

Curriculum vitae

Matthias Gilgien, PhD, Assoc. Prof.



*Date of birth:	16.09.1975	*Sex:	Male
*Nationality:	Switzerland		
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Education

2014	Ph.D. Sport Biomechanics and Technology
2008	Master Sport Science, University studies in physics and navigation as minor
1996	Certified land surveyor

Current Positions

2014-	Head, Center of Alpine Sports Biomechanics, Engadin Health and Innovation Foundation, Switzerland
2014-	Associate Professor, Norwegian School of Sport Sciences, Norway

Previous positions held (list)

2010-2014	PhD student / Norwegian School of Sport Sciences / Norway
2011-2013	National Team Coach / Norwegian Orienteering Federation / Norway
2008-2010	Researcher / WSL – Institute for Snow and Avalanche Research SLF / Switzerland
1996 -2008	Land surveyor / Engineering Office Häberli und Toneatti, Spiez / Switzerland

Supervision

	No. of	Master's students/ Ph.D./Postdocs	Name of faculty/department/centre, name of university/institution/country
2012 - 2023	31	Masters completed	Movement Science and Mechanical Engineering/ETH Zurich /CH, EHSM/Federal Institute for Sport/CH, Fakultet for Realfag /NMBU/N, Institute for Physical Performance/ Norwegian School of Sport Sciences/N, Biomechanik /Fachhochschule Aachen/GER, Sport Science/VU Amsterdam/NED
2016 -	4 3	PhD completed PhD current	Inst. for Physical Performance /Norwegian School of Sport Sciences, N, EHSM /Federal Institute for Sport/CH, WSL Inst. for Snow and Avalanche Research SLF /CH, SIAT / NTNU / N, Dep.of Physics / University of Oslo / N, Dep.of Computer Engineering / Hacettepe University / Turkey

Scientific track record

Publications, technical reports, peer-review assignments

Total Number of Peer – reviewed journal publications: 46

h – index: 22 / i10 index: 32

Total Number of Peer – reviewed conference proceedings: 52

Total Number of invited speeches in international conferences: 13

Total Number of invited speeches in national conferences / seminars: 24

[Researchgate Profile](#)

[Google Scholar Profile](#)

Positions in professional associations / networks

Member of the board, International Society for Skiing Safety, ISSS

Associated member of the board, International Conference of Science and Skiing, ICSS

Member of the SportTech Research Network, STRN

Member of the European Congress of Sport Science, ECSS

Peer reviewed scientific journal publications 2018 - 2023

1. Reinforcement and supervised learning in alpine ski racing, C Magelssen, R Frömer, SL Tajet, P Haugen, R Reid, M Gilgien, OSF 2023
2. Methods to assess validity of positioning systems in team sports: can we do better? LS Luteberget, PAH Jølstad, M Gilgien. BMJ Open Sport & Exercise Medicine 9 (1), e001496, 2023
3. Is there a contextual interference effect for sub-elite alpine ski racers learning complex skills? C Magelssen, P Haugen, R Reid, M Gilgien, Frontiers in Bioengineering and Biotechnology 10, 966041, 2022
4. Assessment of the steady glide phase in ski jumping, O Elfmark, G Ettema, M Gilgien, Journal of Biomechanics, 111139 2022
5. Ranking surgical skills using an attention-enhanced Siamese network with piecewise aggregated kinematic data, BB Oğul, M Gilgien, S Özdemir, International Journal of Computer Assisted Radiology and Surgery, 2022
6. Kinematic determination of the aerial phase in ski jumping, O Elfmark, G Ettema, P Jølstad, M Gilgien, Sensors 22 (2), 540 2022
7. Is there a contextual interference effect for sub-elite alpine ski racers learning complex skills?, C Magelssen, P Haugen, R Reid, M Gilgien, Frontiers in bioengineering and biotechnology 10 2022
8. Validity of the AdMos, Advanced Sport Instruments, GNSS Sensor for Use in Alpine Skiing, PAH Jølstad, RC Reid, JGO Gjevestad, M Gilgien, Remote Sensing 14 (1), 22 2021
9. Towards more valid simulations of slopestyle and big air jumps: Aerodynamics during in-run and flight phase, F Wolfspurger, F Meyer, M Gilgien, Journal of Science and Medicine in Sport 24 (10), 3 2021
10. The effect of foot setting on kinematic and kinetic skiing parameters during giant slalom: A single subject study on a Paralympic gold medalist sit skier, N Petrone, D Vanzetto, G Marcolin, B Bruhin, M Gilgien, Journal of Science and Medicine in Sport 24 (10), 1049-1054 3 2021
11. Performance analysis in ski jumping with a differential global navigation satellite system and video-based pose estimation, O Elfmark, G Ettema, D Groos, EAF Ihlen, R Velta, P Haugen, S Braaten, M Gilgien, Sensors 2021
12. Classification of Cross-Country Ski Skating Sub-Technique Can Be Automated Using Carrier-Phase Differential GNSS Measurements of the Head's Position, Ø Gløersen, M Gilgien, Sensors 21 (8), 5 2021
13. Differences in pacing pattern and sub-technique selection between young and adult competitive cross-country skiers, O Sollie, Ø Gløersen, M Gilgien, T Losnegard, Scandinavian Journal of Medicine & Science in Sports 2021
14. Injury prevention in Super-G alpine ski racing through course design, M Gilgien, P Crivelli, J Kröll, LS Luteberget, E Müller, J Spörri, Scientific reports 11 (1), 1-7 5 2021