## **CURRICULUM VITAE**

Name: Jeffrey M. Lawrence, M.D. Birthdate: 1/9/61 Address: 407 S. Main St. Suite #101 Birthplace: Chicago, IL

Viroqua, WI 54665

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### **ORTHOPAEDIC EXPERIENCE**

3/1/97-Current: Orthopaedic Surgeon, Viroqua, WI

Adult reconstructive specialist, Gundersen Viroqua Center for

Orthopaedic Surgery

8/17/93-2/28/97: Orthopaedic Surgeon, Highland Park, IL

General Orthopaedics, Highland Park Orthopaedic Clinic

3/1/97-6/1/2012: <u>Team Physician</u>, Viroqua High School

8/17/93-3/1/97: <u>Team Physician</u>, Highland Park High School, Trinity College

8/17/93-3/1/97: <u>Academic Appointment</u>

Clinical Instructor, Loyola University Dept. of Orthopaedic Surgery

8/1/92-7/31/93: Subspecialty Orthopaedic Training

Fellowship in Joint Arthroplasty, Anderson Clinic (Arlington, VA)

7/87-6/92: Resident in Orthopaedic Surgery

Loyola University Dept. of Orthopaedic Surgery (Maywood, IL)

Honors: Soffield/Seabury Travelling Fellowship Award

**EDUCATION** 

9/83-6/87: <u>Northwestern University School of Medicine</u>

M.D. Degree

9/79-6/83: Harvard University: BA in Biology

Honors: Magna Cum Laude

Harvard College Scholarship

CERTIFICATION

National Board of Medical Examiners 1988

American Board of Orthopaedic Surgeons 1995, recert 2005, recert 2015

#### **MEMBERSHIPS**

American Medical Association

American Academy of Orthopaedic Surgeons American Association of Hip and Knee Surgeons

**LICENSE** Wisconsin #38523 (1997)

**CONSULTANT** Stryker, Corin, Clyra, Concensus

### PRESENTATION AND PUBLICATIONS

- 1. Lawrence, J.M. and Paprosky, W.G.: Treatment of Failed Total Hip Allograft and Cementless Technique, a 7 Year Clinical Experience. Mid-American Orthopaedic Assn., Bermuda, 1989
- 2. Lawrence, J.M. and Paprosky, W.G.: The Relationship Between Distal Canal Fill and Thigh Pain in Cementless Revision Total Hip Arthroplasty. Mid-American Orthopaedic Assn., Alabama, 1990
- 3. Lawrence, J.M. and Paprosky, W.G.: Autologous Blood Donations in Primary and Revision Hip Surgery. Mid-American Orthopaedic Assn., Alabama, 1990
- 4. Paprosky, W.G. and Lawrence, J.M.: Bone Grafting the Deficient Acetabulum. Mid-American Orthopaedic Assn., Alabama, 1990
- 5. Paprosky, W.G., Lawrence, J.M., and Cameron, H.: Acetabular Defect Classification: Clinical Application. Orthopaedic Review, Vol. XIX Supplement: 3, 1990
- 6. Paprosky, W.G., Lawrence, J.M. and Cameron, H.: Femoral Defect Classification: Clinical Application. Orthopaedic Review, Vol. XIX Supplement: 9, 1990
- 7. Lawrence, J.M., and Paprosky, W.G.: Thigh Pain in Revision Hip Arthroplasty. AAOS, Anaheim. 1991
- 8. Paprosky, W.G., Lawrence, J.M., and Cameron, H.: Use of Femoral Strut Grafts in Cementless Revision Total Hip Arthroplasty: Functional or Decorative? AAOS, Anaheim, 1991
- 9. Paprosky, W.G., Lawrence, J.M., and Cameron, H.: Classification and Treatment of the Failed Acetabulum: A Systematic Approach. Contemporary Orthopaedics, Vol. 22, No. 2:121, 1991
- Lawrence, J.M. and Paprosky, W.G.: Cementless Femoral Revision Arthroplasty Using Long Stem Extensively Porous Coated Prostheses. Mid-American Orthopaedic Assn., Palm Springs 1991
- 11. Lawrence, J.M., Farless, B., Schwartz, C.M., Research: Patwarden, A., Sartori, M., Lickus, L., Paprosky, W.G., Daley, R.: Acetabular Micromotion as measured by Laser Holographic Interferometry. ORS, Anaheim, 1991
- 12. Paprosky, W.G., Perona, PG., Lawrence, J.M.: Use of Structural Allografts in the Severely Deficient Acetabulum: The Crucial Importance of Surgical Technique. Mid-American Orthopaedic Assn., FL 1992
- 13. Perona, P.G., Lawrence, J.M., Paprosky, W.G., Patwardhan, A.G., and Sartori, M.: Acetabular Micromotion as a Measure of Initial Implant Stability in Primary Hip Arthroplasty. An In Vitro Comparison of Different Methods of Initial Acetabular Component Fixation. J. Arthroplasty, Vol. 7, No. 4, Dec 1992

- 14. Pak, J.H., Jablonsky, W., Lawrence, J.M., and Paprosky, W.G.: Cortical Strut Allograft in Uncemented Revision Femoral Hip Arthroplasty. AAOS, San Francisco, CA, 1993
- 15. Perona, P.G. and Lawrence, J.M.: Acetabular Defect Classification and Surgical Technique in Revision Total Hip Arthroplasty. AAOS, San Francisco, CA, 1993
- 16. Pak, J.H., Paprosky, W.G., and Lawrence, J.M.: Femoral Strut Allografts in Cementless Revision Total Hip Arthroplasty. Clin. Orthop. 295:172, 1993
- 17. Lawrence, J.M., Engh, C.A., and Macalino, G.: Revision Total Hip Arthroplasty. Long Term Results without Cement. Orthop. Clin. N. America 23:635, 1993. Also presented at AAOS. New Orleans, LA, 1994
- 18. Lawrence, J.M., Engh, C.A., Macalino, G., and Lauro, G.: Outcome of Cementless Revision Hip Arthroplasty. J Bone and Joint Surgery, July 1994
- 19. Lawrence, J.M., Engh, C.A., Parks, N.L.: A Comparative Study of the Effects of Closed Suction Drainage Versus No Drainage After Primary Total Knee Arthroplasty. AAOS, Orlando, FL, 1995
- 20. Holt, B.T., Parks, N.L., Engh, G.A. and Lawrence, J.M.: Comparison of Closed-Suction Drainage and no Drainage After Primary TKA. Orthopaedics, vol. 20, No. 12, Dec. 97, p.1121
- 21. Sami Shalhoub, MS, Christopher Plaskos, Ph.D, Alex Todorov, Jeffrey M. Lawrence, M.D., John M. Keggi, M.D., "Development of an Active Soft Tissue Balancing System for Robotic-Assisted Total Knee Arthroplasty" chapter in "Handbook of Robotic and Image Guided Surgery" Elsevier, currently in print.
- Sami Shalhoub, MS, Christopher Plaskos, Ph.D, Jeffrey M. Lawrence, M.D., John M. Keggi, M.D., "Early Clinical outcomes of a Novel Predictive Ligament Balancing Technique for Total Knee Arthroplasty". CAOS, New York, 2019
- 23. Sami Shalhoub, MS, Christopher Plaskos, Ph.D, Alex Todorov, Jeffrey M. Lawrence, M.D., John M. Keggi, M.D., "Robotic-Assisted TKA can Predict and Achieve Accurate Post-Operative Ligament Balance. CAOS, New York, 2019
- 24. Sami Shalhoub, MS, Christopher Plaskos, Ph.D, Alex Todorov, Jeffrey M. Lawrence, M.D., John M. Keggi, M.D., "The Extension Planning Angle in Gap-Balancing Total Knee Arthroplasty Influences Mid-Flexion Laxity". CAOS, New York, 2019
- 25. Vigdorchik JM, Wakelin EA, Koenig JA, Ponder CE, Plaskos C, DeClaire JH, Lawrence JM, Keggi JM. Impact of Component Alignment and Soft Tissue Release on 2 Year Outcomes in TKA. *J Arthroplasty.* 2022 May 6:S0883-5403(22)00510-1. doi: 10.1016/j.arth.2022.04.042
- 26. Keggi JM, Wakelin EA, Koenig JA, Lawrence JM, Randall AL, Ponder CE, DeClaire JH, Shalhoub S, Lyman S, Plaskos C. Impact of intra-operative predictive ligament balance on post-operative balance and patient outcome in TKA: a prospective multicenter study. *Arch Orthop Trauma Surg.* 2021 Dec;141(12):2165-2174. doi: 10.1007/s00402-021-04043-3

- 27. Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, DeClaire JH, Randall AL, Ponder CE, Koenig JA, Lyman S, Plaskos C. Improved total knee arthroplasty pain outcome when joint gap targets are achieved throughout flexion. *Knee Surg Sports Traumatol Arthrosc.* 2021 Feb 12. doi: 10.1007/s00167-021-06482-2
- 28. Plaskos C, Lawrence JM. Letter to the Editor: Not All Robotic-Assisted Total Knee Arthroplasty Are the Same. *J Am Acad Orthop Surg.* 2021 Sep 16. doi: 10.5435/JAAOS-D-21-00393.
- 29. Shalhoub S, Lawrence JM, Keggi JM, Randall AL, DeClaire JH, Plaskos C. Imageless, robotic-assisted TKA combined with a robotic tensioning system can help predict and achieve accurate post-operative ligament balance. *Arthroplasty Today.* 5 (2019) 334-340.
- 30. Abhinav K. Sharma, MD, Christopher Plaskos, PhD, Sami Shalhoub, PhD, Dylan Lawrence, MD, Jonathan M. Vigdorchik, MD, Jeffrey M. Lawrence, MD: Ligament Tension and Balance before and afterRobotic-Assisted Total Knee Arthroplasty –Dynamic Changes with Increasing Applied Force. *JKnee surgery 2023*

31.

### **Book Chapters**

 Shalhoub S, Plaskos C, Todorov A, Lawrence JM, Keggi JM. Development of an Active Soft Tissue Balancing System for Robotic-Assisted Total Knee Arthroplasty. In Handbook of Robotic and Image-Guided Surgery. Ed. Mohammad H. Abedin-Nasab. Elsevier. Chapter 27, pages 459-473, 2019

# Peer-Reviewed Conference Proceedings (non-exhaustive)

2023

- Randall, A, Wakelin E, Kah J, Keggi J, Koenig J., DeClaire J., Ponder C., Lawrence J., Plaskos C.: Impact of laxity and balance on KOOS pain outcomes of a posterior stabilized TKA, Poster AAOS 2023
- DeClaire J., Lawrence J., Koenig J., Wakelin E., Randall A., Plaskos C., Ponder C, Keggi J.: Impact of soft tissue balance and alignment on 2-year outcomes in TKA, Poster AAOS 2023

2022

- Wakelin EA, Kah J, Randall A, Lawrence J, Keggi J, Koenig JA, DeClaire J, Ponder C, Plaskos C. Impact of laxity and balance on early KOOS pain outcomes of a posterior stabilized Total Knee Arthroplasty, Poster 87 AAHKS 2022
- Karas V, Wakelin E, Lawrence J, Keggi J, Randall A, DeClaire J, Koenig JA, Ponder CE, Plaskos C. When is a loose TKA a good TKA?, Poster 318 AAHKS 2022
- Wakelin EA, Lawrence J, Koenig JA, DeClaire J, Randall A, Plaskos C, Ponder CE, Keggi J. Impact of Soft Tissue Balance on 2-Year Outcomes in TKA CAOS 2022
- Plaskos C. Wakelin EA, Lawrence J, Koenig JA, DeClaire J, Keggi J, Ponder CE. Impact of Soft-Tissue Release and Component Alignment on Outcome in Robotic-Assisted

#### TKA. CAOS 2022

 Wakelin EA, Mills S, Brimson P, Lawrence J, Koenig JA, DeClaire J, Ponder CE, Randall A, Keggi J, Plaskos C. Patient Specific Soft Tissue Balance Targets in Total Knee Arthroplasty CAOS 2022

#### 2021

- Ponder CE, Wakelin EA, Lawrence J, Keggi J, Koenig JA, Plaskos C. Impact of softtissue release and component alignment on outcome in robotic-assisted TKA. AAHKS 2022
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. The Effect of Coronal and Axial Femoral Component Rotation on Midflexion Laxity and Patient Reported Outcomes in Total Knee Arthroplasty (TKA) ESSKA 2021
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, DeClaire JH, Koenig JA, Plaskos C. Axial and Coronal Femoral Rotation and its effect on outcome in TKA in light of soft tissue balancing. ESSKA 2021
- Lawrence JM, Keggi JM, Randall AL, Ponder CE, DeClaire JH, Koenig JA, Shalhoub S, Wakelin EA, Plaskos C. One Year Clinical Outcomes of a Novel Predictive Ligament Balancing Technique for Total Knee Arthroplasty (TKA) ESSKA 2021
- Plaskos C, Wakelin E, Shalhoub S, Lawrence JM, Keggi JM, Koenig JA, Ponder CE, Randall AL, DeClaire JH. Soft-tissue release rates in robotic-assisted gap-balancing and measured-resection Total Knee Arthroplasty (TKA) ESSKA 2021

#### 2020

- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. Joint Balance Throughout Flexion Has Greater Impact on 1 Year Pain Outcome than Component Alignment in TKA. AAHKS 2020
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. The Effect of Coronal and Axial Femoral Component Rotation on Midflexion Laxity and Patient Reported Outcomes in Total Knee Arthroplasty. ORS, 2020
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. Intra-operative Soft Tissue Targets in Total Knee Arthroplasty. ORS 2020
- Keggi JM, Koenig JA, Ponder CE, DeClaire JH, Randall AL, Lawrence JM, Shalhoub S, Wakelin EA, Plaskos C. Accuracy of Balance and Early Outcomes in Tibia and Femur First Total Knee Arthroplasty using a Digital Balancing Tool. AAOS 2020
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. Femoral Component Alignment Boundaries for Tibia First Gap Balancing Using Digital Tensioning Tool. CAOS 2020
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. Intra-operative Soft Tissue Targets for Improved Outcomes in Total Knee Arthroplasty. CAOS 2020
- Keggi JM, Lawrence JM, Randall AL, DeClaire JH, Ponder CE, Koenig JA, Shalhoub S, Wakelin EA, Plaskos C. Predictive Ligament Balancing in Robotic TKA - One Year Clinical Outcomes from a Multicenter Study CAOS 2020
- Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Koenig JA, Plaskos C. The Effect of Coronal and Axial Femoral Component Rotation on Midflexion Laxity and Patient Reported Outcomes in Total Knee Arthroplasty. CAOS 2020
- Plaskos C, Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Koenig JA, Ponder CE, Randall AL, DeClaire JH. Frequency of Soft Tissue Releases and Their Effect on Patient

- Reported Outcomes in Robotic Assisted TKA CAOS 2020
- Orsi AD, Wakelin EA, Shalhoub S, Lawrence JM, Ponder CE, Plaskos C. Optimizing TKA Positioning via Intraoperative Ligament Characterization. CAOS 2020

#### 2019

- Plaskos C, Gill P, Lawrence JM. OMNI Case Study OMNI BalanceBot Technology.
  Digital Orthopaedics Conference San Francisco (DOCSF) 2019
- DeClaire JH, Lawrence JM, Keggi JM, Koenig JA, Ponder CE, Randall AL, Shalhoub S, Wakelin EA, Plaskos C The Impact of Intra-Operative Coronal Midflexionand Flexion Balance on Early Post-Operative Pain in Total Knee Arthroplasty AAHKS 2019
- Lawrence J, Shalhoub S, Lawrence D, Plaskos C Non-linear Dynamic Behavior of Ligaments Balanced Under Tension in Robotic-Assisted Total Knee Arthroplasty AAHKS 2019
- Keggi JM, Lawrence JM, Randall AL, Declaire JH, Shalhoub S, Wakelin EA, Plaskos C. Early Clinical Outcomes of a Novel Predictive Ligament Balancing Technique for Total Knee Arthroplasty AOA 2019
- Keggi JM, Lawrence JM, Randall AL, Declaire JH, Shalhoub S, Wakelin EA, Plaskos C. Robotic-Assisted TKA Can Predict and Achieve Accurate Post-Operative Ligament Balance AOA 2019
- Keggi JM, Lawrence JM, Randall AL, Declaire JH, Shalhoub S, Wakelin EA, Plaskos C. Intra-operative, real-time coronal ligament balance and its effect on patient-reported outcomes AOA 2019
- Lawrence JM, Keggi JM, Randall AL, Ponder CE, Declaire JH, Shalhoub S, Wakelin EA, Plaskos C. Early Clinical Outcomes of a Novel Predictive Ligament Balancing Technique for Total Knee Arthroplasty ISTA 2019
- Lawrence JM, Lawrence D, Shalhoub S, Plaskos C. Ligament Tension and Balance in Robotic-Assisted TKA Dynamic Changes with Increasing Applied Force ISTA 2019
- Wakelin EA, Shalhoub S, Lawrence JM, Koenig JA, Ponder CE, DeClaire JH, Randall AL, Keggi JM, Plaskos C. The impact of intra-operative coronal midflexion and flexion balance on early post-operative pain in TKA ISTA 2019
- DeClaire JH, Lawrence JM, Keggi JM, Randall AL, Ponder CE, Koenig JA, Shalhoub S, Wakelin EA, Plaskos C. Intra-operative, real-time coronal ligament balance and its effect on patient-reported outcomes ISTA 2019
- Plaskos C, Wakelin EA, Shalhoub S, Lawrence JM, Keggi JM, Koenig JA, Ponder CE, Randall AL, DeClaire JH. Soft-Tissue Release Rates in Robotic-Assisted Gap-Balancing and Measured-Resection TKA ISTA 2019
- Randall AL, Declaire JH, Lawrence JM, Keggi JM, Plaskos C Shalhoub S. The Extension Planning Angle in Gap-Balancing Total Knee Arthroplasty Influences Mid-Flexion Laxity. CAOS New York, June 2019
- Lawrence J, Declaire J, Randall A, Keggi J, Shalhoub S Plaskos C. Robotic-Assisted TKA Can Predict and Achieve Accurate Post-Operative Ligament Balance. CAOS New York, June 2019
- Keggi JM, Lawrence JM, Randall A, Declaire JH, Shalhoub S, Plaskos C. Early Clinical Outcomes of a Novel Predictive Ligament Balancing Technique for Total Knee Arthroplasty. CAOS New York, June 2019

#### 2018

- Aiming for equal gaps at 0° and 90° of flexion does not produce an equal gap throughout the arc of flexion in total knee arthroplasty. Shalhoub S, Amanatullah DF, Fritsch B, Gill PS, Keggi JM, Lawrence JM, Plaskos C. *AAOS* New Orleans, USA, March 2018.
- Validation of a Laxity Prediction Algorithm for Gap-Balancing TKA. Shalhoub S, Randall AL, Lawrence JM, Keggi JM, Plaskos C. *Orthopeadic Research Society (ORS)*.

- New Orleans, USA, March 2018.
- The Effect of Gap Balancing at 0° Versus 10° of Flexion on Extension and Mid-flexion Laxity in Total Knee Arthroplasty. Shalhoub S, Plaskos C, Randall AL, Lawrence JM, Keggi JM. *Orthopeadic Research Society (ORS)*. New Orleans, USA, March 2018.
- Does an increase in distraction force uniformly increase tibiofemoral gaps? Shalhoub S, Lawrence D, Plaskos C, Lawrence J. Orthopeadic Research Society (ORS). New Orleans, USA, March 2018.
- Ligament Tension and Balance After Robotic-Assisted TKA Dynamic Changes with an Increasingly Applied Force. Shalhoub S, Lawrence D, Plaskos C, Lawrence JM, Orthopeadic Research Society (ORS). New Orleans, USA, March 2018.
- Can We Predict Laxity in Robotic TKA Using Pre-operative Force-controlled Laxity Measurements? Shalhoub S, Randall AL, Lawrence JM, Keggi JM, Declaire JH, Plaskos C. International Society for Technology in Arthroplasty (ISTA), London, UK, Oct 2018
- The Extension Planning Angle in Gap-Balancing Total Knee Arthroplasty Influences Mid-flexion Laxity Shalhoub S, Declaire JH, Keggi JM, Lawrence JM, Randall AL, Plaskos C. *International Society for Technology in Arthroplasty (ISTA)*, London, UK, Oct 2018

#### SCIENTIFIC EXHIBITS AND POSTERS

- 1. Lawrence, J.M., and Paprosky, W.G.: Methods of Allografting in The Deficient Acetabulum-An 8 Year Clinical Experience. AAOS, New Orleans, 1990
- 2. Jablonsky, W.S., Paprosky, W.G., Lawrence, J.M, Magnus, R.E., and Pak, J.H.: Cementless Femoral Revision Arthroplasty: Long Term Evaluation of Surgical Techniques, Allografting Methods and Prosthetic Design, AAOS, Washington, D.C., 1992
- 3. Perona, P.G., Paprosky, W.G., Lawrence, J.M., Patwardhan, A.G.: Initial Cementless Acetabular Component Stability: Evaluation of Intrinsic Acetabular Support and the Effects of Screw and Spike Augmentation. AAOS, Washington, D.C., 1992
- 4. Perona, P.G., Lawrence, J.M., Paprosky, W.G., Schwartz, A.G., Patwardhan, A: Acetabular Component Micromotion as a Measure of Initial Implant Stability: A Biomechanical Comparison of Cementless Components. Combined Meeting of the ORS of USA, Japan and Canada, in Banff, Alberta, Canada, 1991.
- 5. Perona, P.G., Lawrence, J.M., Paprosky, W.G., Patwardhan, A.: Initial Acetabular Component Stability: An In Vitro Comparison of Cemented and Cementless Acetabular Components. ORS, Washington, D.C., 1992
- 6. Perona, P.G., Lawrence, J.M., Paprosky, W.G.: Effect of Screws and Spikes on the Initial Stability of Cementless Acetabular Components. Mid-American Orthopaedic Assn. Orlando, FL 1992
- 7. Lawrence, J.M. and Paprosky, W.G.: Evaluation of Thigh Pain in Cementless Revision Hip Arthroplasty. Orthopaedic Assns. Of the English Speaking World, Toronto, Canada, 1992 and Canadian Orthopaedic Assn., Calgary, Canada, 1991
- 8. Perona, P.G., Lawrence, J.M. and Paprosky, W.G.: An Acetabular Defect Classification System and Applied Surgical Technique in Revision Total Hip Arthroplasty: A Six Year Clinical and Radiographic Follow-Up. AAOS, San Francisco, CA, 1993
- 9. Jablonsky, W.S., Lawrence, J.M., Pak, J.H. and Paprosky, W.G.: Use of a Cortical Strut Allograft in the Femur During Uncemented Revision Hip Arthroplasty: A Ten Year Experience. AAOS, San Francisco, CA, 1993

- 10. Sami Shalhoub MS<sup>1</sup>, Derek F. Amanatullah MD, PhD<sup>2</sup>, Brett A. Fritsch, MD, FRACS<sup>3</sup>, Paramjeet S. Gill MD<sup>4</sup>, John M. Keggi MD<sup>5</sup>, Jeffrey M. Lawrence<sup>6</sup>, MD, Christopher Plaskos PhD: Aiming for equal gaps at 0° and 90° of flexion does not produce an equal gap throughout the arc of flexion in total knee arthroplasty. AAHKS, Dallas, 2017
- 11. Sami Shalhoub MS<sup>1</sup>, Derek F. Amanatullah MD, PhD<sup>2</sup>, Brett A. Fritsch, MD, FRACS<sup>3</sup>, Paramjeet S. Gill MD<sup>4</sup>, John M. Keggi MD<sup>5</sup>, Jeffrey M. Lawrence<sup>6</sup>, MD, Christopher Plaskos PhD: Aiming for equal gaps at 0° and 90° of flexion does not produce an equal gap throughout the arc of flexion in total knee arthroplasty. AAOS, New Orleans, 2018
- Sami Shaloub, MS, Amber Randall, M.D., Jeffrey M Lawrence, M.D., Christopher Plaskos, PhD: Validation of a Laxity Prediction Algorithm for Gap Balancing Total Knee Arthroplasty. ORS, New Orleans, 2018
- 13. Sami Shaloub, MS, Amber Randall, M.D., John Keggi, MD, Christopher Plaskos, PhD, Jeffrey M Lawrence, M.D.: The Effect of Gap Balancing at 0 degrees Versus 10 degrees of Flexion on Extension and Mid-flexion Laxity in Total Knee Arthroplasty. ORS, New Orleans, 2018
- Sami Shaloub, MS, Dylan Lawrence, BS, Christopher Plaskos, PhD, Jeffrey M Lawrence, M.D.: Does an Increase in Distraction Force Uniformly Increase Tibiofemoral Gaps? ORS, New Orleans, 2018
- 15. Sami Shalhoub, MS, Christopher Plaskos, Ph.D, Alex Todorov, Jeffrey M. Lawrence, M.D., John M. Keggi, M.D., "Development of an Active Soft Tissue Balancing System for Robotic-