List of publications

Prof. Dr. Philipp Fürnstahl, updated in March, 2022

H-Index: 24 (Google scholar) / 20 (Scopus) / 18 (Web of Science)

Number of original publications as first author: 9

Number of original publications as co-author: 81

Number of original publications as last author: 48

Sum of the Times Cited: 1908

ORIGINAL PAPERS

1. Hodel S, Flury A, Hoch A, Fürnstahl P, Zingg P, Vlachopoulos L, Fucentese S. Three-dimensional analysis of functional femoral antetorsion and the position of the greater trochanter in high-grade patellofemoral dysplastic knees. *The Knee,* 2023.
2. Wolf J, Luchmann D, Lohmeyer Q, Farshad M, Fürnstahl P, Meboldt M. How different augmented reality visualizations for drilling affect trajectory deviation, visual attention, and user experience. *International Journal of Computer Assisted Radiology and Surgery,* 2023.
3. Seibold M, Spirig JM, Esfandiari H, Farshad M, Fürnstahl P. Translation of Medical AR Research into Clinical Practice. *Journal of Imaging*, 2023.
4. Margaryan M, Seibold M, Joshi I, Farshad M, Fürnstahl P, Navab N. Improved Techniques for the Conditional Generative Augmentation of Clinical Audio Data. *International Conference on Medical Imaging and Computer-Aided Diagnosis (MICAD), 2022.*
5. Jecklin S, Jancik C, Farshad M, Fürnstahl P, Esfandiari H. X23D – Intraoperative 3D Lumbar Spine Shape Reconstruction Based on Sparse Multi-View X-ray Data. *Multidisciplinary Digital Publishing Institute, 2022.*
6. Seibold M, Hoch A, Farshad M, Navab N, Fürnstahl P. Conditional Generative Data Augmentation for Clinical Audio Datasets. *Proceedings of the International Conference on Medical Image Computing and Computer-Assisted Interventions (MICCAI), 2022.*
7. Mania S, Zindel C, Götschi T, Carrillo, Fürnstahl P, Schweizer A. Malunion deformity of the forearm: Three-dimensional length variation of interosseous membrane and bone collision. *Journal of Orthopaedic Research, 2022.*

8. Hoch A, Hasler J, Schenk P, Ackermann J, Ebert L, Fürnstahl P, Zingg P, Vlachopoulos L. Registration Based Assessment of Femoral Torsion for Rotational Osteotomies based on the Contralateral Anatomy. *BMC Musculoskeletal Disorders, 2022.*
9. Hodel S, Torrez C, Hoch A, Fürnstahl P, Vlachopoulos L, Fucentese S. Increased femoral curvature and trochlea flexion in high-grade patellofemoral dysplastic knees. *Knee Surgery, Sports Traumatology, Arthroscopy, 2022.*
10. Massalimova A, Timmermans M, Esfandiari H, Carrillo F, Laux C, Farshad M, Denis K, Fürnstahl P. Intraoperative tissue classification methods in orthopedic and neurological surgeries: a systematic review. *Frontiers in Surgery, 2022.*
11. Matinfar S, Salehi M, Suter D, Seibold M, Navab N, Dehghani S, Wanivenhaus F, Fürnstahl P, Farshad M. Sonification as a Reliable Alternative to Conventional Visual Surgical Navigation. *Electrical Engineering and Systems Science, 2022.*
12. Hodel S, Hasler J, Fürnstahl P, Fucentese SF, Vlachopoulos L. Elongation Patterns of the Superficial Medial Collateral Ligament and the Posterior Oblique Ligament. *The Orthopaedic Journal of Sports Medicine, 2022.*
13. Hoch A, Grossenbacher G, Jungwirth-Weinberger A, Götschi T, Fürnstahl P, Zingg P. The periacetabular osteotomy: angulation of the supraacetabular osteotomy for quantification of correction. HIP International, 2022.
14. Pastor T, Nagy L, Fürnstahl P, Roner S, Pastor T, Schweizer A. Three-Dimensional Planning and Patient-Specific Instrumentation for the Fixation of Distal Radius Fractures. *Medicina*, 2022.
15. Hodel S, Hasler J, Fürnstahl P, Fucentese SF, Vlachopoulos L. Elongation Patterns of Posterolateral Corner Reconstruction Techniques: Results Using 3-Dimensional Weightbearing Computed Tomography Simulation. *The Orthopaedic Journal of Sports Medicine*, 2022.
16. Esfandiari H, Troxler P, Hodel S, Suter D, Farshad M, Fürnstahl P. Introducing a brain-computer interface to facilitate intraoperative medical imaging control – a feasibility study. *BMC Musculoskeletal Disorders*, 2022.
17. Von Atzingen M, Liebmann F, Hoch A, Spirig J, Farshad M, Snedeker J, Fürnstahl P. Marker-free Surgical Navigation of Rod Bending using a Stereo Neural Network and Augmented Reality in Spinal Fusion. *Medical Image Analsys*, 2022.
18. Buis N, Esfandiari H, Hoch A, Fürnstahl P. Overview of Methods to Quantify Invasiveness of Surgical Approaches in Orthopedic Surgery — A Scoping Review. *Froniers in Surgery*, 2022.
19. Kriechling P, Leoty L, Fürnstahl P, Rahbani D, Zingg P, Vlacholpoulos L. A Statistical Shape Model Based Analysis of (Reverse) Periacetabular Osteotomies –

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20. Burkhard MD, Farshad M, Suter D, Cornaz F, Leoty L, Fuernstahl P, Spirig JM. Spinal decompression with patient-specific guides. *The Spine Journal*, 2022.
21. Carrillo F, Esfandiari H, Müller S, von Atzigen M, Massalimova A, Suter D, Laux C, Spirig J, Farshad M, Fürnstahl P. Surgical Process Modeling for Open Spinal Surgeries. *Frontiers in Surgery*, 2022.
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23. Singh S, Jud L, Fürnstahl P, Nagy L, Schweizer A, Roner S. Intermediate term outcome of three-dimensional corrective osteotomy for malunited distal radius fractures with a mean follow up of 6 years. *Journal of Hand Surgery*, 2022.
24. Ackermann J, Wieland M, Hoch A, Ganz R, Snedeker JG, Oswald MR, Pollefeys M, Zingg PO, Esfandiari H, Fürnstahl P. A New Approach to Orthopedic Surgery Planning Using Deep Reinforcement Learning and Simulation. *International Conference on Medical Image Computing and Computer-Assisted Intervention* (MICCAI), 2021.
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26. Liebmann F, Stütz D, Suter D, Jecklin S, Snedeker JG, Farshad M, Fürnstahl P, Esfandiari H. SpineDepth: A Multi-Modal Data Collection Approach for Automatic Labelling and Intraoperative Spinal Shape Reconstruction Based on RGB-D Data. *Journal of Imaging*, 2021.
27. Zaleski M, Hodel S, Fürnstahl P, Vlachopoulos L, Fucentese S. Osteochondral Allograft Reconstruction of the Tibia Plateau for Posttraumatic Defects – A Novel Computer-Assisted Method Using 3D Preoperative Planning and Patient-Specific Instrumentation. *The surgery Journal*, 2021. (7)4.
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29. Farshad M, Miguel Spirig J, Suter D, Hoch A, Burkhard M, Liebmann F, Nadja Farshad N, Fürnstahl P. Operator independent reliability of direct augmented

reality navigated pedicle screw placement and rod bending. *North American Spine Society Journal*, 2021.

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33. Hodel S, Mania S, Vlachopoulos L, Fürnstahl P, Fucentese S. Influence of femoral tunnel exit on the 3D graft bending angle in anterior cruciate ligament reconstruction. *Journal of Experimental Orthopaedics*, 2021. 8(44).
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36. Hodel S, Zindel C, Jud L, Vlachopoulos L, Fürnstahl P, Fucentese S. Influence of medial open wedge high tibial osteotomy on tibial tuberosity–trochlear groove distance. *Knee Surgery, Sports Traumatology, Arthroscopy*, 2021.
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43. Casari F. A, Roner S, Fürnstahl P, Nagy L, Schweizer A. Computer-assisted open reduction internal fixation of intraarticular radius fractures navigated with patient-specific instrumentation, a prospective case series. *Archives of Orthopaedic and Trauma Surgery*, 2021.
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function. *Computer Methods in Biomechanics and Biomedical Engineering*, 2019. 22(7): 740-751.

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OTHER PUBLICATIONS

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2. Kiarostami P, Dennler C, Roner S, Sutter R, Fürnstahl P, Farshad M, Rahm S, Zingg P. Augmented reality-guided periacetabular osteotomy – proof of concept. Virtual EFFORT Congress 2020, Switzerland.
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Patents

1. 2021: Method for determining a surgery plan by means of a reinforcement learning method. EP21197827.5, pending.
2. EP21157603.8: Implant Customization Tool System, submitted in February 2021, pending.
3. EP18158106.7: Method for designing a registration instrument for osteosynthesis and a system comprising the registration instrument, submitted February 2018, pending.

Lay press

1. Der Bund *Wissen* über "Premiere mit holografischer Brille", 11. Dezember 2020.
2. The North American Spine Society featured the article of Müller F, Roner S, Liebmann F, Spirig J.M, Farshad M. "Augmented reality navigation for spinal pedicle screw instrumentation using intraoperative 3D imaging" in the form of an online report, 22.04.2020.
3. SRF gesundheitheute "Weichteiltumore sind wenig bekannt", 29.02.2020
4. SRF gesundheitheute "Akzent: Augmented Reality", 27.10.2020
5. Venturebeat.com über "Researchers say low-res 3D tracking limits AR glasses` use in surgery", 20.01.2020
6. Basler Zeitung über „Science Fiction im Operationssaal“, 16.05.2018
7. SRF gesundheitheute über „Probleme mit der Wirbelsäule“, 25.02.2017
8. Süddeutsche Zeitung über „Freinarbeit am Schirm – Informatiker Philipp Fürnstahl erleichtert Chirurgen die Arbeit“, 28.5.2016
9. SRF gesundheitheute über „High-Tech im Operationssaal“, 30.04.2016
10. Neue Zürcher Zeitung über "Mit ein paar Klicks zum geraden Knochen", 10.05.2015
11. Sonntagszeitung über "Filigrane Knochenarbeit - Mit der neuen 3-D-Technik können nach einem Bruch komplizierte Fehlstellungen korrigiert werden", 12.10.2014
12. Top Talk über "Megatrend 3D Drucker", Tele Top, 28.04.2014