeral joint motion.”
1994	2 nd World Congress of Biomechanics. Amsterdam, Holland. July 10-15, 1994. Invited Presentation: Boardman, N.D., Thompson, W.O., Debski, R.E., McMahon, P.J., Warner, J.J.P., Woo, S.L-Y., and Fu, F.H.: “Glenohumeral Motion with rotator cuff pathology: A dynamic analysis.”
1994	Annual Closed Meeting of the American Shoulder and Elbow Surgeons. Equinox, VT. September 20-23, 1994. Invited Presentation: Boardman, D., Taskiran, E., Debski, R.E., Maddox, L., Warner, J.J.P., Fu, F.H., and Woo, S.L-Y.: “Structural properties of the superior glenohumeral and

	coracohumeral ligaments.”
1994	Ohio State University, Dept. of Orthopaedic Surgery. Columbus, OH. Sept. 8-9, 1994. Visiting Professor. Grand Rounds Lectures on “Clinically relevant biomechanics of the shoulder for management of instability”; “Current concepts of arthroscopic Bankart repair.”
1994	Argentina Arthroscopy Society. Advances en Medicina Deportiva y Rehabilitacion. Buenos Aires, Argentina. September 28- October 1, 1994. Invited Guest Speaker. Lectures on “Instability-Instights into anatomy/biomechanics and treatment”; “Impingement and rotator cuff disease – Instights into anatomy/biomechanics and treatment”; “Anterior knee pain and patello-femoral anatomy/biomechanics and treatment”; “PCL Anatomy/biomechanics and treatment”; “Meniscus tears – arthroscopic repair and allograft replacement”; and “ACL Anatomy/biomechanics and treatment.”
1994	Advances in Sport Traumatology. Society Italiana de Traumatologia dello Sport. Clinica Ortopedica Traumatologica dell’Universita degli Studi di Milano. Centro di Traumatologia dello Sport. Istituto Ortopedico G. Pini. Milano, Italy. October 14-15, 1994. Invited Speaker. Lecture on “Present State of Shoulder Arthroscopy.”
1994	76 th Annual Alumni Meeting of the Hospital for Special Surgery, New York, N.Y. November 3-4, 1994. Invited Speaker: Warner, J.J.P., Allen, A.A., Marks, P., and Wong, P.: “Arthroscopic release of chronic, refractory capsular contracture of the shoulder.”
1994	Dutch Arthroscopy Association. Arthroscopy Update 1994. Utrecht University. The Netherlands. December 4-7, 1994. Invited Guest Speaker/Laboratory Instructor. Lectures on “Biomechanics and pathophysiology of shoulder instability”; “Patient selection and de-selection for arthroscopic Bankart repair”; “Arthroscopic Bankart repair with the Suretac device: The Pittsburgh Experience”; “Arthroscopic findings and pathophysiology of Impingement syndrome”; “Arthroscopic-assisted rotator cuff repair: Does it make sense?”; “Arthroscopic acromioplasty: Verification of adequate surgery by the Arthroscopic Impingement test”; “Arthroscopic release of chronic refractory adhesive capsulitis”; “Arthroscopic SLAP lesion repair”. Surgical Laboratory Instructor.
1995	Visiting Professor Dept. of Orthopaedic Surgery and Biomechanics Laboratories, Columbia, University Presbyterian Hospital, New York, NY. January 19, 1995. Lectures on “Arthroscopic Bankart Repair: Patient Selection and De-Selection, and “Technical Pitfalls, Anatomy and Biomechanics of Shoulder Stability”
1995	62 nd Annual Meeting of the American Academy of Orthopaedic Surgeons. Orlando, FL. February 17-21, 1995. Invited Presentation (Poster): Warner, J.J.P. and Iannotti, J.P.: “Recognition and treatment of iatrogenic loss of motion following posterior capsulorrhaphy of the shoulder.”
1995	62 nd Annual Meeting of the American Academy of Orthopaedic Surgeons. Orlando, FL. February 17-21, 1995. Invited Presentation: Warner, J.J.P., Boardman, N.D. III, Debski, R.E., Taskarin, E., Maddox, L.M., Fu, F.H., and Woo, S.L-Y.: “Structural properties of the superior and coracohumeral ligaments.”
1995	62 nd Annual Meeting of the American Academy of Orthopaedic Surgeons. Orlando, FL. February 17-21, 1995. Invited Presentation: Safran, M.R., Lephart, S.M., Caldwell, G.L., Borsa, P.A., Fu, F.H., and Warner, J.J.P.: “Shoulder proprioception in baseball pitchers.”
1995	62 nd Annual Meeting of the American Academy of Orthopaedic Surgeons. Orlando, FL. February 17-21, 1995. Invited Presentation: Pagnani, M.J., Warren, R.F., Altchek, D.W., Wickiewicz, T.L., and Warner, J.J.P.: “Arthroscopic shoulder stabilization using transglenoid sutures: Four year minimum follow-up.”