

Curriculum Vitae

General Information:

Last name: List
First name: Renate Barbara
Year of birth: 1977
Nationality: Swiss
Marital status: Married, 3 kids
Address: Rhiweg 22
CH-8260 Stein am Rhein
Phone: +4176 3797813
e-mail: renae.list@kws.ch
rlist@ethz.ch
rl@llsbiomechanics.ch
Position: Research Associate Schulthess Clinic, Zurich
Lecturer at ETH Zurich
CEO LLS Biomechanics GmbH



Highlights

- Clinical movement analysis outcome studies
- Consulting and education in the area of movement analysis and biomechanics
- In vivo kinematic measurement approaches in clinical and sports biomechanics
- Foot, ankle and knee biomechanics

Narrative Report

Renate List received her degree in Physical Education Teaching and Coaching from the ETH Zurich in spring 2002. Thereon, she continued her education with the diploma course in Human Movement Science at the ETH Zurich including an internship at the Biomechanics Research Laboratory at the University of Wollongong, Australia (graduation with a diploma in Natural Sciences in spring 2005). After her diploma thesis in the Movement Analysis Group of the Laboratory for Biomechanics of the ETH Zurich, which involved the development of a new skin marker set and analysis routine, she carried out her PhD entitled "Joint Kinematics of Unconstrained Ankle Arthroplasties" under the supervision of Prof. Dr. E. Stüssi (2005-2009). From 2009 until 2011, as a postdoctoral fellow, she extended this line of research and successfully conducted an industry funded functional outcome study of total ankle arthroplasty subjects using videofluoroscopy.

In 2011 she was appointed Senior Research Associate at the Institute for Biomechanics at ETH Zurich and managed an industry funded project on the in vivo performance of a total knee arthroplasty, followed by building up and leading the Clinical Movement Biomechanics Group from 2013 until 2017. Her research mainly focused on the in vivo assessment of the functional outcome of different knee arthroplasties as well as the understanding of the kinematics of the normal knee. To address these clinical biomechanical questions she has a strong interest in methodological developments in whole body skin marker assessment as well as movement analysis of single joints and implants by means of videofluoroscopy. Within her team at ETH she has been supervising three PhD students, 3 research assistant, 15 master students, 10 interns and more than ten junior and teaching assistants.

Her work was awarded with several prizes such as the ISB student dissertation award (2007), the Young Investigator Award from the International Society of Biomechanics (2009) and the International Society of Biomechanics Award on the occasion of the 7th Conference of the German Society for Biomechanics (DGfB) in Murnau (2011).

Since 2010 she is a lecturer in Biomechanics at a bachelor and master level for Human Movement Science and Mechanical Engineering students (2010-2013), and since 2013 in Health Sciences and Technology at ETH Zurich.

Since 2017 she is CEO of the ETH-Spin-off Company LLS Biomechanics GmbH, which is a young and dynamic start-up, specialized in design, development and consulting in the area of health technologies. Her core competencies are consulting and education in the area of movement analysis and biomechanics, especially design and leading of clinical movement outcome studies, development of in vivo kinematic measurement approaches in clinical and sports biomechanics as well as consulting and education related to foot, ankle and knee biomechanics.

Since September 2017 she is building up the new fluoroscopy group and since 2020 has also taken over the lead of the classical motion capture research within the Human Performance Lab of the Schulthess Clinic in Zurich with the main responsibility and scope of translating newly developed motion analysis tools into clinical application.

Institutional Appointments:

Since May 2020	Research Associate Schulthess Clinic, Zurich, leading of motion analysis and fluoroscopy research in the Human Performance Lab
Since Sept 2017	Research Associate Schulthess Clinic, Zurich, building up and leading of the new fluoroscopy group in the Human Performance Lab
Since 2017	CEO LLS Biomechanics GmbH
2013 - 2017	Building up and heading of the new Clinical Movement Biomechanics Group, Institute for Biomechanics, ETH Zurich, Switzerland
2011 - 2017	Senior Research Associate at the Institute for Biomechanics, ETH Zurich, Switzerland
Since 2010	Lecturer at the Institute for Biomechanics, ETH Zurich, Switzerland
2009 – 2011	PostDoc at the Institute for Biomechanics, ETH Zurich, Switzerland
2005 – 2009	PhD student at the Institute for Biomechanics (Prof. Dr. E. Stüssi), ETH Zurich, Switzerland
2004	Internship at the Biomechanics Research Laboratory (Prof. Dr. Julie Steele), University of Wollongong, Australia
2002 – 2004	Junior assistant at the Laboratory for Biomechanics, ETH Zurich

Education:

2009	Doctor of Sciences (Dr. sc. ETH) , Institute for Biomechanics, ETH Zurich, Switzerland PhD Thesis: <i>Joint Kinematics of Unconstrained Ankle Arthroplasties</i>
2005	Master in natural sciences (Dipl. Natw. ETH), Human Movement and Sport Science, ETH Zurich, Switzerland Master Thesis: <i>A Hybrid Marker Set for Future Basic Research and Instrumented Gait Analysis at the Laboratory for Biomechanics</i>
2002	Swiss Diploma II as a teacher in physical education (Dipl. Turn- und Sportlehrer II), ETH Zurich, Switzerland Diploma Thesis: <i>Effect of physical activity with respect to hip prosthesis</i>
1999	Swiss Diploma I as a teacher in physical education (Dipl. Turn- und Sportlehrer I), University of Basel, Switzerland
1996	Matura Type C (mathematics and science), Gymnasium Muttenz, Switzerland

Further Education:

2014	Basic and Advanced Course in Good Clinical Practice (Module 1-3), Clinical Trials Center, Zurich, Switzerland
2013	Course Projectmanagement “Alles im Griff mit Projektmanagement”, Business Tools AG, Zurich, Switzerland
2012	Course Introduction to Accounting “Fit in Sachen Finanzen für Einsteiger/-innen”, Business Tools AG, Zurich, Switzerland

Awards:

2021	ISB Clinical Biomechanics Award for the paper “Tibio-femoral kinematics of natural versus replaced knees: A comparison using dynamic videofluoroscopy” by Postolka, B., Taylor, W.R., List R., Fucentese, S., Koch, P. and Schütz, P.
2011	International Society of Biomechanics (ISB) Award. On the occasion of the 7 th Conference of the German Society for Biomechanics (DGfB) in Murnau, Germany, 2011, for the presentation: <i>Wieviel/Welche Beweglichkeit braucht die Sprunggelenksarthroplastik – eine videofluoroskopischen Analyse.</i>
2009	Young Investigator Award, Poster Session of the International Society of Biomechanics (ISB) at the XXII Congress of the ISB in Cape Town, South Africa
2007	ISB Student Dissertation Award, International Society of Biomechanics

Student Awards:

2018	Thomas Zumbrunn: ETH Medal for Outstanding Doctoral Theses, ETH Zurich
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- 2016 ISB student award. On the occasion of the XIV International Symposium on 3D Analysis of Human Movement, 2016, in Taipei, Taiwan, for the presentation: *Knee implant kinematics of downhill walking by means of videofluoroscopy*. Schütz Pascal, Angst Michael, Postolka Barbara, Hitz Marco, Schwilch Peter, Gerber Hans, Taylor William, List Renate.
- 2014 ISB student award. On the occasion of the International Symposium: 3D Analysis of Human Movement, 2014, in Lausanne, Switzerland, for the presentation: *Task Dependency of Knee Implant Kinematics by means of Videofluoroscopy - Level Gait versus Stair Descent*. Pascal Schütz, Hans Gerber, Marco Hitz, Stephen Ferguson, William Taylor, Renate List.
- 2013 Ursina Tresch: Willi Studer Award, ETH Zurich

Research Society Memberships:

- 2009 – Sportwissenschaftliche Gesellschaft der Schweiz (SGS)
 2008 – International Foot and Ankle Biomechanics Community (i-FAB)
 2006 – International Society of Biomechanics (ISB)
 2011 – Deutsche Gesellschaft für Biomechanik (DGfB)
 2005 – Swiss Society for Biomedical Engineering (SSBE)
 2009 – International Society of Biomechanics in Sports (ISBS)

Professional Leadership Roles:

- 2015 International Society of Biomechanics, Session Chair “Motion Analysis 2”, Glasgow, UK
 2011-2014 Development and lead of “iFAB moodle”, a collaborative workspace for communicating research issues in the area of foot and ankle biomechanics
 2011 Organising Committee “iFAB WikiFlash”

Editorial Boards:

- 2020 - Ad Hoc Reviewer The Knee
 2019 - Ad Hoc Reviewer Sports Biomechanics
 2018 - Ad Hoc Reviewer Journal of Engineering in Medicine
 2013 - Ad Hoc Reviewer Orthopaedic and Muscular System: Current Research
 2012 - Ad Hoc Reviewer Journal of Biomechanics
 2011 - Ad Hoc Reviewer Gait and Posture
 2011 - Ad Hoc Reviewer Medical Engineering and Physics

Major Committee Assignments:

- 2013 Founder of LLS Biomechanics GmbH
 2013-2017 Deputy representative of the academic staff in the study commission BWS, ETH Zurich
 2010-2014 Research Fellow for the International Foot and Ankle Biomechanics Community i-FAB

Funding:

- 2014 CTI funded project “GMK sphere”, 250kCHF
 2014 Industry funded project (J&J), 369k CHF
 2013 Industry funded project (Medacta), 250k CHF
 2012 Industry funded project (J&J), 190k CHF
 2010 Industry funded project (DePuy), 87k CHF

Computer Skills: Windows, OSX, MATLAB, MS Office, EndNote, LaTeX, Adobe Illustrator, Adobe Photoshop, Nexus, NX, Amira, Geomagic, Maya

Languages: Mother language: German
 Foreign languages: English, French

Other Activities:

- 2008-2012 Swiss Sailing Championship Dolphin 81 with SUI 55
 Since 2010 International Certificate for Operators of Pleasure Craft (skipper’s license)
 Since 2010 Swiss sailing license (category D)

Report of Teaching:

University Classes:

2014 –	Lecturer, “Clinical and Movement Biomechanics”, Department of Health Sciences and Technology, ETH Zürich, 20 master students, 9 hours of teaching yearly.
2014 – 2017	Lecturer, “Biomechanik II”, Department of Health Sciences and Technology, ETH Zürich, 60 bachelor students, 2 hours of teaching yearly.
2013 –	Lecturer, “Bewegungs- und Sportbiomechanik”, Department of Health Sciences and Technology, ETH Zürich, 120 bachelor students, 18 hours of teaching yearly.
2012 – 2014	Lecturer, “Biomechanik III”, Department of Health Sciences and Technology, ETH Zürich, 30 master students, 8 hours of teaching yearly.
2011 – 2013	Lecturer, “Biomechanik Ia”, Department of Health Sciences and Technology, ETH Zürich, 100 movement science undergraduate students, 8 hours of teaching yearly.
2010 – 2012	Lecturer, “Grundlagen Biomechanik”, Department of Biology, ETH Zürich, 100 movement science undergraduate students, 8 hours of teaching yearly.
2010 – 2020	Lecturer, “Praktikum Biomechanik”, Department of Health Sciences and Technology, ETH Zürich, 50 movement science undergraduate students, 21 hours of teaching yearly.
10./17.11.2008	2x2h biomechanics class for for movement science and mechanical engineer students at the ETH Zurich, topics: Fussbiomechanik [foot biomechanics] and Kopplung [coupling]
05.11.2006	2h biomechanics class for movement science and mechanical engineer students at the ETH Zurich, topic: Fussgelenksprothetik [ankle arthroplasties]
30.11.2007	2h biomechanics basics class for movement science students at the ETH Zurich, topic: rotations, angular momentum, moment of inertia and rigid body model.

Others:

2005 –	Teaching in the field of Biomechanics at the ETH Zurich, practical and lecture classes
2000 – 2010	Fitness instructor for the midday gymnastics class of the tax office Zurich
1998 – 2002	Several jobs as a fitness instructor for the health promotion organisation and as a teacher in physical education at primary schools, high schools and gymnasiums in Zurich and Basel, Switzerland.

Advisory and Supervisory Responsibilities:

PhD Students:

Since 2021	Katrin Dätwyler, ETH Zurich,
Since 2018	Rao Longfeng, ETH Zurich, “Understanding joint instability after TKA”
2015 - 2020	Barbara Postolka, ETH Zurich, “Natural Knee Kinematics – The Role of Limb Alignment and Activity on Knee Joint Motion”
2014 - 2019	Seyyed Hamed Hosseini Nasab, ETH Zurich, “Taking the Strain: Understanding Functionality of the Knee Ligaments before and after Total Knee Arthroplasty”
2014 - 2018	Pascal Schütz, ETH Zurich, “Towards improving joint replacement: Which characteristics of design and activity govern joint kinematics in total knee arthroplasty?”

PhD Thesis, Co-Examiner:

2016 - 2018	Thomas Zumbunn, ETH Zurich
2020	Maryam Hajizadeh, Université de Montréal
2020	Hannelore Boey, KU Leuven

Master Thesis:

1. Philipp Banteli, Health Sciences and Technology, “Videofluoroscopic Evaluation of the Influence of a Gradually Reducing Femoral Radius on Knee Ligament Elongation Patterns during Daily Activities in Total Knee Arthroplasty”, ETH 2021
2. Danielle Hinny, Health Sciences and Technology, “Influence of Bearing Type on Knee Implant and Lower Limb Kinematics during Golf Swings based on Videofluoroscopy and Motion Capture”, ETH 2020
3. Kevin Wunderlin, Health Sciences and Technology, “Golf and Total Knee Replacement – Videofluoroscopy Study”, ETH 2019
4. Diana Jermann, Health Sciences and Technology, “Hand kinematics during activities of daily living”, ETH 2017
5. Lynn Ellenberger, TU München, “The Influence of Knee Implant Design on Interlimb Symmetries of the lower extremities during Level Walking”, ETH 2017
6. Marina Hitz, Health Sciences and Technology, “Potential methods for optimizing the moving fluoroscope setting to provide the best conditions for natural gait”, ETH 2016

7. Barbara Postolka, Movement Sciences, "Task dependency of rotational pattern and loading conditions in total knee arthroplasty (TKA) by means of videofluoroscopy", ETH 2015.
8. Andreas Bircher, Movement Sciences, "Talking while walking: The effect of stimulus congruence in a cognitive dual task on gait in the elderly", ETH 2015.
9. Sibylle Maier, Movement Sciences, "Einfluss von orthopädischen Schuheinlagen bei O-Beinstellung auf die Knie- und Fussrichtung während des Gehens", ETH 2014.
10. Ursina Tresch, Movement Sciences, "Susceptibility of hand extension to starReact in unimpaired control subjects", ETH 2013.
11. Nyima Phuntsok, Movement Sciences, "Titanium particle coating", ETH 2013
12. Manuela Vogel, Movement Sciences, "Influence of activity level of spinal locomotor networks on gait patterns in patients with incomplete spinal cord injury", ETH 2012.
13. Barbara Huber, Movement Sciences, "Kinematic and electromyographic gait analysis in iSCI patients", ETH 2012.
14. Domenic Stamm, Movement Sciences, "Anwendbarkeit und Grenzen des Oxford Foot Models in der Orthopädie", ETH 2012.
15. Michi Angst, Movement Sciences, "Load condition of the wrist during back handspring, handspring and handstand", ETH, 2012.
16. Tamara Urech, Movement Sciences, "Kompensationsmechanismen bei Patienten mit Torsionsfehlstellungen der Tibia", ETH, 2012.
17. Jacqueline Stucki, Movement Sciences, "Fluoroscopic measurement of a total knee arthroplasty during knee bending, level gait and stair descent", ETH, 2011.
18. Daniela Emmenegger, Movement Sciences, "Feasibility Study: Application of Digital Videofluoroscopy on the Shoulder Joint", ETH, 2011.

Semester Project:

1. Ariana Ortigas, Biomedical Engineering, "Investigating the Influence of Different Foot Positions During the Golf Swing on the Skin Marker Based Kinematics of the Lower Extremities and the Trunk", ETH 2020.

Bachelor Thesis:

1. David Joos, Mechanical Engineering, „Bandansätze im Kniegelenk – Ein Vergleich zweier Messmethoden“, ETH, 2006.

Literaturework:

1. Diana Jermann, "A review on the current state in hand kinematic assessment", ETH 2016.
2. Benedikt Bühler, "Influence of malalignment in total knee arthroplasties", ETH 2015.
3. Dominik Jenni, „Comparison of the in vivo kinematics of cruciate-retaining and posterior-stabilized total knee arthroplasties“, ETH 2015.
4. Sibylle Maier, Nicole Spörri, "Wie bewegt sich das Knie wirklich? In vivo Kinematik des gesunden tibiofemorales Gelenks", ETH, 2013.
5. Angelina Schönenberger, Barbara Postolka, "Changes in gait during pregnancy", ETH, 2013.
6. Ursina Tresch, Carole Pauli, „Can minimal footwear simulate the advantages of barefoot motion?“, ETH, 2012.
7. Andreas Catschegn, Michi Walti, „Kniegelenksprothese: Total oder Unikondylär?“, ETH, 2011.
8. Amanda Genewein, Michel Schläppi, „Kniegelenksprothese: Mobile oder Fixed Bearing?“, ETH, 2011.
9. Laura Baumgartner, „Biomechanik des dynamischen Sitzens – Einfluss des dynamischen Sitzens auf die Bandscheiben und die Rückenmuskulatur“, ETH, 2010.
10. Aline Mühl, Patrick Hiltbold, „Plastizität der Bänder und Sehnen: Adaptation an erhöhte Belastungen und Immobilisation“, ETH, 2008.
11. Silvio Nussbaumer, Tita Pron, „Hautbewegungsartefakte in der Ganganalyse – intern vs. extern gemessene Bewegung“, ETH, 2008.
12. Stephan Affolter, „Verdrehsteifigkeit des gesunden und des künstlichen Fussgelenkes“, ETH, 2007.
13. Marion Brands, „Oberes Sprunggelenk – Arthroplastik vs. Arthrodesen“, ETH, 2006.
14. Michelle Gilgen, „Biomechanische Variablen bei PFFS: Die tibiale Innenrotation“, ETH, 2005.
15. Matteo Zaltron, Renato Mattli, „Nutzen von Schuheinlagen“, ETH, 2005.

Interns:

2021	Selina Burch, Health Sciences and Technology, ETH Zurich, 3 months
2021	Pietro Sartori, Health Sciences and Technology, ETH Zurich, 3 months
2020	Alessia Meyer, Health Sciences and Technology, ETH Zurich, 3 months
2020	Isabel Hirzel, Health Sciences and Technology, ETH Zurich, 3 months
2020	Philipp Bächteli, Health Sciences and Technology, ETH Zurich, 3 months
2016	Lorenzo Pelli, Health Sciences and Technology, ETH Zurich, 3 months
2016	Lynn Ellenberger, TU München, 6 weeks
2016	Diana Jermann, Health Sciences and Technology, ETH Zurich, 3 months
2016	Adrian Roth, Health Sciences and Technology, ETH Zurich, 3 months

2015	Marina Hitz, Health Sciences and Technology, ETH Zurich, 3 months
2014	Barbara Postolka, Movement Sciences, ETH Zurich, 3 months
2013	Nicole Spörri, Movement Sciences, ETH Zurich, 3 months
2011	Michi Walti, Movement Sciences, ETH Zurich, 3 months
2010	Michi Angst, Movement Sciences, ETH Zurich, 3 months
2007	Berthold Hobi, Movement Sciences, ETH Zurich, 3 months

Invited Talks:

1. *List, R., Friesenbichler, B., Kramers-de Quervain, I.:* Messtechnik Bewegungsanalyse, praktische Beispiele. Education for MD in Physical Medicine and Rehabilitation, Schulthess Klinik, Switzerland, 2018. Invited Talk.
2. *List, R., Schütz, P., Postolka, B., Hitz, M., Taylor, W.R.:* Knee and TKA kinematics by means of a moving fluoroscope. Seminar EPFL, Lausanne, Switzerland, 2016, Invited Talk.
3. *List, R., Lorenzetti, S.:* Messtechnik Bewegungsanalyse und Fluoroskopie, Education for MD in Physical Medicine and Rehabilitation, ETH, Zürich, Switzerland, 2015. Invited Talk.
4. *List, R., Lorenzetti, S.:* Messtechnik Bewegungsanalyse und Fluoroskopie, Education for MD in Physical Medicine and Rehabilitation, ETH, Zürich, Switzerland, 2013. Invited Talk.
5. *List, R.:* Videofluoroskopie in der Knieendoprothetik, Qualitätszirkel, Ärztefortbildung, Stein am Rhein, Schweiz, 2012. Invited Talk.
6. *List, R.:* Kinematics of ankle arthroplasties based on videofluoroscopy. 9th EFAS International Congress, Nordwijk Aan Zee, The Netherlands, 2012. Invited Talk.
7. *List, R.:* Kinematics of ankle arthroplasties based on videofluoroscopy. International Symposium on Foot and Ankle, Katholieke Universiteit Leuven, Limelette, Belgium, 2011. Invited Talk.
8. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties Using Videofluoroscopy. 8th Research Day of Translational Orthopedics, EPFL, Lausanne, Switzerland, 2010. Invited Talk.
9. *List, R., Foresti, M., Gerber, H., Stüssi, E.:* 3D Kinematik von Sprunggelenksarthroplastiken basierend auf Videofluoroskopie. 7. Biomechanik Symposium Tübingen, Deutschland, 2010. Invited Talk.

Invited Talks as a Medacta Consultant:

1. *List, R., Schütz, P., Fucentese, S., Koch, P., Taylor, W.R.:* Moving Fluoroscopy Analysis – GMK Sphere versus PS and UC knee. GMK Sphere Meeting, Antwerpen, Belgium, 2017.
2. *List, R., Schütz, P., Fucentese, S., Koch, P., Taylor, W.R.:* GMK Sphere - Flurososkopische Bewegungsanalyse. GMK Sphere Knie Meeting, Rüslikon, Switzerland, 2017.

Invited Talks as a DePuy Foot and Ankle Faculty Member:

1. *List, R.:* 3D Kinematics of Ankle Arthroplasties. 14th Total Ankle Instructional Course, Zürich, Schweiz, 2011.
2. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties. Total Ankle, Zürich, Schweiz, 2010.
3. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties. Mobility™ User Group Meeting, Birmingham, England, 2010.
4. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties. Foot and Ankle Instructional Course, Zürich, Schweiz, 2010.
5. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties. Mobility™ Instructional Course, Zürich, Schweiz, 2009.
6. *List, R.:* In Vivo Assessment of the 3D Kinematics of Ankle Arthroplasties. UK Mobility™ User Group Meeting, Crewe, England, 2009.
7. *List, R.:* An in vivo procedure to quantify 3D kinematics of ankle arthroplasties using videofluoroscopy. International Mobility™ User Group Meeting, Zürich, Schweiz, 2008.
8. *List, R.:* An in vivo procedure to quantify 3D kinematics of ankle arthroplasties using videofluoroscopy. Total Ankle Arthroplasty Instructional Course, Zürich, Schweiz, 2008.

Invited Talks as a DePuy Knee Faculty Member:

1. *List, R.:* Videofluoroskopie in der Knieendoprothetik. DACH Expertenmeeting Kontroversen in der Knieendoprothetik, Luzern, Switzerland, 2011.
2. *List, R.:* Biomechanik High Flex Knie. DACH Expertenmeeting Kontroversen in der Knieendoprothetik, Luzern, Switzerland, 2011.
3. *List, R.:* Biomechanik des Kniegelenks. Expertenrunde Knieendoprothetik, Zürich, Switzerland, 2011.

Presentations for Vitra:

1. *List, R., Lorenzetti, S.:* Wissenschaftliche Untersuchung: Bewegtes Sitzen und der Einfluss auf den Menschen. Deutsche Fachhandeltagung 2011 „Identität und Nachhaltigkeit“, Weil am Rhein, Deutschland, 2011.
2. *List, R., Lorenzetti, S.:* Scientific Study: Dynamic sitting and the influence on human being. French and Spanish Trade Conferences 2011 „Identity and Sustainability“, Weil am Rhein, Deutschland, 2011.

List of Publications:

[Researcher ID: D-3884-2011](#)

h-index: 13, citations: 621

[Google scholar bibliography](#)

h-index: 18, citations: 1036

Original Papers:

1. De Pieri, E., Friesenbichler, B., List, R., Monn, S., Casartelli, N. C., Leunig, M., Ferguson, S.J.: Subject-Specific Modeling of Femoral Torsion Influences the Prediction of Hip Loading During Gait in Asymptomatic Adults. *Fron. Bioeng. Biotechnol.* 9:679360, 2021. doi: 10.3389/fbioe.2021.679360
2. Hosseini Nasab, S.H., Smith, C., Postolka, B., Schütz, P., List, R., Taylor, W.R.: In vivo Elongation Patterns of the Collateral Ligaments in the Healthy Knee during Functional Activities. *The Journal of Bone & Joint Surgery*, 2021. doi:10.2106/JBJS.20.01311
3. Fischer, G., Jermann, D., List, R., Reissner, L., Calcagni, M.: Development and application of a motion analysis protocol for the kinematic evaluation of basic and functional hand and finger movements using motion capture in a clinical setting – a repeatability study. *Applied Sciences*, 10, 6436, 2020. doi:10.3390/app10186436
4. Sayers, M., Hosseini Nasab, S.H., Bachem, C., Taylor, W.R., List, R., Lorenzetti, S.: The effect of increasing heel height on lower limb symmetry during the back squat in trained and novice lifters. *BMC Sports Science, Medicine and Rehabilitation*, 12, 42, 2020. <https://doi.org/10.1186/s13102-020-00191-y>
5. Hosseini Nasab, S.H., Smith, C., Schütz, P., Postolka, B., Ferguson, S.J, Taylor, W.R., List, R.: Elongation Patterns of the Posterior Cruciate Ligament after Total Knee Arthroplasty, *Journal of Clinical Medicine*, 9(7), 207, 2020. <https://doi.org/10.3390/jcm9072078>
6. Postolka, B., Schütz, P., Fucentese, S.F., Freeman, M.A.R., Pinskerova, V., List, R., Taylor, W.R.: Tibio-Femoral Kinematics of the Healthy Knee Joint throughout Complete Cycles of Gait Activities, *Journal of Biomechanics*, 110, 109915, 2020. doi:10.1016/j.jbiomech.2020.109915
7. List, R, Schütz, P., Angst, M., Ellenberger, L., Dätwyler, K., von Einsenhart-Rothe, R., Schwaller, C., Ferguson, S.J.: Videofluoroscopic Evaluation of the Influence of a Gradually Reducing Femoral Radius on Joint Kinematics during Daily Activities in Total Knee Arthroplasty. *Journal of Arthroplasty*, 2020. 10.1016/j.arth.2020.05.039
8. Pacifico, D., Visscher, R., List, R., Item, J., Casartelli, N., Maffiuletti, N.: Discriminant validity and reproducibility of spatiotemporal and kinetic parameters during treadmill walking in patients with knee osteoarthritis. *Gait & Posture*, 80:77-79, 2020. <https://doi.org/10.1016/j.gaitpost.2020.04.002>
9. Sayers, M., Bachem, C., Schütz, P., Taylor, W.R., List, R., Lorenzetti, S., Hosseini Nasab, S.H.: The effect of elevating the heels on spinal kinematics and kinetics during the back squat in trained and novice weight trainers. *Journal of Sports Sciences*, 38(9), 1000-1008, 2020. 10.1080/02640414.2020.1738675
10. Hosseini Nasab, S.H., Smith, C., Schütz, P., Damm, P., Trepczynsky, A., List, R., Taylor, W.: Length-change Patterns of the Collateral Ligaments during Functional Activities after Total Knee Arthroplasty, *Annals of Biomedical Engineering*, 48, 1396-1406, 2020. <https://doi.org/10.1007/s10439-020-02459-3>
11. Postolka, B., List, R., Thelen, B., Schütz, P., Taylor, W.R., Zheng, G.: Evaluation of an intensity-based Algorithm for 2D/3D Registration of Natural Knee Videofluoroscopy Data. *Journal of Medical Engineering & Physics*, 77:107-113,2020. <https://doi.org/10.1016/j.medengphy.2020.01.002>
12. Zumbrunn, T., Schuetz, P., Von Knoch, F., Preiss, S., List, R., Ferguson, S.: Medial unicompartmental knee arthroplasty in ACL-deficient knees is a viable treatment option: in vivo kinematic evaluation using a moving fluoroscope. *Knee Surg Sports Traumatol Arthrosc*, 2020. <https://doi.org/10.1007/s00167-019-05594-0>
13. Hosseini Nasab, S.H., Smith, C., Schütz, P., Postolka, B., List, R., Taylor, W.R.: Elongation Patterns of the Collateral Ligaments after Total Knee Arthroplasty are dominated by the Knee Flexion Angle. *Frontiers in Bioengineering and Biotechnology*, 2019. <https://doi.org/10.3389/fbioe.2019.00323>
14. Schütz, Taylor, W.R., Postolka, B., Fucentese, S.F., Koch, P.P., Freeman, M.A.R., Pinskerova, V., List, R.: Kinematic Evaluation of the GMK Sphere Implant During Gait Activities: A Dynamic Videofluoroscopy, *J Orthop Res*, 37(11):2337-2347, 2019. 10.1002/jor.24416
15. Reissner, L, Fischer, G., List, R., Taylor, W.R., Giovanoli, P., Calcagni, M.: Minimal detectable difference of the finger and wrist range of motion: comparison of goniometry and 3D motion analysis. *J Orthop Surg Res*, 14(1), 173, 2019. <https://doi.org/10.1186/s13018-019-1177-y>
16. Reissner, L., Fischer, G., List, R., Giovanoli, P., Calcagni, M.: Assessment of hand function during activities of daily living using motion tracking cameras: A systematic review. *Journal of Engineering in Medicine*, 233(8):764–783, 2019. DOI: 10.1177/0954411919851302
17. Schütz, P., Postolka, B., Gerber, H., Ferguson, S., Taylor, W. R., List, R.: Knee implant kinematics are task dependent. *Journal of the Royal Society Interface*, 2019. doi.org/10.1098/rsif.2018.0678
18. Trepczynski, A., Kutzner, I., Schütz, P., Dymke, J., List, R., von Roth, P., Moewis, P., Bergmann, G., Taylor, W. R., Duda, G. : Tibio-femoral contact force distribution is not the only factor governing pivot location in TKA. *Scientific Reports*, *Scientific Reports* 9, 182, 2019. doi:10.1038/s41598-018-37189-z

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3. Postolka, B., Taylor, W.R., List, R., Schütz, P.: The Role of Limb Alignment on Tibio-Femoral Kinematics: A Dynamic Videofluoroscopy Study, In 26th Congress of the European Society of Biomechanics, 2021.
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