



Personal Details

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Position	PhD student
Academic Position	MSc ETH, Human Movement Sciences
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Graduate

- 2009-11 MSc Human Movement Sciences, Major in Biomechanics, ETH Zurich, Switzerland
- 2006-09 BSc Human Movement Sciences, ETH Zurich, Switzerland

Scientific Interests

- Physical activity in children with neurological disorders
- Movement analysis of the spine
- Evaluation of outcome assessments and therapeutic interventions

Memberships

- ESMAC – European Society for Movement Analysis for Adults and Children

Scientific Reviewer for

- Journal of NeuroEngineering and Rehabilitation
- Journal of Applied Biomechanics
- Journal of Electromyography and Kinesiology

Awards

- Research Award of Reha Rheinfelden 2016: "Measuring lumbar reposition accuracy in patients with unspecific low back pain – a systematic review and meta-analysis"



Publications

- **Rast, F. M.**, & Labruyère, R. (2018). Protocol of a systematic review on the application of wearable inertial sensors to quantify everyday life motor activity in people with mobility impairments. *Systematic Reviews*, 7(1), 174.
- Matheve, T., De Baets, L., **Rast, F.**, Bauer, C., Timmermans, A. (2018). Within/between-session reliability and agreement of lumbopelvic kinematics in the sagittal plane during functional movement control tasks in healthy persons. *Musculoskelet Sci Pract*, 33, 90–8.
- **Rast, F. M.**, Graser, J. V., Meichtry, A., Ernst, M. J., & Bauer, C. M. (2017). Reproducibility of a new signal processing technique to assess joint sway during standing. *Journal of Biomechanics*, 51, 133–136.
- Bauer, C. M., Heimgartner, M., **Rast, F. M.**, Ernst, M. J., Oetiker, S., & Kool, J. (2016). Reliability of lumbar movement dysfunction tests for chronic low back pain patients. *Manual Therapy*, 24, 81–84.
- **Rast, F. M.**, Graf, E. S., Meichtry, A., Kool, J., & Bauer, C. M. (2016). Between-day reliability of three-dimensional motion analysis of the trunk: A comparison of marker based protocols. *Journal of Biomechanics*, 49(5), 807–811.
- Bauer, C. M., **Rast, F. M.**, Ernst, M. J., Oetiker, S., Meichtry, A., Kool, J., ... Kankaanpää, M. (2015). Pain intensity attenuates movement control of the lumbar spine in low back pain. *Journal of Electromyography and Kinesiology: Official Journal of the International Society of Electrophysiological Kinesiology*, 25(6), 919–927.
- Bauer, C. M., **Rast, F. M.**, Ernst, M. J., Kool, J., Oetiker, S., Rissanen, S. M., ... Kankaanpää, M. (2015). Concurrent validity and reliability of a novel wireless inertial measurement system to assess trunk movement. *Journal of Electromyography and Kinesiology*, 25(5), 782–790.
- Hügli, A. S., Ernst, M. J., Kool, J., **Rast, F. M.**, Rausch-Osthoff, A.-K., Mannig, A., ... Bauer, C. M. (2015). Adherence to home exercises in non-specific low back pain. A randomised controlled pilot trial. *Journal of Bodywork and Movement Therapies*, 19(1), 177–185.
- Rausch Osthoff, A.-K., Ernst, M. J., **Rast, F. M.**, Mauz, D., Graf, E. S., Kool, J., & Bauer, C. M. (2015). Measuring lumbar reposition accuracy in patients with unspecific low back pain: systematic review and meta-analysis. *Spine*, 40(2), E97–E111.
- Schelldorfer, S., Ernst, M. J., **Rast, F. M.**, Bauer, C. M., Meichtry, A., & Kool, J. (2015). Low back pain and postural control, effects of task difficulty on centre of pressure and spinal kinematics. *Gait & Posture*, 41(1), 112–118.
- Ernst, M. J., **Rast, F. M.**, Bauer, C. M., Marcar, V. L., & Kool, J. (2013). Determination of thoracic and lumbar spinal processes by their percentage position between C7 and the PSIS level. *BMC Research Notes*, 6, 58.