CURRICULUM VITAE **Silvio Lorenzetti**

Privatdozent
ETH Zurich
Institute for Biomechanics
Sports Biomechanics Group

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Sports Biomechanics Group

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Date of Birth: September 28, 1974
Place of Birth: Schaffhausen, Switzerland
Married, daughter: Samira, February 14, 2014

Institutional Appointments

Since 2014	Permanent Senior Scientist at the Institute for Biomechanics, ETH Zurich
	in particular
Since 2012	Deputy Vertiefungsleiter "Biomechanics" BWS, ETH Zurich
Since 2009	Building up and heading the new Sports Biomechanics Group, Institute for Biomechanics, ETH Zurich
2007 - 2013	Lecturer and Senior Research Associate at the Institute for Biomechanics, ETH Zurich
2009 - 2012	Co-Head of the Multiscale Biomechanics Group, Institute for Biomechanics, ETH Zurich
2007 - 2009	Head of the Bone and Cartilage Research Laboratory, Institute for Biomechanics, ETH Zurich
2004 - 2006	Ph.D. Student and Assistant at the Institute for Biomechanics, ETH Zurich
2003	Post-doc, Department for Space Research and Planetology, University of Bern
2002 - 2013	Educator for the Star Education, School for Training and Recreation
2000 - 2003	Ph.D. Student at the Institute for Physics, University of Bern
1999 - 2003	Assistant at the Institute for Physics, University of Bern

Academic Offer

Autumn 2016	Shortlisted for a W3 Professorship, TU Chemnitz, (GER)
Autumn 2015	Shortlisted for a Professorship, London Southbank University (LSBU, UK)

Winter 2014	Shortlisted for a Professorship, Victoria University Melbourne and the Australian Institute for Sports (AIS)

Education

2017	PD, Habilitation, *Venia Legendi*, ETH Zurich in "Biomechanics" *Strength training: Towards subject specific modelling, individual internal loading conditions and design of exercises*
2007	Dr. sc. ETH Zurich *New method to determine the Young's modulus of single trabeculae*
2003	Dr. phil.-nat. UNIBE (Department Space Research and Planetology) *Auswurfalter und Bestrahlungsgeschichte der Meteorite vom Mond, Mars und Asteroiden anhand von Edelgasisotopenanalysen*
2000	Master in Physics (Mathematics, Astronomy), University of Bern, Switzerland
1998	Exchange term, University of Strathclyde, Glasgow, UK
1995 - 2000	Studies in Physics, University of Bern, Switzerland
1994	Matura Type C (Natural Sciences), Kantonsschule Schaffhausen, Switzerland

Further Education

2014	Advanced course "Good Clinical Practice (GCP)", Modul 3, CTC, Universitätsspital Zürich
2014	Basic course "Good Clinical Practice (GCP)", Modul 1+2, CTC, Universitätsspital Zürich

2013	Course "Project Management Leadership Skills", ETH Zurich
2010	Certificate "Teaching at ETH Zurich", teaching at master's degree level
2009	Certificate "Teaching at ETH Zurich", teaching undergraduate courses
2008	Venture Challenge
2005	Special module fitness, Physical Education, ETH Zurich

Awards and Honors

2016	Swiss Olympic Sport Science Award, third prize
2016	Nominated for the KITE Award, ETH
2015	Swiss Olympic Sport Science Award, third prize
2014	Finalist Spark Award, top 20 most promising invention, ETH
2013	Swiss Olympic Sport Science Award, third prize
2012	Inaugural Biomechanics Oscars Competition ISBS 2012, People's Choice Award Short movie
2011	Antarctica Service Medal of the United States of America
2010	startup.ch Challenge, 3rd best, Switzerland, rotavis 1000 CHF
2010	Business Plan Challenge Lichtenstein Rheinthal, rotavis 3500 CHF
2008	Sportler/innen Ehrung Panathlon Club / Stadt Winterthur
2007	Sportler/innen Ehrung Panathlon Club / Stadt Winterthur
2007	ASBMR Young Investigator Travel Grant
2006	ISB Student Dissertation Award

2002	Student Award Recipient Meteoritical Society

Student Awards

2016	Nicole Spörri: 1st, Young Investigator Award, SGS, Swiss Society for Sports Sciences
2013	Roland Zemp: ESB Travel Award, European Society of Biomechanics
2011	Christophe Farrér (ZHAW): SSBE Award, Swiss Society for Biomedical Engineering
2010	Roberto Carretta: Student Dissertation Award, International Society of Biomechanics

Professional Societies

2015 -	Treasurer International Society of Biomechanics in Sports (ISBS)
2015 -	Member of Executive Council International Society of Biomechanics in Sports (ISBS)
2014 - 2016	Board of Directors International Society of Biomechanics in Sports (ISBS)
2017 -	Member European Collage of Sport Science (ECSS)
2016 -	Member International Congress on Science and Skiing (ICSS)
2009 -	Member International Society of Biomechanics in Sports (ISBS)
2008 -	Member Schweizerische Gesellschaft für Sportwissenschaft (SGS)
2008 -	Member European Society of Biomechanics (ESB)
2008 -	Member Swiss Society for Biomedical Engineering (SSBE)

2007 -	Member American Society for Bone and Mineral Research (ASBMR)
2007 -	Member National Strength and Conditioning Association (NSCA)
2006 -	Member International Society of Biomechanics (ISB)
2000 -	Member Meteoritical Society

Professional Leadership Roles

2017	Scientific Committee, International Conference on Technology and Innovation icSports, Health and Wellbeing, Funchal, Portugal
2017	Scientific Committee, Sportwissenschaftliche Gesellschaft der Schweiz SGS, Zürich, CH
2017	Sportwissenschaftliche Gesellschaft der Schweiz SGS, Zürich, CH, Session Chair "Biomechanics and Kinematic analysis"
2017	Sportwissenschaftliche Gesellschaft der Schweiz SGS, Zürich, CH, Session Chair of key note lecture
2017	Award Committee "SGS-Dissertationspreis" Sportwissenschaftliche Gesellschaft der Schweiz
2016	International Society of Biomechanics in Sports ISBS, Session Chair "Sport Rehabilitation II" Tsukuba, JP
2016	ISBS Student Mentor Program of the International Society of Biomechanics in Sports, Mentor
2016	Scientific Committee, International Conference on Technology and Innovation icSports, Health and Wellbeing, Vila Real, Portugal
2016	Scientific Committee, International Society of Biomechanics in Sports ISBS, Tsukuba, JP
2016	International Program Committee of icSPORTS, Lisbon, Portugal
2016	Scientific Committee, Sportwissenschaftliche Gesellschaft der Schweiz SGS, Bern, CH
2016	Sportwissenschaftliche Gesellschaft der Schweiz SGS, Session Chair "Biomechanics" Bern, CH
2015	Organizer Mini-Symposium "Loading and performance during strength training" ETH Zurich, CH

2015	ISBS Student Mentor Program of the International Society of Biomechanics in Sports, Mentor
2015	International Society of Biomechanics in Sports ISBS, Session Chair "Poster session 2" Poitiers, FR
2015	Biomechanisches Praktikum, Swiss-Ski Trainerausbildung
2015	4S annual congress of the Swiss Society of Sport Sciences, Session Chair, Lausanne, Switzerland
2015	Scientific Committee, International Society of Biomechanics in Sports ISBS, Poitiers, FR
2015	International Program Committee of icSPORTS, Lisbon, Portugal
2014	International Society of Biomechanics in Sports ISBS, Session Chair "Strength and Power Sports" Johnson City, TN, USA
2014	ISBS Student Mentor Program of the International Society of Biomechanics in Sports, Mentor
2014	6th Congress of the SGS, Swiss Society for Sports Sciences, Session Chair "Natural Sciences", Fribourg, Switzerland
2014	International Program Committee of icSPORTS, Rome, Italy
2014	Scientific Committee, International Society of Biomechanics in Sports ISBS, Johnson City, TN, USA
2013	Biomechanisches Praktikum, Swiss-Ski Trainierausbildung
2013	International Program Committee of icSPORTS, Vilamoura, Portugal
2012	Minisymposium on Muscle Mechanics, IfB, ETH Zurich, Switzerland, Session Chair
Since 2010	Co-Organizer 1.-7. Zurich Forum for Applied Sport Sciences, ZFASS, Zurich, Switzerland

2010	17th Congress of the European Society of Biomechanics, Session Chair "Sports Biomechanics", Edinburgh, United Kingdom
2009	ESB 2009 Workshop "Movement Biomechanics and Sport", European Society of Biomechanics, Zurich, Switzerland, Chair Scientific Committee

Major Committee Assignments

2017	Expert, ETH entrance exam, ETH Zurich
2015 -	Didactic Fellowship, ETH Zurich
2015	Co-Founder of SensoMATive GmbH
2013	Founder of LLS Biomechanics GmbH
2013 - 2014	Expert, ZHAW, School of Engineering, Bachelor thesis
2012 - 2016	Expert, Board of Research, BASPO (Bundesamt für Sport)
2010 - 2012	Deputy representative of the academic staff at the department conference HEST, ETH Zurich
2009	Head Award Committee ESB Workshop
2009 - 2011	Member of Arbeitsgruppe Forschung, Eidgenössische Sportkommission
Since 2008	Deputy representative in the study commission BWS, ETH Zurich

Granting and Funding Agencies

Reviewer	Sport Science, Swiss Olympic
Reviewer	Swiss National Science Foundation
Reviewer	Research Council KU Leuven, Belgium
Reviewer	Research Foundation - Flanders, FWO, Belgium
Reviewer	Bundesamt für Sport BASP0

Reviewer	Eidgenössische Sport Kommission
Reviewer	Innovedum teaching projects, ETH Zurich

Editorial Boards

2015 -	Editorial Board Sports Biomechanics
2015 -	Editorial Board Journal of Functional Morphology and Kinesiology
2017	Ad Hoc Reviewer International Biomechanics
2017	Ad Hoc Reviewer IEEE Journal of Biomedical and Health Informatics
2016	Ad Hoc Reviewer European Journal of Sport Science
2016	Ad Hoc Reviewer Applied Ergonomics
2016	Ad Hoc Reviewer Clinical Biomechanics
2016	Ad Hoc Reviewer Journal of Medical and Biological Engineering
2016	Ad Hoc Reviewer Plos one
2016	Ad Hoc Reviewer Clinical Biomechanics
2015	Ad Hoc Reviewer Clinical Biomechanics
2015	Ad Hoc Reviewer Journal of Strength and Conditioning Research
2015	Reviewer congress of the Swiss Society of Sport Science, Lausanne, CH
2014	Ad Hoc Reviewer European Journal of Sport Science
2014	Ad Hoc Reviewer International Biomechanics
2014	Ad Hoc Reviewer Clinical Biomechanics
2014	Ad Hoc Reviewer European Journal of Sport Science
2014	Ad Hoc Reviewer European Spine Journal
2014	Ad Hoc Reviewer Journal of Biomechanics

2014	Ad Hoc Reviewer Medicine & Science in Sports & Exercise
2014	Ad Hoc Reviewer Journal of Strength and Conditioning Research
2014	Reviewer 7th World Congress of Biomechanics, Boston, USA
2013	Ad Hoc Reviewer Sports Biomechanics
2013	Ad Hoc Reviewer Acta Biomaterialia
2013	Ad Hoc Reviewer Journal of Strength and Conditioning Research
2013	Ad Hoc Reviewer Journal of Sports Sciences
2013	Ad Hoc Reviewer Clinical Biomechanics
2012	Ad Hoc Reviewer Technology & Health Care
2012	Ad Hoc Reviewer BMC Research Note
2012	Ad Hoc Reviewer Scandinavian Journal of Medicine and Science in Sports
2012	Ad Hoc Reviewer Journal of Sports Sciences
2010	Ad Hoc Reviewer Journal of Biomechanics
2010	Reviewer for ESB 2010 Motion and Sports Biomechanics
2003	Ad Hoc Reviewer Geochimica et Cosmochemica Acta

Other activities

Competitive Sports & Strength and Conditioning Expertise

2009 - 2012	Swiss Sailing Championship Dolphin 81 with SUI 55
2006 - 2008	American Football NLA, Winterthur Warriors, Swiss Champion 2006, Vice 2007
2004	Vice Swiss Champion, up to 90 kg, Swiss Drug-Free Powerlifting Federation
2002	Swiss Champion, up to 82.5 kg, Powerlifting, SPC

2009 - 2011	Head of the expert commission for "Fachwissen", SFCV, exam fitness instructor with Federal Certificate, Bundesamt für Bildung und Technologie (BBT)
2007 - 2011	Expert at the federal exam for "Fitnessinstructor with Federal Certificate" (BBT)

Expeditions

06/07	ANSMET, NASA expedition to Antarctica to recover meteorites
02/02/05/09	Expedition in the Omani desert to recover meteorites

Hunting

2017 - 2018	Administrator Allianz Natur Schaffhausen
2014 - 2018	President JagdSchaffhausen
2016	Member Schätzkommission für die Revierverpachtung Kanton Schaffhausen
Since 2011	Member Jägerprüfungskommission Kanton Schaffhausen
2008 - 2013	Vice President and Webmaster JagdSchaffhausen
2006 - 2011	Treasurer JagdSchaffhausen
2015 -	Trained hunting dog Centi
2007 - 2015	Trained hunting dog Gwendi

Narrative Report

Dr. S. Lorenzetti is currently the leader of the Sports Biomechanics Group at the Institute for Biomechanics at the Department of Health Science and Technology of ETH Zurich, Switzerland. Since 2014 he has been a Senior Scientist at ETH Zurich. In 2017 he received the " *Venia Legendi* in the area of "Biomechanics" at ETH Zurich and is now a privat docent. He studied physics, mathematics and astronomy at the University of Bern with an exchange term at the University of Strathclyde, Glasgow, UK. After a 12 month master's thesis, achieving the highest grade, he did his first Ph.D. in experimental physics (2003) at the University of Bern. The second Ph.D. took place

under the supervision of Prof E. Stüssi at the Institute for Biomechanics, in the Department of Mechanical and Process Engineering ETH Zurich in Bone Biomechanics (2007). After a NASA expedition to Antarctica, he became a Lecturer and Senior Research Associate at the Institute for Biomechanics. He was a co-applicant of the project "Biomechanics of Squat" funded by the Swiss Federal Sports Commission. This project and the inherited project "Dynamic analysis and modelling of the instability of the ankle joint" were successfully completed in 2010. At the microscopic level, a new method to determine the Young's modulus of single trabeculae was developed. Current research in the area of sports biomechanics includes industry-funded projects and a KTI funded projects as well as the modelling of strength exercises.

He is especially interested in the external and internal loading conditions of the human body during daily activities as well as sports and the corresponding loading of the joints and biological structures. The combination of experimental approaches, combined with finite element analysis (FEA) or whole body simulation allows the influence of macroscopic loading on microscopic structures to be studied.

He has received a number of awards, including the Student Award of the Meteoritical Society, the International Society of Biomechanics Student Dissertation Award and the Antarctica Service Medal of the United States of America.

Since 2008, Dr. Lorenzetti has been actively involved in the development of student education. As of 2008, he is deputy representative in the study commission "Movement Science and Sport" and was deputy representative in the department conference Health Sciences and Technology (2010-2012). His teaching includes courses on Introduction to Health Sciences and Technology, Movement and Sports Biomechanics, Biomechanics II and a laboratory course in Exercise Biomechanics at a bachelor level and Clinical and Movement Biomechanics and Sport Biomechanics at a master's level at the ETH Zurich. Since 2012, he is the deputy of the head of the major "Biomechanics" of the master program of Human Movement Sciences and Sport. In 2013 he founded a spin-off company, LLS biomechanics GmbH, consulting and educating in biomechanics and in 2015 he was co-funder of the start-up SensoMATive GmbH. In 2014 he was elected as a Director of the International Society of Biomechanics in Sports and in 2015 he was appointed as treasurer.

Funding Information

2017	KTI project (Forster Rohner, LLS) " FabSense", Co-Investigator, 541k CHF

2016	KTI project (SensoMATive) "Sit-Cat weelchair", PM, 290k CHF,
2016	ESSO, Swiss Olympic funded project (Swiss Ski, Ski jumping), Counselor, 20k CHF
2015	Innovedum project "eSkript 2.0", ETH Zurich, 55k CHF
2015	ESSO, Swiss Olympic funded project (Swiss Ski, Ski cross), Counselor, 48k CHF
2014	Industry funded projects (Swiss Ski), PI, 35k CHF
2014	Innovedum project "Experimentelle Biomechanik (Videos)", ETH Zurich, PI, 48k CHF
2014	Innovedum project "Interaktives Vorlesungsmaterial", ETH Zurich, 30k CHF
2014	BASPO funded project "Knee injury risk in alpine ski racing", PI, 101k CHF
2013	Industry funded projects (Kistler, Swiss Ski, Swiss Olympic), PI, 70k CHF
2013	physioswiss "Spine Dynamics during Gait", Co-Investigator, 6k CHF
2013	KTI project (Künzli) "Ortho Schuh", Co-Investigator, 120k CHF
2011	Industry funded projects (VITRA, Credit Suisse, On), PI, 320k CHF
2010	Industry funded projects (VITRA, Kybun, Scott USA), PI, 120k CHF
2008	Eidgenössische Sportkommission, "Biomechanics of squats", PI, 70k CHF

Teaching Report

Bachelor Level

Since 2015	Main Lecturer, "Biomechanik II", 80% 376-0206-00L
Since 2014	Guest lecturer, "Trainingswissenschaften", 376-0204-00L, 3h
2014	Lecturer, "Biomechanik II", 376-0206-00L, 80%
Since 2013	Lecturer, "Bewegungs- und Sportbiomechanik", 376-0203-00L, 20% - 30%
Since 2013	Lecturer, "Demowoche Gesundheitswissenschaften und Technologie", 376-0003-01L, 100%
2012	Main lecturer, "Praktikum Gesundheitstechnologie", 376-0016-00L, 12.5%

2011-2013	Lecturer, "Introduction to Health Sciences and Technology I", 376-0003-00L, 7% - 15%
Since 2010	Lecturer, "Laboratory Course in Exercise Biomechanics", 557-0131-00L, 25% - 50 %
2008 - 2011	Lecturer, "Basics of Biomechanics", 557-0163-00L, 30 - 50 %
2009 - 2012	Main lecturer, "Biomechanics Ia", 151-0645-01L, 40 % part of 557-0165-00L, 20 %
2008	Lecturer, "Biomechanics Ia", 151-0645-01L, 50 % part of 557-0165-00L, 25 %
2008 - 2013	Main lecturer, "Biomechanics IIb", 151-0646-02L, 100 % part of 557-0166-01L, 50 %
2004 - 2006	Teaching assistant "Biomechanics I, II and IV", 50 hours of teaching yearly
1999 - 2003	Practical courses, beginners and advanced practical courses for physics and biology students, Physical Institute, University of Bern, 80 hours of teaching yearly

Master Level

2016	Guest lecturer, "Grand Challenges in Engineering Design",151-3203-00L 2h
Since 2015	Lecturer, "Applied movement analysis",376-2019-00L, 50%
Since 2014	Main lecturer, "Clinical and Movement Biomechanics",376-1651-00L, 40%
Since 2010	Main lecturer, "Sports Biomechanics", 376-1168-00L 40%-100%
2012 - 2013	Main lecturer, "Biomechanics III", 376-1647-00L, 40 %
2007 - 2011	Lecturer, "Biomechanics III", 376-1647-00L, 40%-50 %

Advisory and Supervisory Responsibility

Ph.D. Students

2015 -	Matt Baker, ETH Zurich, "Knee injury in Golf"
2013 - 2015	Patrick Wettenschwiler, EMPA, "Comparing mechanical discomfort and risk of low back pain or injury when wearing load carriage systems"

2012 - 2016	Florian Schellenberg, ETH Zurich, "Muscle forces in the lower extremities during strength training for strength enhancement, prevention and rehabilitation of an anterior cruciate ligament rupture"
2012 - 2015	Stefan Schmid, ETH Zurich / UKBB / FHBE, "Advancing Clinical Movement Analysis: Spinal Kinematics are Fundamental for Understanding Normal and Pathological Gait"
2011 - 2015	Roland Zemp, ETH Zurich, "The human being in the office environment in a biomechanical point of view"
2008 - 2014	Roberto Carretta, ETH Zurich, "Mechanics of single trabeculae"

Ph.D. Theses, Co-examiner

2016	Rahel Ammann, Faculte des Sciences, Universite de Fribourg, "Quantifizierung und Optimierung von Laufparametern mit Hilfe von körpertragbaren Sensoren"
2012	Julien Chardonnens, School of Engineering, Lausanne, EPFL, "Outcome evaluation in ski jumping using inertial sensors"
2008	Heidi Knüsel, DMAVT, ETH Zurich, "Mechanics of the shoulder complex and clinical investigation in spinal cord injured individuals"

Master Theses

1. Michael Plüss, HEST, 2016, ETH Zurich, "Musculoskeltal simulations of squats using CAMS data"

2. Christian Kopp, BWS, 2016, ETH Zurich, "Changing gears: Non-linear gait adaptations across the speed continuum"

3. Edeny Baaklini, MSc Physiotherapy, 2016, FH Bern, "Cross-sectional study on the influence of the ghight of high-heeled shoes on the kinematics and kinetics of the pelvis and the spine during walking"

4. Mira Ostermann, MSc Physiotherapy, 2016, FH Bern, "Influence on knee alignment during squats in varios stance withs and foot positions"

5. Dominik Jenni, BWS, 2016, ETH Zurich, "Finite element modelling of an implant-based prophylactic augmentation approach in the proximal femor"

6. Sabrina Windmüller, Universität Freiburg, CH; Hochschule für Sport, Magglingen, CH, "Welche Imitationssprünge auf dem Messwagen sind

im Kraft-Zeit-Verlauf denen auf der der Skisprungschanze am ähnlichsten?"

7. Ramona Häberle, HST, 2016, ETH Zurich, "Comparison of the kinematics and kinetics of shoulder exercises performed with constant and elastic resistance"

8. Dino Causevic, MAVT, 2016, ETH Zurich, "Entwicklung einer mittels eines Elektromotors geregelten Kraftmaschine"

9. Nicole Spörri, BWS, 2015, ETH Zurich, "The influence of a reduced foveal vision the peripheral detection capacity during multiple object tracking"

10. Olivier Meyer, BWS Trainingslehre, 2015, ETH Zurich, "Auswirkungen von körperlicher Ermüdung auf das Laufen"

11. Thomas Lamparter, Master in top class sport, 2015, EHSM Magglingen, "Validität und Reliabilität von einfachen Messgeräten zur Bestimmung der Langhantelgeschwindigkeit bei freien Kniebeugen"

12. Nicole Schmid, BWS, 2015, ETH Zurich, "Biomechanical Changes in Technique and Movement Variability in the Learning Process of an Upstart in Gymnastics"

13. Julia Lindorfer, Sports Equipment Technology, 2015, Technikum Wien Austria, "Entwicklung eines mobilen Systems zur Überwachung von Kniebeugen in der Knierehabilitation"

14. Sergio Corradori, DSBG, 2015, Uni Basel, "Kinetische und kinematische Messungen des Trackstarts zur Leistungsanalyse im Schwimmen"

15. Nicole Hörterer, BWS, 2015, ETH Zurich, "Knieverletzungen im Schweizer Skirennsport - eine retrospektive Analyse zum Einfluss von Fitnessfaktoren"

16. Suzanne Sinistaj, Health and Fitness, 2015, Universität Salzburg. "Kinematische und kinetische Analyse von Rückenstartvarianten"

17. Sara Lehmann, BWS, 2014, ETH Zurich, "Entwicklung von mechanischen Hautäquivalenten für Materialprüfungen und Forschung"

18. Roman Kallen, BWS, 2014, ETH Zurich, "Systematische Erfassung von Knieverletzungen im Schweizer Ski-Rennsport"

19. Andreas Ganz, BWS, 2014, ETH Zurich, "Development of a versatile test setup for the biomechical assessment of various ankle fusion plate systems"

20. Michael Preiswerk, BWS, 2014, ETH Zurich, "Friction mechanisms of the human finger pad"

21. Stefan Plüss, MAVT, 2014, ETH Zurich, "Development of an instrumented vehicle to perform imitation jumps in ski jumping"

22. Karin Schnüriger, BWS, 2014, ETH Zurich, "Sitting behavior during office work"

23. Björn Bruhin, BWS, 2013, ETH Zurich, "Messung der Wirbelsäulenbewegung während des Ganges bei gesunden Jugendlichen"

24. Simon Bürgi, BWS, 2013, ETH Zurich, "Junior Hockey Stick JR16 FlexBlade: A Feasibility Study"

25. Melanie Keller, ISSW, 2013, Universität Basel, "Kinematik und Kinetik von Niedersprüngen und Kniebeugen bei Skispringern"

26. Nicole Ade, BWS, 2013, ETH Zurich, "Entwicklung von Massnahmen zur Prävention von Thoraxverletzungen im Reitsport"

27. Bettina Sommer, BWS, 2013, ETH Zurich, "Trunk kinematics in non-specific low back pain patients following a sudden unloading event"

28. Cynthia Unholz, BWS, 2013, ETH Zurich, "World Cup Downhill Ski Races: Where and why do skiers drop out or get injured?"

29. Markus Ramseier, BWS, 2013, ETH Zurich, "Muskelkräfte, Gelenkkräfte und Gelenkmomente bei Kniebeugen im Ausfallschritt simuliert mit OpenSim"

30. Carole Pauli, BWS, 2013, ETH Zurich, "Imitation jumps in ski jumping"

31. Daniela Häuptli, BWS, 2012, ETH Zurich, "Biomechanical assessment of different unstable shoe sole constructions and their impact on the human body"

32. Michel Schläppi, BWS, 2012, ETH Zurich, "Ballistic bench press performance"

33. Esther Zoller, BWS, 2012 ETH Zurich, "The influence of compression apparel on soft tissue vibrations and muscle activity during running"

34. Michael Angst, BWS, 2012 ETH Zurich, "Load condition of the wrist during the forward handspring, the forward handspring with ulnar deviated hand positioning and the backward handspring"

35. Claudio Koch, BWS, 2012 ETH Zurich, "Comparison of virtual rowing training to on-water training"

36. Barbara Huber, BWS, 2012, ETH Zurich, "Kinematic gait analysis in incomplete spinal cord injured patients"

37. Michel Meisterhans, MAVT, 2012, ETH Zurich, "Development of a new head and neck support system for dental chairs"

38. Manuela Ernst, BWS, 2012, ETH Zurich, "Development of a supplementary device for the external fixator to monitor the course of fracture healing using a novel data collection concept"

39. Benjamin Hinterberger, BWS, 2012, ETH Zurich, "Trunk kinematics following a sudden unloading event in healthy subjects assessed with combined inertial and magnetic sensors"

40. Amélie Reymond, BWS, 2012, ETH Zurich, "Exploration of a new method to correct an abnormal femoral anteversion angle"

41. Christoph Wenger, BWS, 2012, ETH Zurich, "Development of a test device for assessment of glenoid baseplates for reversed shoulder arthroplasty"

42. Florian Schellenberg, BWS, 2012, ETH Zurich, "Machbarkeitsstudie: Intraoperative Bestimmung der mechanischen Eigenschaften des Knochens"

43. Corine Frischknecht, BWS, 2011, ETH Zurich, "Zusammenhang des Pendeltests und des aktiven Streckdefizits mit der 3D Ganganalyse beim Initialkontakt und während der Schwungphase"

44. Ursi Eberli, BWS, 2011, ETH Zurich, "The influence of bone cement stiffness modifications on implant anchorage in osteoporotic bone"

45. Pascal Schütz, BWS, 2011, ETH Zurich, "Bestimmung des Kollagengehalts von Knochen mit Nahinfrarotspektroskopie (NIRS)"

46. Fabian Rast, BWS, 2011, ETH Zurich, "Evaluation der Geometrie einer ventralen winkelstabilen Platte für die Arthrodese des oberen Sprunggelenks"

47. Benoit Luisier, BWS, 2011, ETH Zurich, "The influence of collagen on elastic properties of a single trabecula tested in three point bending test"

48. Jan Bründler, BWS, 2011, ETH Zurich, "Einfluss von Bindungswinkel und -Abstand auf die Tibiarotation und die Sprunghöhe beim Snowboarden"

49. Roland Zemp, BWS, 2011, ETH Zurich, Pilot study: "Validierung eines Rückenmarkersets"

50. Samuel Volery, BWS, 2010, ETH Zurich, "Auswirkungen eines Slackline- resp. eines herkömmlichen Gleichgewichtstrainings auf die Sensomotorik und die Gleichgewichtsfähigkeit"

51. David Burkhardt, BWS, 2010, ETH Zurich, "Tracking of upper body movements in rowing"

52. Ivan Zderic, BWS, 2010, ETH Zurich, "Ermittlung und Verfolgung der Verschiebung von einzelnen Trabekeln während eines Zugversuchs"

53. Simon Scherrer, MAVT, 2010, ETH Zurich, "Stresses and strains in different glenoid designs of shoulder arthroplasty"

54. Turgut Gülay, BWS, 2010, ETH Zurich, "Momente und Kräfte in Hüft und Knie sowie die Bewegung der Wirbelsäule bei der Kniebeuge"

55. Michèle Mattle, BWS, 2010, ETH Zurich, "Erfassung von Veränderungen der Muskelaktivierung durch interdisziplinäre arbeitsbezogene Rehabilitation mittels Oberflächenelektromyographie bei Patienten mit chronischen Schmerzen im Lendenwirbelsäulenbereich"

56. Erich Roffler, BWS, 2009, ETH Zurich, "Prophylaktische Augmentation von osteoporotischen Femora zur Verhinderung von Frakturen"

57. Mirjam Stoop, BWS, 2009, ETH Zurich, "Biomechanik der Kniebeuge: Berechnung der Kräfte und Drehmomente am Knie- und Hüftgelenk in Abhängigkeit der Bewegungsausführung"

58. Aline Mühl, BWS, 2009, ETH Zurich, "Evaluation dynamischer Messmethoden zur Erfassung einer unilateralen Sprunggelenksinstabilität"

59. Patrick Hiltplot, BWS, 2009, ETH Zurich, "Vergleich der Rotation in der Transversalebene zwischen Frauen mit und ohne patellofemoralem Schmerzsyndrom"

Bachelor Theses

1. Pia Zimmer, FH.T.Wien, 2016, Sports-Equipment Technology, "Influence of stance width and foot positioning on sagittal curvature of the lumbar spine during back squats"

2. Fabian Zeidler, FH.T.Wien, 2016, Sports-Equipment Technology, "Einfluss der Standbreite und der Fussposition auf die auftretenden Momente im Kniegelenk, Hüftgelenk und in der Lendenwirbeilsäule bei Kniebeugen"

3. Jan Speckien, MAVT, 2016, ETH Zurich, "Development of a calibration device for pressure distribution measurement systems"

4. Mickey Führer, MAVT, 2015, ETH Zurich, "Inbetriebnahme des instrumentierten Ski-Cross Startgates"

5. Serjosha Robmann, MAVT, 2015, ETH Zurich, "Ausarbeitung eines Messaufbaus zur Bestimmung des Dämpfungsverhaltens von Mountainbike"

6. Dominique Ernst, MAVT, 2015, ETH Zurich, "Entwicklung eines kraftsensitiven Startgates im Skicross"

7. Jann Schraner, MAVT, 2014, ETH Zurich, "Development of a sensor system to supervise strength training"

8. Dino Causevic, MAVT, 2014, ETH Zurich, "Testung und Weiterentwicklung einer Auswertungsroutine zur Quantifizierung der Wirbelsäulen-Kinematik"

9. Stefan Anthamatten, MAVT, 2013, ETH Zurich, "Feasibility Study: Influence of damping elements on avveleration and motion on racket and lower arrm during tennis serves"

10. Johanna Menze, 2013, University of Twente (NL), "A kinematic analysis of the grab and the track start in swinmming - changes in the start performance"

11. Tom Reuter, MAVT, 2012, ETH Zurich, "Biomechanical bench press model"

12. Viktoria Reidl, FH.T.Wien, 2012, Sports-Equipment Technology, "Pilot Study: The influence of two different orthopedic shoes on the ground reaction force and the ankle during gait"

13. Stefan Plüss, MAVT, 2011, ETH Zurich, "Design of a save locking mechanism for a Smith press"

14. Dominique Seuret, MAVT, 2011, ETH Zurich, "Design of a save locking mechanism for a Smith press"

15. Michele Casanova, MAVT, 2009, ETH Zurich, "Translation of the center of the humeral head with respect to the glenoid"

16. Andreas Kaiser, BWS, 2006, ETH Zurich, "Möglichkeiten und Limitationen für die FE-Modellierung einer Knochentrabekel im Biegetest"

Semester Projects

1. Christoph Grether, MAVT 2015, "Loading conditions and simulation of muscle forces durng squats"

2. Frédéric Lamon, ITET 2015, "Comparison between Platform and Pinpoint stance serve in tennis in relation to performance and lower limbs loading conditions"

3. Michele Mazzariello, ITET, 2015, "Biomechanics of the strength exercise Back Extension"

4. Stefan Plüss, MAVT 2013, "Development and validation of an instrumented office chair"

5. Enrico De Pieri, ITET 2013, "Office chair simulation with Anybody"

6. Roman Schneider, MAVT 2009, "Quasistatische Momentenberechnung an Knie und Hüfte beim Treppensteigen"

Interns

2016	Dominik Huber, ETH Zurich, 3 months
2016	Santiago Alzate Restrepo, Universidat de Antioquia, Colombia, 2 months
2016	Lia Sutter, FH Bern, Switzerland, 2 months
2016	Michèle Stauffer, FH Bern Switzerland, 2 months

2016	Alexander Balloi, BNF Projektpraktikum, Switzerland, 4 months
2016	Stefan Kunz, BNF Projektpraktikum, Switzerland, 5 months
2016	Pia Zimmer, Fachhochschule Technikum Wien Austria, 3 months
2016	Fabian Zeidler, Fachhochschule Technikum Wien Austria, 3 months
2015	Anna Kratschmar, Sporthochschule Köln, 2 months
2015	Michael Plüss, ETH Zurich, 3 months
2015	Mira Ostermann, FH Bern, Switzerland, 3 months
2015	Nicole Hörterer, ETH Zurich, 3 months
2014	Edeny Baaklini, FH Bern, Switzerland, 3 months
2014	Augusto Frusone, BNF Projektpraktikum, Switzerland, 3 months
2014	Peter Kümmerli, BNF Projektpraktikum, Switzerland, 3 months
2014	Janine Weigand, RheinAhrCampus Remagen, Germany, 3 months
2014	Christian Röhrig, University of Heidelberg, Germany, 6 weeks
2013	Jeroen Aeles, KU Leuven Belgium, 1 month
	Julia Lindorfer, Fachhochschule Technikum Wien Austria, 3 months
2012	Michael Angst, ETH Zurich, 3 months
	Pascal Schütz, ETH Zurich, 3 months
	Viktoria Reidl, Fachhochschule Technikum Wien, 3 months
2011	Michel Schläppi, BWS, ETH Zurich, 3 months
2010	Turgut Gülay, BWS, ETH Zurich, 4 months
	Markus Geisendorf, ZHAW, ETH Zurich, 1 month
	Ursi Eberli, BWS, ETH Zurich, 4 months
	Pascal Schütz, BWS, ETH Zurich, 4 months
	Fabian Rast, BWS, ETH Zurich, 4 months
	Florian Schellenberg, BWS, ETH Zurich, 4 months
	Jan Bründler, BWS, ETH Zurich, 4 months
2009	Samuel Volery, BWS, ETH Zurich, 4 months
	Patrick Wettenschwiler, BWS, ETH Zurich, 4 months
	Arnd Viehoefer, Physics, University of Tübingen, 3 weeks
	Ivan Zderic, BWS, ETH Zurich, 4 months
	Roland Zemp, BWS, ETH Zurich, 4 months
	Esther Wobmann, BWS, ETH Zurich, 4 months
2008	Juri Steiner, BWS, ETH Zurich, 4 months
	Fabian Bleiker, BWS, ETH Zurich, 4 months

2006	Jasmin Zahn, University of Heidelberg, Germany, 4 months
2006	Renato Semadeni, BWS, ETH Zurich, 4 months
2005	Katja Oberhofer, M.S., ETH Zurich, 4 months

Literature Work

1. Fabienne Riner 2016, Comparison of imitation jumps and competition jumps in ski jumping - A review
2. Dominik Huber, 2016, Influence of vibration of the outcome of strength training exercies
3. David Bützer, 2015, How is the energy return of a sports floor related to the fatique of the athlete?
4. Ramona Häberle, 2015, "Influence of the breathing pattern on the performance and motion during strength training"
5. Mirjam Pfister, 2015, "Influence of the core stability on the performance and motion during strength training"
6. Lucas Schmid, 2015, "Step counting and activity level: What is the accuracy of mobile phones compared to bracelets?"
7. Oliver Schuhmacher, 2015, "Are the gait parameters and the strength training performance influenced by a supplementation of cratine in elderly subjects?
8. Ursina König, Lukas Kaiser, BWS, 2014, "Bewegung und Beschwerden im Golf"
9. Domenic Stamm, Björn Bruhin, BWS, 2011, "Richtlinien für die korrekte Ausführung von Krafttrainingsübungen"
10. Benjamin Hinterberger, Ursi Eberli, BWS, 2010, "Kriterien zur Beurteilung der Leistung im Krafttraining"
11. Florian Schellenberg, Nadine Wismer, BWS, 2010, "Messtechnik der Leistungsdiagnostik im Krafttraining"
12. Christian Buser, Exarchos Omiros, MAVT, 2009, "Ganzkörper Krafttest, Möglichkeiten, Limitationen"
13. Matthias Schüssel, David Burkhardt, BWS, 2009, "Krafttraining mit Vibrationsplatten - eine Alternative?"

14. Ivan Zedric, Samuel Volery, BWS, 2009, "Beweglichkeitstraining mit den Vibrationsplatten - eine Alternative?"

15. Ladina Fliri, Maja Schlittler, BWS, 2008, "Der Einfluss des Kollagens auf die Stabilität von Knochen im Alter"

16. Berni Studer, Turgut Gülay, BWS, 2008, "Kräfte und Drehmomente im Knie beim Squat"

17. Corina Nüesch, Michaela Nusser, BWS, 2007, "Auswirkungen von verschiedenen Trainingsprogrammen auf die Knochenmineraldichte und andere Parameter"

18. Daniel Lengwiler, BWS, 2007, "Sinnvolles Rating von Krafttrainingsübungen"

19. Roger von Menthen, ZHAW, 2006, "Aufbau und Ausrichtung von Kollagen und Apatit im Knochen"

20. Cora Huber, BWS, 2006, "Einfluss auf das Knie von Hantel- und Fussposition bei Kniebeugen mit der Scheibenhantel"

21. Denise Schmid, BWS, 2006, "Osteoporose-Diagnose mittels Bestimmung der Knochendichte"

22. Daniel Edelaar, Pascale Vaucher, BWS, 2005, "Osteoporose: Beeinflussung durch Sport / Belastung / Bewegung im Alter"

23. Christine Bachmann, Anna Münger, BWS, 2005, "Osteoporoseprävention beginnt in jungen Jahren"

24. Angie Batschelet und Christine Zimmermann, BWS, 2005, "Osteoporose und Behandlungen mit Alendronat bei Männern und Frauen"

25. Stephanie Unternährer, Franziska Rusca, BWS, 2004, "Einfluss von Schwangerschaft und Stillzeit auf die Knochendichte von Mutter und Kind"

26. Carmen Hauser, Christian Ruckli, BWS, 2004, "Osteoporose und Knochendichte - eine einfache Korrelation?"

Matura Theses

1. Kevin Nietlispach, 2006, "Design und Bau eines aktiven Magnetlagers in Form eines Schwebeglobus"

2. Roland Schübi, 2006, "Fussgängerbrücke über die Limmat"

Invited Talks and Distinguished Lectures

2018	Talk, Invited Symposium sponsored by adidas, 23rd annual congress of the European College of Sport Science – ECSS Dublin
2017	ZFASS, Zurich Forum for Applied Sport Sciences
2017	Gait, forces & energy, Lucerne University of Applied Sciences and Art
2016	Fachtagung, "Squats", "Back-extensions" and "Rotator cuff exercises", Star Education
2015	Einfluss der konditionellen Fähigkeiten auf das Verletzungsrisiko, Swiss-Ski Trainerforum
2014	Modelling of strength training exercises, Colloquium University Konstanz (D)
2013	Masterdiplomfeier Bewegungswissenschaften und Sport ETHZ
2013	Biomechanics of Tendon, Ligaments, Bone, Meniscus and Cartilage, Education for MD in physical medicine and rehabilitation.
2012	Biomechanics of the Knee, Qualitätszirkel, Ärztefortbildung
2012	Biomechanics of falls, Workshop Novartis, IBM, Falls and Activity Monitoring, Hursley UK
2011-2017	Moderator, Zurich Forum for Applied Sport Sciences
2011	Objektivierung des Sitzens aus einer ganzheitlichen Perspektive, 6. Konferenz für Gesundheit für Arbeitsmediziner, Weil am Rhein (D)
2011	Biomechanik des Knies, Gründungsveranstaltung der Deutschen Gesellschaft für medizinische technische Trauma Biomechanik (GMTTB, D)
2010	Load condition of the knee during daily activities and sports, ZFASS, Zurich Forum for Applied Sport Sciences
2010	Biomechanics of Tendon, Ligaments and Bone, Education for MD in physical medicine and rehabilitation.
2008	Biomechanics of Bone, Education for MD in physical medicine and rehabilitation.

Media Appearances

1. Sonntagszeitung, 16.4.2017: High Heels
2. Fitness Tribune, Nr.166, 2017: Star Fachtagung

3. Fitness Tribune, Nr.166, 2017: Backextension
4. 20min, national newspaper, 4.11.2016
5. Radion Munot, Unter 4 Augen, Oct 16. 2016
6. SHF, Schaffhauser Television, Todays talk, Mar 4. 2016
7. SRF 1, NZZ Format, Feb 4. 2016: Rücken-stark und sensibel
8. RSI1, Swiss National Television, Jan 10. 2016: Physiology and Biomechanics
9. Schaffhauser Nachrichten, Swiss Newspaper, Oct 1, 2015: Drei Fragen an ...
10. Radio Munot, Feb 6. 2015: Guest "Kiosk"
11. Fit for Life, Nr.12, 2014: Kurzer Ausfallschritt ist schonender
12. Litteris et Amicitiae, Nr.144, 2014: Fragendomino
13. Fitness Tribune, Nr.153, 2014: F. Schellenberg and S. Lorenzetti: "Bewegung und Belastung bei den Goodmornings und dem Kreuzheben"
14. NZZ, Simon Amman zurück auf der Schanze, 26.6.2014
15. SRF, Swiss National Television, April 7, 2014: Puls: Barfuss-Laufschuhe
16. schaffhauser az, Porträt, Nr. 12, 20.3.2014
17. Beobachter, 3, 2014, Biomechanik und Sport, p44-47
18. Schaffhauser Bock, 006, 2014, Gastkolumne, S. Lorenzetti
19. Staaner Wanze, 2014. p.4.
20. Aargauer Zeitung, Nov 10, 2013:"Kurzes und heftiges Training macht auch fit", p. 6.
21. Fitness Tribune, Nr.141, 2013: S. Lorenzetti: "Bewegung und Belastung bei der Kniebeuge"
22. Workspirit, 2012, ISSN 2195-1950: "Die Wissenschaft vom Sitzen"
23. Radio RTS, Oct 15, 2012: "Sky jump from 38 km height"
24. Radio Sunrise, Oct 15, 2012: "Sky jump from 38 km height"

25. Radio 24, Oct 15, 2012: "Sky jump from 38 km height"

26. SF, Swiss National Television, Oct 10, 2012,: Sky jump from 38 km height

27. DRS 3, Swiss Public Radio, May 15, 2012: "Barfussschuhe"

28. DRS 1, Swiss Public Radio, May 3, 2012: Wissen aktuell,Barfussschuhe: Wissenschaftlich geprüft?

29. SONNTAGSZEITUNG, Swiss Newspaper, July 17, 2011: "Auf gesunden Sohlen", p.55.

30. Aargauer Zeitung, Swiss Newspaper, May, 17, 2011:"Jetzt kommt das Barfussjoggen", p.19.

31. Schaffhauser Nachrichten, Swiss Newspaper, Nov 24, 2009: Mit jeder Antwort kamen wieder neue Fragen auf

32. SF2, Swiss National Television, Nov 11, 2009, Sport Lounge: "Marathon - 42,195 km leiden, warum?"

33. SF2, Swiss National Television, Feb 17, 2008: NZZ Format, Die Bio-Mechaniker

34. Schaffhauser Nachrichten, Swiss Newspaper, June 24, 2003: Kopf der Woche

List of Publications
My google scholar bibliography
h-index: 17, Sum of the times cited: 959
My researcher ID: B-1188-2009
h-index: 12, Sum of the times cited: 602

My NCBI bibliography

Original Articles

1. Baaklini, E., Angst, M., Schellenberg, F., Schmid, S., Tal, A., Taylor, W. R. and Lorenzetti S. 2017. High-heeled walking decreases lumbar lordosis. Gait and Posture, doi:10.1016/ jgaitpost. 2017.03.035

2. Schellenberg, F., Jonkers, I, Taylor, W. R. and Lorenzetti, S. 2017. Robustness of kinematic weighting and scaling concepts for musculoskeletal simulation. Computer Methods in Biomechanics and Biomechanical Engineering, doi:10.1080/10255842.2017.1295305

3. Schellenberg, F., Schmid, N., Häberle, R., Hörterer, N., Taylor, W. R. and Lorenzetti, S. 2017. Loading conditions in the spine, hip and knee during different executions of back extension exercises. BMC Sports Science, Medicine and Rehabilitation, accepted.

4. Schmid, S., Bruhin, B., Ignasiak, D., Romkes, J., Taylor, W. R., Ferguson, S., Brunner, R., Lorenzetti, S. 2017. Spinal Kinematics during Gait in Healthy Individuals across Different Age Groups. Human Movement Science, doi: 10.1016/j.humov.2017.04.001.

5. Volery, S., Singh, N., de Bruin, E., List, R., Jaeggi, M. M., Mattli Bauer, B., Lorenzetti, S. 2017. Traditional balance and slackline training are associated with task-specific adaptations as assessed with sensorimotor tests. European Journal of Sport Science, accepted.

6. Castrogiovanni, P., Szychlinska, M. A., Lorenzetti, S., and Ljubisavljevic, M. 2016. The "Journal of Functional Morphology and Kinesiology" Journal Club Series: Highlights on Recent Papers in Gait and Posture. Journal of Functional Morphology and Kinesiology, 1, 369-372, doi: 10.3390/ jfmk1040369

7. Pauli, C., Keller, M., Ammann, F., Hübner, K., Lindorfer, J., Taylor, W.R. and Lorenzetti, S. 2016. Kinematics and kinetics of squats, drop jumps and imitation jumps of ski jumpers. Journal of Strength and Conditioning Research, 30(3), 643-652, doi: 10.1519/ JSC. 0000000000001166

8. Schmid, S., Romkes, J., Taylor, W.R., Lorenzetti, S. and Brunner, R. 2016. Orthotic Correction of Lower Limb Function during Gait does not immediately influence Spinal Kinematics in Spastic Hemiplegic Cerebral Palsy. Gait and Posture, 49, 457-461, doi: 10.1016/j.gaitpost.2016.08.013

9. Schmitt, K.-U., Hörter, N., Vogt, M.†, Frey, W. O. and Lorenzetti, S. 2016. Investigating physical fitness and race performance as determinants for the ACL injury risk in Alpine ski racing. BMC Sport Science, Medicine & Rehabilitation, 8, 23, doi: 10.1186/s13102-016-0049-6

10. Szychlinska, M. A., Castorina, S., Lorenzetti, S., Di Giunta, A. Vaz, J. R. and Dickin C. 2016. The "Journal of Functional Morphology and Kinesiology" Journal Club Series: Highlights on Recent Papers in Joint Biomechanics of Running. Journal of Functional Morphology and Kinesiology, 1, 276-281, doi: 10.3390/ jfmk1030276

11. Wettenschwiler, P. D., Lorenzetti, S., Ferguson, S. J., Stämpfli, R., Aiyangar, A. K., Rossi, R. and Annaheim, S. 2016. Loading of the lumbar spine during backpack carriage. Computer Methods in Biomechanics and Biomechanical Engineering, doi:10.1080/ 10255842.2016.1261849

12. Zemp, R., Fliesser, M., Wippert, P.-M-, Taylor, W.R. and Lorenzetti, S. 2016. Occupational Sitting Behavior and its Relationship with Back Pain - A Pilot Study. Applied Ergonomics, 56, 84-91, doi: 10.10.16/j.apergo.2016.03.007

13. Zemp, R., Tanadini, M., Plüss, S., Schnüriger, K., Singh, N., Taylor, W.R. and Lorenzetti, S. 2016. Application of Machine Learning Approaches for Classifying Sitting Posture based on Force and Acceleration Sensors. BioMed Research International, ID5978489. doi:10.1155/2016/5978489

14. Zemp, R., Taylor, W.R. and Lorenzetti, S. 2016. Seat pan and backrest pressure distribution while sitting in office chairs. Applied Ergonomics, 53, 1-9, doi: 10.1016/j.apergo.2015.08.004

15. Bürgi, S., Roost, J., Hitz, M., Schwilch, P., Taylor, W.R. and Lorenzetti, S. 2015. A fast testing method to objectively quantify the stiffness of stability boots. Applied Bionics and Biomechanics, doi: 10.1155/2015/595708

16. Carretta, R., Stüssi, E., Müller, R. & Lorenzetti, S. 2015. Prediction of local ultimate strain and toughness of trabecular bone tissue by Raman material composition analysis. BioMed Research International, doi:10.1155/2015/457371

17. Schellenberg, F., Oberhofer, K., Taylor, W.R. and Lorenzetti, S. 2015. Review of modelling techniques for in vivo muscle force estimation in the lower extremities during strength training. Computational and Mathematical Methods in Medicine, Article ID 483921, doi:0.1155/2015/483921

18. Schmid, S., Studer, D., Hasler, C.-C., Romkes, J., Taylor, W.R., Brunner, R. and Lorenzetti, S. 2015. Using skin markers for spinal curvature quantification in main thoracic adolescent idiopatic scoliosis: An explorative radiographic study. PLOS ONE, doi:10.1371/journal.pone.0135689

19. Schmid, S. Studer, D., Hasler, C.-C., Romkes, J., Taylor, W.R., Lorenzetti, S. and Brunner, R. 2015. Quantifying Spinal Gait Kinematics using an Enhanced Optical Motion Capture Approach in Adolescent Idiopathic Scoliosis. Gait and Posture, 44, 231-237, doi: 10.1016/j.gaitpost.2015.12.036

20. Wettenschwiler, P. D., Lorenzetti, S., Stämpfli R., Rossi, R.M., Ferguson, S. J. and Annaheim, S. 2015. Mechanical Predictors of Discomfort during load carriage. Plos One, doi:10.1371/journal.pone.0142004

21. Wettenschwiler, P. D., Stämpfli, R., Lorenzetti, S., Ferguson S. J., Rossi, R. M. and Annaheim S. 2015. How reliable are pressure measurements with Tekscan sensors on the body surface of human subjects wearing load carriage system? International Journal of Industrial Ergonomics, 49, 60-67.
doi: 10.1016j.ergon.2015.06.003

22. Zemp, R., Taylor W.R., & Lorenzetti S. 2015. Are pressure measurements effective in the assessment of office chair comfort/discomfort? A review. Applied Ergonomics, 48, 273-282

23. Knöpfli-Lenzin, C., Waech, J., Gülay T., Schellenberg, F. & Lorenzetti S. 2014. The influence of a new sole geometry while running. Journal of Sports Sciences. doi:10.1080/02640414.2014.915421

24. Schütz, P., List, R., Zemp, R., Schellenberg, Taylor, W.R. & Lorenzetti, S. 2014. Joint angles of ankle, knee and hip and loading conditions during split squat. Journal for applied Biomechanics, 30, 373-380

25. Zemp, R., List, R., Gülay, T., Elsig, J.P., Naxera, J., Taylor W.R., & Lorenzetti S. 2014. Soft tissue artefacts of the human back: Comparison of the sagittal curvature of the spine measured using skin markers and an open upright MRI. PLoS ONE 9(4): e95426. doi:10.1371/journal.pone.0095426

26. Carretta, R., Lorenzetti, S. & Müller, R. 2013. Towards patient-specific material modeling of trabecular bone post-yield behavior. International Journal for Numerical Methods in Biomedical Engineering, 29, 250-272

27. Carretta, R., Luisier, B., Bernoulli, D., Stüssi, E., Müller, R. & Lorenzetti, S. 2013. Novel method to analyze post-yield mechanical properties at trabecular bone tissue level. Journal of the Mechanical Behavior of Biomedical Materials, 20, 6-18

28. Carretta, R., Stüssi, E., Müller, R. & Lorenzetti, S. 2013. Within subject heterogeneity in tissue-level post-yield mechanical and material properties in human trabecular bone. Journal of the Mechanical Behavior of Biomedical Materials, 24, 64-73

29. List, R., Gülay, T., Stoop, M. & Lorenzetti, S. 2013. Kinematics of the trunk and the lower extremities during restricted and unrestricted squats. The Journal of Strength & Conditioning Research, 27, 1529-1538

30. Schärli, A.M., Keller, M., Lorenzetti, S., Murer, K. & van de Langenberg R. 2013. Balancing on a slackline: 8-year-olds vs. adults. Frontiers in Movement Science and Sport Psychology, 4, 208, 1-11

31. Schellenberg, F., Lindorfer, J., List, R., Taylor, W.R. & Lorenzetti, S. 2013. Kinetic and kinematic differences between Dead-

lifts and Goodmornings. BMC Sport Science, Medicine and Rehabilitation, 5, 27.
doi: 10.1186/2052-1847-5-27

32. Schmid, S., Schweizer, K., Romkes, J., Lorenzetti, S. & Brunner, R. 2013. Secondary gait deviations in patients with and without neurological involvement: A systematic review. Gait & Posture, 37(4), 480-493

33. Zemp, R., Taylor, W.R. & Lorenzetti, S. 2013. In vivo spinal posture during upright and reclined sitting in an office chair. BioMed Research International, doi: 10.1155/ 2013/ 916045

34. Baumgartner, D., Zemp, R., List, R., Stoop, M., Naxera, J., Elsig, J. & Lorenzetti, S. 2012. The spinal curvature of three different sitting positions analysed in an open mri scanner. Scientific World Journal, doi: 10.1100/2012/184016

35. Lorenzetti, S., Gülay, T., Stoop, M., List, R., Gerber, H., Schellenberg, F. & Stüssi, E. 2012. Comparison of the angles and corresponding moments in the knee and hip during restricted and unrestricted squats. Journal of Strength and Conditioning Research, 26, 2829-2836

36. Pichierri, G., Coppe, A., Lorenzetti, S., Murer, K. & De Bruin, E. 2012. The effect of a cognitive- motor intervention on voluntary step execution under single and dual task conditions in older adults: A randomized controlled pilot study. Clinical Interventions in Aging, 7, 175-184

37. Baumgartner, D., Nolan, B., Mathys, R., Lorenzetti, S. & Stüssi, E. 2011. Review of fixation techniques for the four-part fractured proximal humerus in hemiarthroplasty. Journal of Orthopaedic Surgery and Research, 6, 36

38. Husa-Russell, J., Ukelo, T., List, R., Lorenzetti, S. & Wolf, P. 2011. Day-to-day consistency of lower extremity kinematics during stair ambulation in 24-45 years old athletes. Gait & Posture, 33, 635-639

39. Lorenzetti, S., Carretta, R., Müller, R. & Stüssi, E. 2011. A new device and method for measuring the elastic modulus of single trabeculae. Medical Engineering & Physics, 33, 993-1000

40. Baumgartner, D., Lorenzetti, S., Mathys, R., Gasser, B. & Stüssi, E. 2009. Refixation stability in shoulder hemiarthroplasty in case of four-part proximal humeral fracture. Medical and Biological Engineering and Computing, 47, 515-522

41. Gnos, E., Lorenzetti, S., Eugster, O., Jull, A., Hofmann, B. A., Al'Kathiri, A. & Eggimann, M. 2009. The jiddat al harasis 073 strewn field, sultanate of oman. Meteoritics & Planetary Science, 44, 375-387

42. Hofmann, B. A., Lorenzetti, S., Eugster, O., Krähenbühl, U., Herzog, G. F., Gnos, E., Eggimann, M. & Wasson, J. T. 2009. The twannberg (Switzerland) IIg iron meteorites: Mineralogy, chemistry and CRE ages. Meteoritics & Planetary Science, 44, 187-199

43. Eugster, O., Lorenzetti, S., Krahenbuhl, U. & Marti, K. 2007. Comparison of cosmic-ray exposure ages and trapped noble gases in chondrule and matrix samples of ordinary, enstatite, and carbonaceous chondrites. Meteoritics & Planetary Science, 42, 1351-1371

44. Busemann, H., Lorenzetti, S. & Eugster, O. 2006. Noble gases in d'Orbigny, sahara 99555 and d'Orbigny glass–evidence for early planetary processing on the Angrite parent body. Geochimica et Cosmochimica Acta, 70, 5403-5425

45. Eugster, O. & Lorenzetti, S. 2005. Cosmic-ray exposure ages of four acapulcoites and two differentiated achondrites and evidence for a two-layer structure of the acapulcoite/lodranite parent asteroid. Geochimica et Cosmochimica Acta, 69, 2675-2685

46. Lorenzetti, S., Busemann, H. & Eugster, O. 2005. Regolith history of lunar meteorites. Meteoritics & Planetary Science, 40, 315-327

47. Gnos, E., Hofmann, B. A., Al-Kathiri, A., Lorenzetti, S., Eugster, O., Whitehouse, M. J., Villa, I. M., Jull, A. J. T., Eikenberg, J. & Spettel, B. 2004. Pinpointing the source of a lunar meteorite: Implications for the evolution of the moon. Science, 305, 657-659

48. Fagan, T., Taylor, G., Keil, K., Hicks, T., Killgore, M., Bunch, T., Wittke, J., Mittlefehldt, D., Clayton, R., Mayeda, T., Eugster, O., Lorenzetti, S. & Norman, M. 2003. Nor-

thwest africa 773: Lunar origin and iron-enrichment trend. Meteoritics & Planetary Science, 38, 529-554

49. Lorenzetti, S., Eugster, O., Busemann, H., Marti, K., Burbine, T. H. & Mccoy, T. 2003a. History and origin of aubrites. Geochimica et Cosmochimica Acta, 67, 557-571

50. Lorenzetti, S., Lin, Y., Wang, D. & Eugster, O. 2003b. Noble gases and mineralogy of meteorites from China and the Grove Mountains, Antarctica: A 0.05 ma cosmic ray exposure age of GRV98004. Meteoritics & Planetary Science, 38, 1243-1253

51. Rubin, A., Kallemeyn, G., Wasson, J., Clayton, R., Mayeda, T., Grady, M., Verchovsky, A., Eugster, O. & Lorenzetti, S. 2003. Formation of metal and silicate globules in gujba: A new Bencubbin- like meteorite fall. Geochimica Et Cosmochimica Acta, 67, 3283-3298

52. Eugster, O., Busemann, H., Lorenzetti, S. & Terrebilini, D. 2002. Ejection ages from krypton-81- krypton-83 dating and preatmospheric sizes of martian meteorites. Meteoritics & Planetary Science, 37, 1345-1360

53. Fagan, T. J., Taylor, G. J., Keil, K., Bunch, T. E., Wittke, J. H., Korotev, R. L., Jolliff, B. L., Gillis, J. J., Haskin, L. A., Jarosewich, E., Clayton, R. N., Mayeda, T. K., Fernandes, V. A., Burgess, R., Turner, G., Eugster, O. & Lorenzetti, S. 2002. Northwest africa 032: Product of lunar volcanism. Meteoritics & Planetary Science, 37, 371-394

Conference Papers / Proceedings

1. Lorenzetti, S., Schellenberg, F. and Taylor, W. R. 2017. Muscle forces based on experimental kinetic and kinematic data: towards evidence based strength training. ISB 2017, Brisbane, Australia.

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