

Curriculum Vitae

Last Updated: 09/06/2019

PERSONAL DATA

Name: Heath B. Henninger

Birth Place: Allentown, PA

Citizenship: United States

EDUCATION

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
2009 - 2011	Postdoctoral Research Fellow	University of Utah (Orthopaedics, Shoulder Biomechanics) Salt Lake City, UT
2004 - 2009	Ph.D.	University of Utah (Bioengineering, Biomechanics Concentration) Salt Lake City, UT
1994 - 1999	B.S.	Kettering University (Mechanical Engineering, Machine Design Concentration) Flint, MI

UNIVERSITY OF UTAH ACADEMIC HISTORY

Orthopaedics, 01/01/2012 - Present

01/01/2012	New Hire, Research Track , Research Assistant Professor
07/01/2017	Promotion, Research Associate Professor

PROFESSIONAL EXPERIENCE

Full-Time Positions

2017 - Present	Research Associate Professor, Orthopaedic Research Laboratory (ORL), University of Utah, Salt Lake City, UT
2012 - 2017	Research Assistant Professor, Orthopaedic Research Laboratory (ORL), University of Utah, Salt Lake City, UT
2011	Postdoctoral Research Fellow, Musculoskeletal Research Laboratories (MRL), University of Utah, Salt Lake City, UT
2009 - 2011	Postdoctoral Research Fellow, Orthopaedic Research Laboratory (ORL), University of Utah, Salt Lake City, UT
2004 - 2009	Graduate Research Assistant, Musculoskeletal Research Laboratories (MRL), University of Utah, Salt Lake City, UT
2001 - 2004	Systems Integration Project Manager, Robotic Production Technology, Auburn Hills, MI
1999 - 2004	Laser Process & Product Development Manager, Robotic Production Technology, Auburn Hills, MI

Part-Time Positions

1996 - 1999	Engineer in Training/Co-op, Robotic Production Technology, Auburn Hills, MI
1995 - 1996	Engineer in Training/Co-op, Carpenter Technology, Reading, PA

Reviewer Experience

Reviewer for: American Journal of Sports Medicine

Reviewer for: Annals of Biomedical Engineering

Reviewer for: Clinical Anatomy

Reviewer for: Clinical Biomechanics
 Reviewer for: Clinical Orthopaedics and Related Research
 Reviewer for: Journal of Anatomy
 Reviewer for: Journal of Biomechanical Engineering
 Reviewer for: Journal of Biomechanics
 Reviewer for: Journal of Bone & Joint Surgery
 Reviewer for: Journal of Orthopaedic Research
 Reviewer for: Journal of Shoulder and Elbow Surgery
 Reviewer for: Journal of the American Academy of Orthopaedic Surgeons
 Reviewer for: PLoS ONE

SCHOLASTIC HONORS

2019	European Society for Surgery of the Shoulder and Elbow (SECEC-ESSSE). Didier Patte Prize - Matthijs Jacxsens - Morphology of the most common shoulder pathologies using conventional and advanced imaging (role: co- author, research mentor)
2011 - 2015	National Institutes of Health Loan Repayment Program Award
2008 - 2009	University of Utah Graduate Travel Award
2005	University of Utah Graduate Travel Award
2004 - 2005	Wayne Brown Fellowship, University of Utah
1997 - 1998	Dean's Honor List, Kettering University
1996 - 1997	Provost's Achievement List, Kettering University
1994 - 1998	Grimley Scholarship

ADMINISTRATIVE EXPERIENCE

Professional Organization & Scientific Activities

2020	Abstract Reviewer, Orthopaedic Research Society, 66th Annual Meeting of the Orthopaedic Research Society, Phoenix, AZ
2019	Abstract Reviewer, American Society of Mechanical Engineers, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), Seven Springs, PA
2018	Abstract Reviewer, Orthopaedic Research Society, 65th Annual Meeting of the Orthopaedic Research Society, Austin, TX
2018	Judge, American Society of Mechanical Engineers, 8th World Congress of Biomechanics, Dublin, Ireland
2017	Abstract Reviewer, Orthopaedic Research Society, 64th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA
2017	Judge, American Society of Mechanical Engineers, PhD Paper Competition, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), Tucson, AZ
2017	Abstract Reviewer, American Society of Mechanical Engineers, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), Tucson, AZ
2016	Abstract Reviewer, Orthopaedic Research Society, 63rd Annual Meeting of the Orthopaedic Research Society, San Diego, CA
2016	Session Chair & Abstract Reviewer, Orthopaedic Research Society, 62nd Annual Meeting of the Orthopaedic Research Society, Orlando, FL

2015	Site Organizer & Co-Coordinator, American Society of Mechanical Engineers, Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C), Snowbird, UT
2015	Session Chair & Abstract Reviewer, American Society of Mechanical Engineers, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), Snowbird, UT
2015	Poster Judge, American Society of Mechanical Engineers, Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C), Snowbird, UT
2015	Abstract Reviewer, Orthopaedic Research Society, 61st Annual Meeting of the Orthopaedic Research Society, Las Vegas, NV
2014	Session Chair & Abstract Reviewer, American Society of Mechanical Engineers, 7th World Congress of Biomechanics, Biomechanics of shoulder and elbow arthroplasty symposium, Boston, MA
2014	Poster Judge, American Society of Mechanical Engineers, 7th World Congress of Biomechanics, Boston, MA
2014	Abstract Reviewer, Orthopaedic Research Society, 60th Annual Meeting of the Orthopaedic Research Society, New Orleans, LA
2013	Poster Judge, American Society of Mechanical Engineers, 2013 ASME Summer Bioengineering Conference, Sun River, OR
2013	Session Chair & Abstract Reviewer, American Society of Mechanical Engineers, 2013 ASME Summer Bioengineering Conference, Sun River, OR
2012	Poster Judge, American Society of Mechanical Engineers, 2012 ASME Summer Bioengineering Conference, Fajardo, Puerto Rico
2012	Session Chair & Abstract Reviewer, American Society of Mechanical Engineers, 2012 ASME Summer Bioengineering Conference, Fajardo, Puerto Rico
2012 - Present	Ambassador, National Institutes of Health, Loan Repayment Program
2011	Poster Judge, American Society of Mechanical Engineers, 2011 ASME Summer Bioengineering Conference, Farmington, PA
2010	Poster Judge, American Society of Mechanical Engineers, 2010 ASME Summer Bioengineering Conference, Naples, FL

Grant Review Committee/Study Section

2017 - Present	University of Utah, URC FRCG
2017 - Present	University of Utah, Center for Clinical & Translational Science (CCTS)
2017	National Science Foundation Panelist
2016 - Present	Orthopaedic Research and Education Foundation Panelist

PROFESSIONAL COMMUNITY ACTIVITIES

2019	Session Organizer/Moderator, International Symposium Computer Methods in Biomechanics and Biomedical Engineering, (CMBBE 2019), New York, NY
2013	Site Organizer & Co-Coordinator, International Symposium Computer Methods in Biomechanics and Biomedical Engineering, (CMBBE 2012), Salt Lake City, UT

UNIVERSITY COMMUNITY ACTIVITIES

University Level

2012 - 2014	Mentor, University of Utah, LEAP Program
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College Level

2013 - 2017

Applicant Interviewer, School of Medicine Admissions Interview Committee

Department Level

2017 - Present

Member, Orthopaedics, Research Advisory Committee

2014 - 2015

Member, Orthopaedics, SDBC review committee

CURRENT MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Society of Mechanical Engineers

Biomedical Engineering Society

Orthopaedic Research Society

FUNDING**Active Grants**

05/01/2016 - 04/30/2021

Biomechanics of Reverse Total Shoulder Arthroplasty - R01 AR067196

Principal Investigator(s): Heath B. Henninger

Direct Costs: \$1,343,215 Total Costs: \$2,003,321

Role: Principal Investigator**Past Grants**

10/27/2016 - 10/26/2017

A Biomechanical Comparison of Two Methods of Glenoid Neck Fracture Fixation

Principal Investigator(s): Heath B. Henninger

Direct Costs: \$5,290 Total Costs: \$5,290

University of Utah Research Committee

Role: Principal Investigator

09/26/2016 - 09/25/2017

Morphology of the Anteriorly Unstable Shoulder with Hill-Sachs Lesions (Jacxsens)

Principal Investigator(s): Matthijs Jacxsens

Direct Costs: \$20,830 Total Costs: \$20,830

Role: Faculty Sponsor

06/14/2016 - 06/13/2017

Morphology of the Anteriorly Unstable Shoulder with Hill-Sachs Lesions

Principal Investigator(s): Heath B. Henninger

Direct Costs: \$3,000 Total Costs: \$3,000

University of Utah Biomedical Image and Data Analysis Core

Role: Principal Investigator

05/23/2016 - 05/22/2017

Morphology of the Anteriorly Unstable Shoulder with Hill-Sachs Lesions

Principal Investigator(s): Heath B. Henninger

Direct Costs: \$17,700 Total Costs: \$17,700

L.S. Peery Foundation

Role: Principal Investigator

04/06/2015 - 12/31/2015

Optotrak Certus Orthopaedic Research System

Principal Investigator(s): Heath B. Henninger

Direct Costs: \$37,984 Total Costs: \$37,984

University of Utah Research Instrumentation Fund

Role: Principal Investigator

01/17/2014 - 01/16/2015	The Importance of Humeral Head Resection in Restoration of Normal Anatomy in Shoulder Arthroplasty (Suter) Principal Investigator(s): Heath B. Henninger Direct Costs: \$37,290 Total Costs: \$37,290 L.S. Peery Foundation Role: <u>Principal Investigator</u>
07/01/2011 - 03/31/2014	In Vivo Determination of Scapula Kinematics after Reverse TSA (Tashjian) Principal Investigator(s): Robert Z. Tashjian Direct Costs: \$28,000 Total Costs: \$28,000 Role: <u>Post-doctoral scientist</u>
09/15/2010 - 08/31/2016	Origins of Elasticity and Viscoelasticity in Knee Ligaments - R01 AR047369 13 (Weiss) Direct Costs: \$1,059,000 Total Costs: \$1,580,000 National Institute of Arthritis and Musculoskeletal and Skin Diseases Role: <u>Key-personnel</u>
10/01/2008 - 09/30/2009	The Role of Elastin in the Restoration of Collagen Crimp Principal Investigator(s): Heath B. Henninger Direct Costs: \$3,000 Total Costs: \$3,000 Orthopaedic Research Laboratory Alumni Council Role: <u>Principal Investigator</u>
09/01/2004 - 08/31/2009	Origins of Elasticity and Viscoelasticity in Knee Ligaments Direct Costs: \$774,261 Total Costs: \$1,155,613 National Institute of Arthritis and Musculoskeletal and Skin Diseases Role: <u>Graduate Research Assistant</u>

Active Contracts

07/22/2015 - 12/31/2019	Joint Warfighter Medical Research Program - Development of a Highly Functional, Neurally Controlled, Skeletally Attached and Intelligent Prosthetic Devices (Bachus) Principal Investigator(s): Kent N. Bachus (00031268) Direct Costs: \$4,639,516 Total Costs: \$5,351,170 Department of Defense/U.S. Army Medical Research and Materiel Command Role: <u>Co-Investigator</u>
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Past Contracts

06/01/2017 - 06/30/2018	Stabilynx Principal Investigator(s): Heath B. Henninger Direct Costs: \$26,850 Total Costs: \$36,650 Joseph Donahue, MD Role: <u>Principal Investigator</u>
02/01/2015 - 01/31/2016	SCOI Rotator Cuff Repair - Healix Principal Investigator(s): Heath B. Henninger Direct Costs: \$28,800 Total Costs: \$38,218 Southern California Orthopaedic Research and Education Center Role: <u>Principal Investigator</u>
11/01/2014 - 10/31/2015	SCOI Biceps Tenodesis - SPIBiT Principal Investigator(s): Heath B. Henninger

	Direct Costs: \$27,360 Total Costs: \$36,307 Southern California Orthopaedic Research and Education Center Role: <u>Principal Investigator</u>
06/01/2013 - 05/31/2014	SCOI Biceps Tenodesis III - ABIT Principal Investigator(s): Heath B. Henninger Direct Costs: \$21,530 Total Costs: \$28,571 Southern California Orthopaedic Research and Education Center Role: <u>Principal Investigator</u>
11/30/2012 - 01/31/2013	DJO Reverse TSA Teaching Lab Principal Investigator(s): Heath B. Henninger Direct Costs: \$1,200 Total Costs: \$1,592 DJO Surgical Role: <u>Principal Investigator</u>
11/05/2012 - 10/31/2013	SCOI Biceps Tenodesis II - Juggerknot Principal Investigator(s): Heath B. Henninger Direct Costs: \$27,880 Total Costs: \$36,997 Biomet Manufacturing Corp Role: <u>Principal Investigator</u>
08/20/2012 - 10/31/2012	SCOI Biceps Tenodesis I - Pilot Principal Investigator(s): Heath B. Henninger Direct Costs: \$27,880 Total Costs: \$36,997 Biomet Manufacturing Corp Role: <u>Co-Principal Investigator</u>

TEACHING RESPONSIBILITIES/ASSIGNMENTS

Courses Directed

Spring 2011	COURSENUMBER: 7210 COURSETITLE: Biosolid Mechanics DEPARTMENT: Bioengineering DEPARTMENTMNEMONIC: BIOEN FACULTYROLE: Co-Instructor INSTITUTION: University of Utah RECORDSOURCE: MBM
Spring 2009	COURSENUMBER: 7210 COURSETITLE: Biosolid Mechanics DEPARTMENT: Bioengineering DEPARTMENTMNEMONIC: BIOEN FACULTYROLE: Co-Instructor INSTITUTION: University of Utah RECORDSOURCE: MBM

Spring 2007

COURSENUMBER: 7210
COURSETITLE: Biosolid Mechanics
DEPARTMENT: Bioengineering
DEPARTMENTMNEMONIC: BIOEN
FACULTYROLE: Instructor
INSTITUTION: University of Utah
RECORDSOURCE: MBM

Course Lectures

2017	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics, SOM
2016	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics, SOM
2014	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics. SOM, Orthopaedics, SOM
2013	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics. SOM, Orthopaedics, SOM
2012	Lecturer, 3901: Current Res in Bioengineering, University of Utah, BIOEN
2012	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics. SOM, Orthopaedics, SOM
2011	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics. SOM, Orthopaedics, SOM
2011	Lecturer, 3091: Current Res in Bioengineering, University of Utah, BIOEN
2010	Lecturer, Core Curriculum lecture series, University of Utah, Orthopaedics. SOM, Orthopaedics, SOM

Small Group Teaching

Fall 2008

COURSENUMBER: 6201
COURSETITLE: Intro to Biomechanics
DEPARTMENT: Bioengineering
DEPARTMENTMNEMONIC: BIOEN
FACULTYROLE: TA
INSTITUTION: University of Utah
RECORDSOURCE: MBM

Fall 2006

COURSENUMBER: 6201
COURSETITLE: Intro to Biomechanics
DEPARTMENT: Bioengineering
DEPARTMENTMNEMONIC: BIOEN
FACULTYROLE: TA
INSTITUTION: University of Utah
RECORDSOURCE: MBM

Trainee Supervision

Fellow

2017 - 2018	Co-mentor (research), Nicola Krahenbuhl, Kantonsspital Baselland, Basel, Switzerland, , Clinical mentors: Charles Saltzman, MD, Alexej Barg, MD
2016 - 2017	Research Mentor, Matthijs Jaxsens, University Hospital of Basel, Basel, Switzerland, , Clinical mentor: Robert Tashjian, MD

2014 - 2015	Co-mentor (research), R. Judd Robins, University of Utah, , Clinical mentor: Robert Burks, MD
2013 - 2014	Research Mentor, Thomas Suter, Kantonsspital Liestal, Clinic for Orthopaedic and Trauma Surgery, Liestal, Switzerland, , Clinical mentor: Robert Tashjian, MD
2013 - 2014	Co-mentor (research), Jeffrey Reagan, University of Utah, , Clinical mentor: Robert Burks, MD
2013 - 2014	Co-mentor (research), J. Benjamin Jackson III, University of Utah, , Clinical mentor: Charles Saltzman, MD
2013 - 2014	Co-mentor (research), Raj Kullar, University of Utah, , Clinical mentor: Robert Burks, MD
2011 - 2012	Co-mentor (research), Peter Scheffel, University of Utah, , Clinical mentor: Robert Burks, MD

Resident

2014 - 2016	Co-mentor (research), Anthony Montanez, University of Utah, , Clinical mentor: Robert Burks, MD
2012	Co-mentor (research), Jeremy Gilliland, University of Utah, , Clinical mentor: Chris Peters, MD

PhD/Doctorate

2019 - Present	Research Mentor, Evan Davis, University of Utah
2017 - Present	Research Mentor, Tyler Knighton, University of Utah
2016 - Present	Research Mentor, Klevis Aliaj, University of Utah
2015 - Present	Research Mentor, Hema Sulkar, University of Utah
2013 - Present	Research Mentor, Christopher Kolz, University of Utah

Medical Student

2018	Co-mentor (research), Garrett Christensen, University of Utah, , Clinical mentors: Peter Chalmers MD, Robert Tashjian MD
2017	Co-mentor (research), Nathan Davidson, University of Iowa, , Clinical mentors: Charles Saltzman, MD, Alexej Barg, MD

Undergraduate

2019 - Present	Mitchell Kirkham, University of Utah
2019 - Present	Zachary Glenn, University of Utah
2019 - Present	Jaren Forsyth, University of Utah
2018 - 2019	Corby Dixon, University of Utah
2018 - Present	Spencer Jones, University of Utah
2017 - 2018	Joshua Johnson, University of Utah
2017 - 2019	UROP awardee, Gentry Feeney, University of Utah
2017 - 2019	Zachary Wade, University of Utah
2016 - 2017	Spencer Kendell, University of Utah
2016 - 2019	UROP awardee, Hanna Shluker, University of Utah
2016 - 2017	UROP awardee, Sarah Brady, University of Utah
2016 - 2017	Savanna Bennett, University of Utah
2016 - 2018	UROP awardee, William Lewis, University of Utah
2016	M. Serhat Kariparduc, University of Utah
2015 - 2017	UROP awardee, Morgan Izykowski, University of Utah

2015 - 2016	UROP awardee, Michael Young, University of Utah
2014	Sean Tagge, University of Utah
2014 - 2016	Benjamin DeViney, University of Utah
2014	Dallin Rees, University of Utah
2013 - 2015	UROP awardee, Sara Scott, University of Utah
2013 - 2014	UROP awardee, Xin Yang, University of Utah
2013 - 2014	UROP awardee, William Valdez, University of Utah
2012 - 2013	Isaiah Davies, University of Utah
2011 - 2013	Kristen Petersen, Point Loma Nazarene University

Graduate Student Committees

2018 - Present	Member, Taylor, University of Utah,
2017 - Present	Chair, Knighton, University of Utah,
2016 - Present	Chair, Aliaj, University of Utah,
2015 - Present	Chair, Sulkar, University of Utah,
2014 - Present	Member, Zitnay, University of Utah,
2013 - 2018	Member, Drew, University of Utah,
2013 - Present	Chair, Kolz, University of Utah,
2013	Member, Swedberg, University of Utah,

PEER-REVIEWED JOURNAL ARTICLES

1. Krähenbühl, N., Bailey, T.L., Presson, A.P., Allen, C.M., **Henninger, H.B.**, Saltzman, C.L., Barg, A. (2019). Torque application helps to diagnose incomplete syndesmotic injuries using weight-bearing computed tomography images. *Skeletal Radiol*, 48(9), 1367-1376.
2. Kahn, T.L., Granger, E.K., **Henninger, H.B.**, Tashjian, R.Z., Chalmers, P.N. (2019). Reverse total shoulder arthroplasty and resting radiographic scapular rotation. *J Shoulder Elbow Surg*, 28(8), e265-e270.
3. **Henninger, H.B.**, Ellis, B.J., Scott, S.A., Weiss, J.A. (2019). Contributions of elastic fibers, collagen, and extracellular matrix to the multiaxial mechanics of ligament. *J Mech Behav Biomed Mater*, 99118-126.
4. Krähenbühl, N., Burssens, A., Davidson, N.P., Allen, C.M., **Henninger, H.B.**, Saltzman, C.L., Barg, A. (2019). Can Weightbearing Computed Tomography Scans Be Used to Diagnose Subtalar Joint Instability? A Cadaver Study.(Epub ahead of print) *J Orthop Res*.
5. Jacxsens, M., Elhabian, S.Y., Brady, S.E., Chalmers, P.N., Tashjian, R.Z., **Henninger, H.B.** (2019). Coracoacromial morphology: a contributor to recurrent traumatic anterior glenohumeral instability? *J Shoulder Elbow Surg*, 28(7), 1316-1325.e1.
6. Chalmers, P.N., Suter, T., Jacxsens, M., Zhang, Y., Zhang, C., Tashjian, R.Z., **Henninger, H.B.** (2019). Influence of radiographic viewing perspective on glenoid inclination measurement. *Journal of Shoulder and Elbow Arthroplasty*, 3(1), 1-8.
7. Krähenbühl, N., Bailey, T.L., Weinberg, M.W., Davidson, N.P., Hintermann, B., Presson, A.P., Allen, C.M., **Henninger, H.B.**, Saltzman, C.L., Barg, A. (2019). Impact of Torque on Assessment of Syndesmotic Injuries Using Weightbearing Computed Tomography Scans. *Foot Ankle Int*, 40(6), 710-719.
8. Aliaj, K., **Henninger, H.B.**, Tétreault-Paquin, J.E., Getelman, M.H., Donahue, J.P. (2019). Biomechanics of an interlinked suture anchor rotator cuff repair in a human cadaveric model. *JSES Open Access*, 3(2), 70-76.
9. Drew, A.J., Tashjian, R.Z., **Henninger, H.B.**, Bachus, K.N. (2019). Sex and Laterality Differences in Medullary Humerus Morphology.(Epub ahead of print) *Anat Rec (Hoboken)*.

10. Krahenbuhl, N., Bailey, T.L., Weinberg, M.W., Davidson, N.P., Hintermann, B., Presson, A.P., Allen, C.M., **Henninger, H.B.**, Saltzman, C.L., Barg, A. (2019). Is load application necessary when using computed tomography scans to diagnose syndesmotic injuries? A cadaver study.LID - S1268-7731(19)30024-4 [pii]LID - 10.1016/j.fas.2019.02.002 [doi].(Epub ahead of print) *Foot Ankle Surg.*
11. Sulkar, H.J., Tashjian, R.Z., Chalmers, P.N., **Henninger, H.B.** (2019). Mechanical testing of scapular neck fracture fixation using a synthetic bone model. *Clin Biomech (Bristol, Avon)*, 61 64-69.
12. Chalmers, P.N., Beck, L., Stertz, I., Aleem, A., Keener, J.D., **Henninger, H.B.**, Tashjian, R.Z. (2018). Do magnetic resonance imaging and computed tomography provide equivalent measures of rotator cuff muscle size in glenohumeral osteoarthritis? *J Shoulder Elbow Surg*, 27(10), 1877-1883.
13. Chalmers, P.N., Beck, L., Granger, E., **Henninger, H.**, Tashjian, R.Z. (2018). Superior glenoid inclination and rotator cuff tears. *J Shoulder Elbow Surg*, 27(8), 1444-1450.
14. Tashjian, R.Z., Martin, B.I., Ricketts, C.A., **Henninger, H.B.**, Granger, E.K., Chalmers, P.N. (2018). Superior Baseplate Inclination Is Associated With Instability After Reverse Total Shoulder Arthroplasty. *Clin Orthop Relat Res*, 476(8), 1622-1629.
15. Jacxsens, M., Karns, M.R., **Henninger, H.B.**, Drew, A.J., Van Tongel, A., De Wilde, L. (2018). Guidelines for humeral subluxation cutoff values: a comparative study between conventional, reoriented, and three-dimensional computed tomography scans of healthy shoulders. *J Shoulder Elbow Surg*, 27(1), 36-43.
16. Karns, M.R., Jacxsens, M., Uffmann, W.J., Todd, D.C., **Henninger, H.B.**, Burks, R.T. (2018). The critical acromial point: the anatomic location of the lateral acromion in the critical shoulder angle. *J Shoulder Elbow Surg*, 27(1), 151-159.
17. Tashjian, R.Z., Hoy, R.W., Helgerson, J.R., Guss, A.D., **Henninger, H.B.**, Burks, R.T. (2018). Biomechanical Comparison of Transosseous Knotless Rotator Cuff Repair Versus Transosseous Equivalent Repair: Half The Anchors With Equivalent Biomechanics? *Arthroscopy*, 34(1), 58-63.
18. Jacxsens, M., Van Tongel, A., **Henninger, H.B.**, Tashjian, R.Z., De Wilde, L. (2017). The three-dimensional glenohumeral subluxation index in primary osteoarthritis of the shoulder. *J Shoulder Elbow Surg*, 26(5), 878-887.
19. Meisel, A.F., **Henninger, H.B.**, Barber, F.A., Getelman, M.H. (2017). Biomechanical Comparison of Standard and Linked Single-Row Rotator Cuff Repairs in a Human Cadaver Model. *Arthroscopy*, 33(5), 938-944.
20. Suter, T., Kolz, C.W., Tashjian, R.Z., **Henninger, H.B.**, Gerber Popp, A. (2017). Humeral head osteotomy in shoulder arthroplasty: a comparison between anterosuperior and inferoanterior resection techniques. *J Shoulder Elbow Surg*, 26(2), 343-351.
21. Drew, A.J., Izykowski, M.T., Bachus, K.N., **Henninger, H.B.**, Foreman, K.B. (2017). Transhumeral loading during advanced upper extremity activities of daily living. *PLoS ONE*, 12(12), e0189418.
22. Suter, T., **Henninger, H.B.**, Zhang, Y., Wylie, J.D., Tashjian, R.Z. (2016). Comparison of measurements of the glenopolar angle in 3D CT reconstructions of the scapula and 2D plain radiographic views. *Bone Joint J*, 98-B(11), 1510-1516.
23. Tashjian, R.Z., Kolz, C.W., Suter, T., **Henninger, H.B.** (2016). Biomechanics of Polyhydroxyalkanoate Mesh-Augmented Single-Row Rotator Cuff Repairs. *Am J Orthop*, 45 (7), E527-E533.
24. Jacxsens, M., Van Tongel, A., **Henninger, H.B.**, De Coninck, B., Mueller, A.M., De Wilde, L. (2016). A three-dimensional comparative study on the scapulohumeral relationship in normal and osteoarthritic shoulders. *J Shoulder Elbow Surg*, 25(10), 1607-15.

25. Montanez, A., Makarewich, C.A., Burks, R.T., **Henninger, H.B.** (2016). The Medial Stitch in Transosseous-Equivalent Rotator Cuff Repair: Vertical or Horizontal Mattress? *Am J Sports Med*, 44(9), 2225-30.
26. Horisberger, M., Haeni, D., **Henninger, H.B.**, Valderrabano, V., Barg, A. (2016). Total Arthroplasty of the Metatarsophalangeal Joint of the Hallux. *Foot Ankle Int*, 37(7), 755-65.
27. Sampatacos, N., Gillette, B.P., Snyder, S.J., **Henninger, H.B.** (2016). Biomechanics of a novel technique for suprapectoral intraosseous biceps tenodesis. *J Shoulder Elbow Surg*, 25 (1), 149-57.
28. Barg, A., Amendola, R.L., **Henninger, H.B.**, Kapron, A.L., Saltzman, C.L., Anderson, A.E. (2015). Influence of Ankle Position and Radiographic Projection Angle on Measurement of Supramalleolar Alignment on the Anteroposterior and Hindfoot Alignment Views. *Foot Ankle Int*, 36(11), 1352-61.
29. Kolz, C.W., Suter, T., **Henninger, H.B.** (2015). Regional mechanical properties of the long head of the biceps tendon. *Clin Biomech (Bristol, Avon)*, 30(9), 940-5.
30. **Henninger, H.B.**, Valdez, W.R., Scott, S.A., Weiss, J.A. (2015). Elastin governs the mechanical response of medial collateral ligament under shear and transverse tensile loading. *Acta Biomater*, 25304-12.
31. Nuesch, C., Huber, C., Paul, J., **Henninger, H.B.**, Pagenstert, G., Valderrabano, V., Barg, A. (2015). Mid- to Long-term Clinical Outcome and Gait Biomechanics After Realignment Surgery in Asymmetric Ankle Osteoarthritis. *Foot Ankle Int*, 36(8), 908-18.
32. Paul, J., Barg, A., Horisberger, M., Herrera, M., **Henninger, H.B.**, Valderrabano, V. (2015). Tibiotalocalcaneal Arthrodesis With an Intramedullary Hindfoot Nail and Pillar Fibula Augmentation: Technical Tip. *Foot Ankle Int*, 36(8), 984-7.
33. Suter, T., Gerber Popp, A., Zhang, Y., Zhang, C., Tashjian, R.Z., **Henninger, H.B.** (2015). The influence of radiographic viewing perspective and demographics on the critical shoulder angle. *J Shoulder Elbow Surg*, 24(6), e149-58.
34. Wiewiorski, M., Barg, A., Hoerterer, H., Voellmy, T., **Henninger, H.B.**, Valderrabano, V. (2015). Risk factors for wound complications in patients after elective orthopedic foot and ankle surgery. *Foot Ankle Int*, 36(5), 479-87.
35. Tashjian, R.Z., Burks, R.T., Zhang, Y., **Henninger, H.B.** (2015). Reverse total shoulder arthroplasty: a biomechanical evaluation of humeral and glenosphere hardware configuration. *J Shoulder Elbow Surg*, 24(3), e68-77.
36. Kullar, R.S., Reagan, J.M., Kolz, C.W., Burks, R.T., **Henninger, H.B.** (2015). Suture placement near the musculotendinous junction in the supraspinatus: implications for rotator cuff repair. *Am J Sports Med*, 43(1), 57-62.
37. Horisberger, M., **Henninger, H.B.**, Valderrabano, V., Barg, A. (2015). Bone augmentation for revision total ankle arthroplasty with large bone defects. *Acta Orthop*, 86(4), 412-4.
38. Sampatacos, N., Getelman, M.H., **Henninger, H.B.** (2014). Biomechanical comparison of two techniques for arthroscopic suprapectoral biceps tenodesis: interference screw versus implant-free intraosseous tendon fixation. *J Shoulder Elbow Surg*, 23(11), 1731-9.
39. Pagenstert, G., Seelhoff, J., **Henninger, H.B.**, Wirtz, D.C., Valderrabano, V., Barg, A. (2014). Lateral patellar facetectomy and medial reefing in patients with lateral facet syndrome after patellar-retaining total knee arthroplasty. *J Arthroplasty*, 29(11), 2156-62.
40. Paul, J., Barg, A., Horisberger, M., Herrera, M., **Henninger, H.B.**, Valderrabano, V. (2014). Ankle salvage surgery with autologous circular pillar fibula augmentation and intramedullary hindfoot nail. *J Foot Ankle Surg*, 53(5), 601-5.
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43. **Henninger, H.B.**, King, F.K., Tashjian, R.Z., Burks, R.T. (2014). Biomechanical comparison of reverse total shoulder arthroplasty systems in soft tissue-constrained shoulders. *J Shoulder Elbow Surg*, 23(5), e108-17.
44. Nosewicz, T.L., Knupp, M., Bolliger, L., **Henninger, H.B.**, Barg, A., Hintermann, B. (2014). Radiological morphology of peritalar instability in varus and valgus tilted ankles. *Foot Ankle Int*, 35(5), 453-62.
45. Tashjian, R.Z., **Henninger, H.B.** (2013). Biomechanical evaluation of subpectoral biceps tenodesis: dual suture anchor versus interference screw fixation. *J Shoulder Elbow Surg*, 22 (10), 1408-12.
46. Barg, A., Barg, K., Schneider, S.W., Pagenstert, G., Gloyer, M., **Henninger, H.B.**, Valderrabano, V. (2013). Thromboembolic complications after total ankle replacement.(Epub ahead of print) *Current Reviews in Musculoskeletal Medicine*.
47. **Henninger, H.B.**, Underwood, C.J., Romney, S.J., Davis, G.L., Weiss, J.A. (2013). Effect of elastin digestion on the quasi-static tensile response of medial collateral ligament. *J Orthop Res*, 31(8), 1226-33.
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50. Suter, T., Barg, A., Knupp, M., **Henninger, H.**, Hintermann, B. (2013). Surgical technique: talar neck osteotomy to lengthen the medial column after a malunited talar neck fracture. *Clin Orthop Relat Res*, 471(4), 1356-64.
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53. **Henninger, H.B.**, Barg, A., Anderson, A.E., Bachus, K.N., Burks, R.T., Tashjian, R.Z. (2012). Effect of lateral offset center of rotation in reverse total shoulder arthroplasty: a biomechanical study. *J Shoulder Elbow Surg*, 21(9), 1128-35.
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55. **Henninger, H.B.**, Barg, A., Anderson, A.E., Bachus, K.N., Tashjian, R.Z., Burks, R.T. (2012). Effect of deltoid tension and humeral version in reverse total shoulder arthroplasty: a biomechanical study. *J Shoulder Elbow Surg*, 21(4), 483-90.
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58. **Henninger, H.B.**, Underwood, C.J., Ateshian, G.A., Weiss, J.A. (2010). Effect of sulfated glycosaminoglycan digestion on the transverse permeability of medial collateral ligament. *J Biomech*, 43(13), 2567-73.

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REVIEW ARTICLES

1. Barg, A., Barg, K., Schneider, S.W., Pagenstert, G., Gloyer, M., **Henninger, H.B.**, Valderrabano, V. (2013). Thrombembolic complications after total ankle replacement. [Review]. *Current Reviews in Musculoskeletal Medicine*, 6, (4), 328-335.
2. Barg, A., Pagenstert, G.I., Horisberger, M., Paul, J., Gloyer, M., **Henninger, H.B.**, Valderrabano, V. (2013). Supramalleolar osteotomies for degenerative joint disease of the ankle joint: indication, technique and results. [Review]. *Int Orthop*, 37, (9), 1683-95.
3. Valderrabano, V., Paul, J., Monika, H., Pagenstert, G.I., **Henninger, H.B.**, Barg, A. (2013). Joint-preserving surgery of valgus ankle osteoarthritis. [Review]. *Foot Ankle Clin*, 18, (3), 481-502.
4. Barg, A., Pagenstert, G.I., Hugle, T., Gloyer, M., Wiewiorski, M., **Henninger, H.B.**, Valderrabano, V. (2013). Ankle osteoarthritis: etiology, diagnostics, and classification. [Review]. *Foot Ankle Clin*, 18, (3), 411-26.
5. Valderrabano, V., Pagenstert, G.I., Muller, A.M., Paul, J., **Henninger, H.B.**, Barg, A. (2012). Mobile- and fixed-bearing total ankle prostheses: is there really a difference? [Review]. *Foot Ankle Clin*, 17, (4), 565-85.
6. Barg, A., Pagenstert, G.I., Leumann, A.G., Muller, A.M., **Henninger, H.B.**, Valderrabano, V. (2012). Treatment of the arthritic valgus ankle. [Review]. *Foot Ankle Clin*, 17, (4), 647-63.
7. Barg, A., Knupp, M., **Henninger, H.B.**, Zwicky, L., Hintermann, B. (2012). Total ankle replacement using HINTEGRA, an unconstrained, three-component system: surgical technique and pitfalls. [Review]. *Foot Ankle Clin*, 17, (4), 607-35.
8. **Henninger, H.B.**, Reese, S.P., Anderson, A.E., Weiss, J.A. (2010). Validation of computational models in biomechanics. [Review]. *Proc Inst Mech Eng [H]*, 224, (7), 801-12.

BOOK CHAPTERS

1. Tashjian, R.Z., **Henninger, H.B.** (2016). Analysis of Reverse Total Shoulder Arthroplasty Biomechanics Using a Dynamic Shoulder Simulator. In Mark Frankle, Scott Marberry, Derek Pupello (Eds.), *Reverse Shoulder Arthroplasty: Biomechanics, Clinical Techniques, and Current Technologies* (1)(pp. 105-13). Springer International Publishing.

Case Reports

1. Horisberger, M., Paul, J., Wiewiorski, M., **Henninger, H.B.**, Khalifa, M.S., Barg, A., Valderrabano, V. (2014). Commercially available trabecular metal ankle interpositional spacer for tibiototalcalcaneal arthrodesis secondary to severe bone loss of the ankle. *J Foot Ankle Surg*, 53(3), 383-7.

Pending Journal Articles

1. Chalmers, P.N., Beck, L.T., Miller, M.S., Stertz, I., **Henninger, H.B.**, Tashjian, R.Z. (In Press). Glenoid retroversion associates with asymmetric rotator cuff muscle atrophy in those with Walch B-type glenohumeral osteoarthritis. *J Am Acad Orthop Surg*.

POSTER PRESENTATIONS

- 2019 Sulkar HJ*, Kolz CW, Aliaj K, Knighton TW, Hermans TR, Henninger HB. In vitro simulation of physiologic human shoulder motion. XXVII Congress of the International Society of Biomechanics (ISB2019), held in conjunction with the 43rd Annual Meeting of the American Society of Biomechanics (ASB2019), Calgary, Canada
- 2019 Chalmers PN*, Martin BI, Ricketts CA, Henninger HB, Granger EK, Tashjian RZ. Superior baseplate inclination in association with instability after reverse total shoulder arthroplasty. 2019 American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting.
- 2019 Aliaj K*, Feeney G, Foreman KB, Bachus KN, Henninger HB. Replicating dynamic humerus motion using an industrial robot. 65th Annual Meeting of the Orthopaedic Research Society
- 2019 Taylor CE*, Henninger HB, Bachus KN. Analysis of medullary tibial morphology to guide intramedullary percutaneous osseointegrated implant design. 65th Annual Meeting of the Orthopaedic Research Society
- 2018 Jacksens M*, Chalmers PN, Tashjian RZ, Henninger HB. Glenoid defect size depends on glenoid defect orientation in patients with recurrent traumatic anterior shoulder instability. 28th SECEC-ESSSE Congress, Geneva, Switzerland
- 2018 Suter T*, Krahenbuhl N, Zhang Y, Henninger HB. The influence of radiographic viewing perspective on the acromial tilt and acromial slope angles. 28th SECEC-ESSSE Congress, Geneva, Switzerland
- 2018 Drew AJ*, Taylor CE, Tashjian RZ, Chalmers PN, Henninger HB, Bachus KN. Initial stability of a novel percutaneous osseointegrated implant with proximal interlocking screws for transhumeral amputees. 2018 Military Health System Research Symposium (MHSRS)
- 2018 Krähenbühl N*, Bailey TL, Weinberg MW, Davidson NP, Henninger HB, Saltzman CL, Barg A. Stress vs. non-stress radiographs in subtle syndesmotic injuries: Is there a difference? American Orthopaedic Foot & Ankle Society (AOFAS) Annual Meeting
- 2018 Aliaj K*, Foreman KB, Bachus KN, Henninger HB. Replicating dynamic humerus motion using an industrial robot. 8th World Congress of Biomechanics, Dublin, Ireland
- 2018 Molinari D*, Coigny F, Zwicky L, Gerber Popp A, Henninger HB, Suter T. Regional and observer differences in determination of the humeral anatomic neck in 3D-CT models. Jahreskongress Swiss Orthopaedics 2018. Montreux, Switzerland.
- 2018 Suter T*, Krähenbühl N, Zhang Y, Henninger HB. The influence of radiographic viewing perspective on the acromial tilt and acromial slope angles. Jahreskongress Swiss Orthopaedics 2018, Montreux, Switzerland

- 2018 Jacxsens M*, Elhabian SY, Chalmers PN, Tashjian RZ, Henninger HB. Periarticular and glenoid morphology of the scapula differs in patients with Hill-Sachs lesions: a controlled Statistical Shape Modeling study. 64th Annual Meeting of the Orthopaedic Research Society.
- 2018 Jacxsens M*, Tashjian RZ, Henninger HB. Glenoid track exceeded glenoid bone loss as a predictor of instability recurrence after anterior capsulolabral repair, 2018 Annual Meeting of the American Academy of Orthopaedic Surgeons.
- 2017 Jacxsens M*, Tashjian RZ, Henninger HB. Glenoid track and glenoid bone loss as predictors of recurrent instability after Bankart repair: A 3D CT-Scan study. 27th SECEC-ESSSE Congress, Berlin, Germany
- 2017 Jacxsens M*, Henninger HB, Karns M, De Wilde L, Van Tongel A. Guidelines for humeral subluxation cut-off values as determined on different imaging modalities. 27th SECEC-ESSSE Congress, Berlin, Germany
- 2017 Sulkar HJ*, Tashjian RZ, Henninger HB. A biomechanical comparison of two methods of scapular neck fracture fixation. Summer Biomechanics, Bioengineering and Biotransport Conference (SB3C).
- 2017 Izykowski MT*, Drew AJ, Foreman KB, Bachus KN, Henninger HB. Forces in the residual humerus of amputees during activities of daily living. 63rd Annual Meeting of the Orthopaedic Research Society.
- 2016 Drew AJ*, Izykowski MT, Henninger HB, Foreman KB, Bachus KN. Kinematic measurement of upper extremity activities of daily living. 2016 Military Health System Research Symposium
- 2016 Suter T*, Henninger HB, Zhang Y, Wylie JD, Tashjian RZ . Comparison of glenopolar angle measurements in three-dimensional computed tomography reconstructions and plain radiographs . 23rd Jahreskongress der DVSE, Bremen, Germany
- 2016 Henninger HB*, Deviney BM, Young MC, Weiss JA. Viscoelastic contributions of elastin during uniaxial tensile stress relaxation of ligament. 62nd Annual Meeting of the Orthopaedic Research Society.
- 2015 Kolz CW*, Suter T, Henninger HB. Regional mechanical properties of the long head of the biceps tendon. Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C).
- 2015 Henninger HB*, Valdez WR, Scott SA, Weiss JA.. Elastin governs the extracellular mechanical response of ligament. 61st Annual Meeting of the Orthopaedic Research Society.
- 2015 Kolz CW*, Suter T, Henninger HB. Regional mechanical properties of the long head of the biceps tendon. 61st Annual Meeting of the Orthopaedic Research Society.
- 2014 Jackson III JB*, Phillipi MT, Kolz CW, Suter T, Henninger HB. Biomechanical properties of the plantaris tendon. 45th Annual Meeting of the American Orthopaedic Foot & Ankle Society
- 2014 Tashjian RZ*, Kolz CW, Suter T, Henninger HB. Initial fixation strength of polyhydroxyalkanoate mesh (BioFiber) augmented rotator cuff repairs, 25th Annual SECEC-ESSSE European Society for Surgery of the Shoulder and Elbow. Istanbul, Turkey
- 2014 Kolz CW*, Tashjian RZ, Henninger HB. Mechanical characterization of rotator cuff repair using a bio-resorbable scaffold. 7th World Congress of Biomechanics

- 2014 Henninger HB*, Valdez WR, Scott SA, Weiss JA. Elastin determines the transverse tensile response of medial collateral ligament. 60th Annual Meeting of the Orthopaedic Research Society.
- 2014 Tashjian RZ*, Burks RT, Henninger HB. Biomechanical evaluation of various humeral and glenosphere options in two reverse TSA systems. 2014 American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting
- 2013 Henninger HB*, Underwood CJ, Weiss JA. Contribution of elastin to the material behavior of medial collateral ligament. 59th Annual Meeting of the Orthopaedic Research Society
- 2013 Henninger HB*, Burks RT, Tashjian RZ. Comparison of reverse total shoulder arthroplasty biomechanics using a medialized or lateralized center of rotation. 59th Annual Meeting of the Orthopaedic Research Society
- 2012 Barg A*, Zwicky L, Knupp M, Henninger HB, Hintermann B. Total ankle replacement following septic and rheumatoid osteoarthritis: A patient-based comparison of outcome. 27th Annual Summer Meeting, American Orthopaedic Foot & Ankle Society (AOFAS).
- 2012 Henninger HB*, Harris MD, Petersen KR, Burks RT, Tashjian RZ. Comparison of methods to predict scapular notching from radiographs after reverse total shoulder arthroplasty. 2012 ASME Summer Bioengineering Conference, Fajardo, Puerto Rico
- 2012 Beck A*, Barg A, Henninger HB, Knupp M, Hintermann B. Simultaneous bilateral total ankle replacement: Mid-term results in 26 patients. Jahrestagung der Deutschen Assoziation für Fuss und Sprunggelenk e.v. (D.A.F.), Dresden, Germany
- 2012 Henninger HB*, Barg A, Anderson AE, Bachus KN, Burks RT, Tashjian RZ. Effect of lateral offset center of rotation in reverse total shoulder arthroplasty: A biomechanical study. 2012 American Academy of Orthopaedic Surgeons (AAOS)
- 2012 Henninger HB*, Harris MD, Petersen KR, Burks RT, Tashjian RZ, Anderson AE. Technique to quantify the morphology of the lateral border of the scapula and scapular notching. 58th Annual Meeting of the Orthopaedic Research Society
- 2011 Gilliland JM*, Anderson LA, Henninger HB, Kubiak EN, Peters CL. Biomechanical analysis of acetabular revision constructs: is pelvic discontinuity best treated with bicolumnar or traditional unicolumnar fixation? American Association of Hip and Knee Surgeons (AAHKS) Annual Meeting
- 2009 Henninger HB*, Underwood CJ, Ateshian GA, Weiss JA. Permeability of bovine articular cartilage differs as a function of test protocol and enzyme treatment. Biomedical Engineering Society Annual Fall Meeting
- 2008 Henninger HB, Maas SA, Shepherd JH, Weiss JA. Transverse isotropy of sulfated glycosaminoglycans in human medial collateral ligament: A quantitative analysis. 54th Annual Meeting of the Orthopaedic Research Society
- 2007 Henninger HB, Maas SA, Whitaker RT, Weiss JA. 3D geometry of sulfated glycosaminoglycans in collagen: Analysis of transmission electron microscopy data. 53rd Annual Meeting of the Orthopaedic Research Society
- 2006 Rainis E, Moore S, Weiss JA, Henninger HB, Debski R. Can an isotropic constitutive model be utilized for the glenohumeral capsule? ASME Summer Bioengineering Conference

- 2006 Underwood CJ, Henninger HB, Lujan TJ, Weiss JA. Glycosaminoglycan concentration and species in human knee ligaments. 52nd Annual Meeting of the Orthopaedic Research Society
- 2006 Henninger HB, Underwood CJ, Whitaker RT, Maas SA, Weiss JA. Fine structure and orientation of sulfated glycosaminoglycans in human knee ligament. 52nd Annual Meeting of the Orthopaedic Research Society
- 2005 Henninger HB, Underwood CJ, Lujan TJ, Thompson BM, Weiss JA. Decorin proteoglycans do not resist shear deformation in ligament. 1st Annual Mountain West Biomedical Engineering Conference

ORAL PRESENTATIONS

Meeting Presentations International

- 2019 Jacxsens M*, Henninger HB, De Wilde L, Van Tongel A. The natural history of three-dimensional scapulohumeral relationship in anatomic total shoulder arthroplasty. 14th International Congress of Shoulder and Elbow Surgery, Buenos Aires, Argentina
- 2019 Jacxsens M*, Elhabian SY, Chalmers PN, Tashjian RZ, Henninger HB. Thinking outside the glenohumeral box: Hierarchical shape variation of the periarticular anatomy of the scapula using statistical shape modeling. 14th International Congress of Shoulder and Elbow Surgery, Buenos Aires, Argentina
- 2018 Molinari D*, Coigny F, Zwicky L, Gerber Popp A, Henninger HB, Suter T. Regional and observer differences in determination of the humeral anatomic neck in 3D-CT models. 28th SECEC-ESSSE Congress, Geneva, Switzerland
- 2018 Jacxsens M*, Elhabian SY, Chalmers PN, Tashjian RZ, Henninger HB. Periarticular and glenoid morphology of the scapula differs in patients with Hill-Sachs lesions: a controlled Statistical Shape Modeling study. Jahreskongress Swiss Orthopaedics 2018. Montreux, Switzerland
- 2017 Jacxsens M*, Elhabian SY, Tashjian RZ, Henninger HB. Scapular morphology in patients with Hill-Sachs lesions using Statistical Shape Modeling. 27th SECEC-ESSSE Congress, Berlin, Germany
- 2017 Jacxsens M*, Tashjian RZ, Henninger HB. Glenoid track and glenoid bone loss as a predictor of instability recurrence after Bankart repair: a 3D CT-Scan study. 77th Annual Congress of Swiss Society of Orthopaedics and Traumatology, St. Gallen, Switzerland
- 2017 Jacxsens M*, Tashjian RZ, Henninger HB. Glenoid track and glenoid bone loss as a predictor of instability recurrence after Bankart repair: a 3D CT-Scan study. 2017 AGA Congress, Munich, Germany
- 2016 Suter T, Kolz CW, Tashjian RZ, Henninger HB, Gerber Popp A*. Which osteotomy of the humeral head in shoulder arthroplasty? A comparison between traditional anterosuperior versus a novel inferoanterior oriented resection SECEC-ESSSE European Society for Surgery of the Shoulder and Elbow Closed Meeting, Antwerp, Belgium.
- 2016 Suter T*, Henninger HB, Kolz CW, Tashjian RZ, Gerber Popp A. Osteotomy of humeral head in shoulder arthroplasty. Comparison between the traditional antero-superior versus a novel infero-anterior oriented resection technique. 23rd Jahreskongress der DVSE, Bremen, Germany

- 2016 Suter T*, Henninger HB, Kolz CW, Tashjian RZ, Gerber Popp A. Osteotomy of humeral head in shoulder arthroplasty. Comparison between the traditional antero-superior versus a novel infero-anterior oriented resection technique. 17th EFORT Congress, Geneva, Switzerland
- 2016 Suter T*, Henninger HB, Zhang Y, Wylie JD, Tashjian RZ . Comparison of glenopolar angle measurements in three-dimensional computed tomography reconstructions and plain radiographs . 17th EFORT Congress, Geneva, Switzerland
- 2015 Suter T*, Kolz CW, Tagge ST, Tashjian RZ, Gerber Popp A, Henninger HB. Surgical accuracy of traditional humeral head osteotomy in shoulder arthroplasty, 26th Annual SECEC-ESSSE European Society for Surgery of the Shoulder and Elbow. Milan, Italy
- 2015 Suter T*, Gerber Popp A, Zhang Y, Zhang C, Tashjian RZ, Henninger HB. The influence of radiographic viewing perspective and demographics on the Critical Shoulder Angle. Jahreskongress der Swiss Orthopaedics. Basel, Switzerland.
- 2015 Suter T*, Kolz CW, Tagge ST, Tashjian RZ, Gerber Popp A, Henninger HB. Surgical accuracy of humeral head osteotomy in shoulder arthroplasty. Jahreskongress der Swiss Orthopaedics. Basel, Switzerland.
- 2015 Suter T*, Kolz CW, Tagge ST, Tashjian RZ, Gerber Popp A, Henninger HB. Surgical accuracy of humeral head osteotomy in shoulder arthroplasty. 16th EFORT Congress, Prague, Czech Republic
- 2015 Tashjian RZ*, Suter T, Gerber Popp A, Zhang Y, Zhang C, Henninger HB. The influence of radiographic viewing perspective and demographics on the critical shoulder angle. 16th EFORT Congress, Prague, Czech Republic
- 2012 Barg A*, Zwicky L, Suter T, Knupp M, Henninger HB, Hintermann B. Medial syndrome in patients with total ankle replacement. Jahreskongress der Schweizerischen Gesellschaft für Orthopädie und Traumatologie, Basel, Switzerland.
- 2012 Barg A*, Anderson AE, Bachus KN, Tashjian RZ, Burks RT, Henninger HB. Biomechanical effects of lateral offset center of rotation in reverse shoulder arthroplasty. Jahreskongress der Schweizerischen Gesellschaft für Orthopädie und Traumatologie, Basel, Switzerland.
- 2012 Henninger, HB*, Underwood CJ, Weiss JA. Contributions of elastin to the quasi-static tensile mechanics of medial collateral ligament. 2012 ASME Summer Bioengineering Conference, Fajardo, Puerto Rico
- 2012 Barg A*, Harris MD, Henninger HB, Hintermann B, Anderson AE, Saltzman CL. Radiologic assessment of hindfoot alignment: Saltzman view. Jahrestagung der Deutschen Assoziation für Fuss und Sprunggelenk e.v. (D.A.F.), Dresden, Germany
- 2006 Underwood CJ, Henninger HB, Lujan TJ*, Weiss JA. Distribution, fine structure and mechanical role of dermatan sulfate glycosaminoglycans in the medial collateral ligament. 5th World Congress of Biomechanics, Munich, Germany
- National
2019 Moderated ePoster, Poster, Kolz CW*, Sulkar HS, Aliaj K, Tashjian RZ, Chalmers PN, Henninger HB. Changes in scapulothoracic and glenohumeral joint angles during humeral internal rotation in adduction, 65th Annual Meeting of the Orthopaedic Research Society

- 2018 Krähenbühl N*, Bailey TL, Weinberg MW, Davidson NP, Henninger HB, Saltzman CL, Barg A. Can subtle syndesmotic injury be assessed using weight-bearing CT scans? American Orthopaedic Foot & Ankle Society (AOFAS) Annual Meeting
- 2015 Robins RJ*, Henninger HB, Tashjian RZ, Burks RT. Soft tissue labral reconstruction in glenoid bone loss model: A biomechanical study. 57th Annual Meeting of the Society of Military Orthopaedic Surgeons (SOMOS).
- 2015 Suter T*, Kolz CW, Tagge ST, Tashjian RZ, Gerber Popp A, Henninger HB. Surgical accuracy of traditional humeral head osteotomy in shoulder arthroplasty. Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C).
- 2015 Henninger HB*, Scott SA, Ellis BJ, Weiss JA. A transversely isotropic constitutive model describes and predicts the contribution of elastin to the multiaxial mechanics of ligament. Summer Biomechanics, Bioengineering, and Biotransport Conference (SB3C).
- 2015 Barg A*, Wiewiorski M, Paul J, Horisberger M, Henninger HB, Valderrabano V. Realignment osteotomy in fibular malunion: Mid-term results in 19 consecutive patients. 2015 American Academy of Orthopaedic Surgeons (AAOS)
- 2014 Henninger HB, Valdez WR, Scott SA, Weiss JA*, Elastin dominates extracellular matrix mechanics in ligament, Biomedical Engineering Society (BMES) Annual Fall Meeting
- 2014 Barg A*, Wiewiorski M, Horisberger M, Paul J, Henninger HB, Valderrabano V. Realignment osteotomy in fibular malunion: mid-term results in 19 consecutive patients. 45th Annual Meeting of the American Orthopaedic Foot & Ankle Society
- 2013 Henninger HB*, Burks RT, Tashjian RZ. A biomechanical comparison of reverse total shoulder arthroplasty systems. 2013 Annual Meeting of the International Society for Technology in Arthroplasty (ISTA).
- 2013 Burks RT*, Tashjian RZ, Henninger HB. Comparison of reverse total shoulder arthroplasty systems in soft tissue constrained shoulders. 2013 Closed Meeting of the American Shoulder and Elbow Surgeons
- 2013 Henninger HB*, Burks RT, Tashjian RZ. Biomechanics of reverse total shoulder arthroplasty. 2013 ASME Summer Bioengineering Conference
- 2013 Henninger HB*, Underwood CJ, Romney SJ, Davis GL, Weiss JA. Elastin contributes to the tensile response of medial collateral ligament. 2013 ASME Summer Bioengineering Conference
- 2012 Barg A*, Zwicky L, Knupp M, Henninger HB, Anderson AE, Hintermann B. Total ankle replacement using a non-constrained, three component system. 2012 American Academy of Orthopaedic Surgeons (AAOS) Annual Meeting
- 2011 Henninger HB, Barg A, Anderson AE, Bachus KN, Tashjian RZ, Burks RT*. Influence of intra-operative variables on the biomechanics of reverse total shoulder arthroplasty. American Shoulder and Elbow Surgeons (ASES) Closed Meeting.
- 2011 Henninger HB*, Barg A, Anderson AE, Bachus KN, Tashjian RZ, Burks RT. Influence of humeral version and deltoid tension on glenohumeral kinematics after reverse total shoulder arthroplasty, ASME Summer Bioengineering Conference.

- 2011 Barg A*, Henninger HB, Knupp M, Anderson AE, Hintermann B. Simultaneous bilateral total ankle replacement: Outcome in 26 patients following for 2 – 10 27th Annual Summer Meeting, American Orthopaedic Foot & Ankle Society (AOFAS)
- 2011 Barg A*, Anderson AE, Harris MD, Henninger HB, Nickisch F, Hintermann B, Saltzman CL. Radiographic measurement of medial distal tibial angle, part I: Comparison between weight-bearing mortise and special hindfoot alignment view radiographs. 27th Annual Summer Meeting, American Orthopaedic Foot & Ankle Society (AOFAS)
- 2011 Barg A*, Harris MD, Henninger HB, Hintermann B, Anderson AE. Radiographic measurement of medial distal tibial angle, part II: Influence of ankle position (rotation, dorsiflexion/plantar flexion) and radiograph technique on obtained results. 27th Annual Summer Meeting, American Orthopaedic Foot & Ankle Society (AOFAS)
- 2010 Henninger HB*, Underwood CJ, Ateshian GA, Weiss JA. Depletion of sulfated glycosaminoglycans increases the transverse permeability of medial collateral ligament, 56th Annual Meeting of the Orthopaedic Research Society
- 2009 Henninger HB*, Underwood CJ, Ateshian GA, Weiss JA. Removal of sulfated glycosaminoglycans has a differential effect on the permeability of bovine articular cartilage as measured by direct permeation and stress relaxation, ASME Summer Bioengineering Conference
- 2009 Yoder JH*, Henninger HB, Weiss JA, Elliott DM. Annulus fibrosus shear properties are consistent with motion segment mechanics when fibers are loaded, ASME Summer Bioengineering Conference
- 2009 Henninger HB*, Underwood CJ, Weiss JA. Influence of sulfated glycosaminoglycans on the transverse permeability of porcine medial collateral ligament, 55th Annual Meeting of the Orthopaedic Research Society
- 2008 Reese SP*, Maas SA, Henninger HB, Weiss JA. The effect of fiber microstructure on the observed Poisson's ratio of tendon and ligament tissue. Proceedings, ASME Summer Bioengineering Conference
- 2006 Henninger HB*, Lujan TJ, Underwood CJ, Weiss JA. Distribution and mechanical implications of dermatan sulfate in human medial collateral ligament. ASME Summer Bioengineering Conference
- 2006 Underwood CJ*, Henninger HB, Lujan TL, Weiss JA. Influence of sulfated glycosaminoglycans on ligament mechanics. Biomedical Engineering Society (BMES) Annual Fall Meeting
- 2006 Lujan TJ*, Underwood CJ, Henninger HB, Weiss JA. Dermatan sulfate glycosaminoglycans do not contribute to the shear or tensile material behavior of the human MCL. 52nd Annual Meeting of the Orthopaedic Research Society
- 2005 Henninger HB*, Underwood CJ, Lujan TJ, Thompson BM, Weiss JA. Decorin proteoglycans do not resist shear deformation in ligament. Biomedical Engineering Society (BMES) Annual Fall Meeting

Local/Regional

- 2019 Podium, Sulkar HJ*, Kolz CW, Aliaj K, Knighton TW, Hermans TR, Henninger HB. In vitro simulation of physiologic human shoulder motion. 2019 Utah Biomedical Engineering Conference (UBEC)

- 2013 Valdez WR*, Henninger HB, Scott SA, Weiss JA. Elastin's mechanical role in the transverse tensile response of medial collateral ligament. 9th Annual Utah Biomedical Engineering Conference (UBEC)
- 2011 Henninger HB*, Barg A, Anderson AE, Bachus KN, Tashjian RZ, Burks RT. Influence of intra-operative variables on the biomechanics of reverse total shoulder arthroplasty. 7th Annual Utah Biomedical Engineering Conference (UBEC)
- 2006 Henninger HB*, Maas SA, Whitaker RT, Weiss JA. 3D Geometry of sulfated glycosaminoglycans in collagen: Analysis of transmission electron microscopy data. Proceedings, 2nd Annual Mountain West Biomedical Engineering

Invited/Visiting Professor Presentations

National

- 2014 Henninger HB: Biomechanics of reverse total shoulder arthroplasty. 7th World Congress of Biomechanics, Boston
- 2010 Henninger, HB: Validation of computational models in biomechanics. Osteosynthesis & Trauma Care Foundation Numerical Modeling Workshop, Boston
- 2009 Henninger, HB: Microscopic constituents and their mechanical contributions in ligament. Department Seminar, McKay Orthopaedic Research Laboratory, University of Pennsylvania

Local/Regional

- 2005 Henninger, HB: Spatial orientation of dermatan sulfate in human MCL & implications in tissue mechanics. Department Seminar, Scientific Computing & Imaging Institute, University of Utah

Grand Rounds Presentations

- 2019 Henninger HB: Shoulder Biomechanics: Kinematics, Simulation, and Morphology. University of Utah Orthopaedic Grand Rounds
- 2017 Henninger HB: Percutaneous Osseointegrated Docking Systems (PODS) for Above Elbow Amputees - Design, Testing, and Preparation for an FDA Early Feasibility Study. University of Utah Orthopaedic Grand Rounds
- 2012 Henninger HB, Tashjian RZ: Clinical and experimental biomechanics of reverse total shoulder arthroplasty. University of Utah Orthopaedic Grand Rounds

INTELLECTUAL PROPERTY

Patents

1. Drew AJ, Bachus KN, Kubiak EN, Tashjian RZ, **Henninger HB** (In Press). Osseointegrated implant assembly having transverse through-openings, and systems and methods of using same. US Patent No. 62/503,542. Washington, DC: U.S. Patent and Trademark Office.

OTHER SCHOLARLY ACTIVITIES

Additional Research/Scholarship Contributions

- 2004 - 2009 PhD Dissertation: Microscopic Constituents and Their Mechanical Contributions in Ligament
- 1997 - 1999 BS Thesis: Specification of Servo Drive Assembly for Indexing Wall Applications