

Juha Heikki Koivisto

10 most relevant publications are indicated by an asterisk (\*).

#### **A Peer-reviewed scientific articles**

1. \* J. Koivisto and D.J. Durian, *The sands of time flow faster near the end*, **under review in Nature Communications (minor revisions)**.
2. \* J. Koivisto and D.J. Durian, *Effect of interstitial fluid on the fraction of flow microstates that precede clogging in granular hoppers*, **in preparation**.
3. \* J. Koivisto, M. Korhonen, C. Ortiz, M. Alava, D.J. Durian and A. Puisto, *Forced flow makes submerged hopper an hourglass*, **in preparation**.
4. \* J. Koivisto, M.-J. Dalbe, M.J. Alava, and S. Santucci, *Path (un)predictability of two interacting cracks in polycarbonate sheets using Digital Image Correlation*, Scientific Reports **6**, 32278 (2016).
5. \* J. Koivisto, M. Ovaska, A. Miksic, L. Laurson, and M.J. Alava, *Predicting sample lifetimes in creep fracture of heterogeneous materials*, Physical Review E **94**, 023002 (2016).
6. \* M.-J. Dalbe, J. Koivisto, L. Vanel, A. Miksic, O. Ramos, M. Alava, and S. Santucci, *Repulsion and Attraction between a Pair of Cracks in a Plastic Sheet*, Physical Review Letters **114**, 205501 (2015).
7. \* A. Mauranen, M. Ovaska, J. Koivisto, L. I. Salminen, and M. Alava, *Thermal conductivity of wood: effect of fatigue treatment*, Wood Science and Technology **49**, 359 (2015).
8. A. Vaikkinen, B. Shrestha, J. Koivisto, R. Kostianen, A. Vertes, and T. J. Kauppila, *Laser ablation atmospheric pressure photoionization mass spectrometry imaging of phytochemicals from sage leaves*, Rapid Communications in Mass Spectrometry **28**, 2490 (2014).
9. J. Koivisto, *Fracture propagation and prediction in heterogeneous materials*, PhD Thesis, Aalto University (2013).

10. A. Miksic, M. Myntti, J. Koivisto, L. Salminen, and M. Alava, *Effect of fatigue and annual rings' orientation on mechanical properties of wood under cross-grain uniaxial compression*, *Wood Science and Technology* **47**, 1117 (2013).
11. A. Miksic, J. Koivisto, and M. Alava, *Statistical properties of low cycle fatigue in paper*, *Journal of Statistical Mechanics: Theory and Experiment* **P05002** (2011).
12. L. Laurson, J. Rosti, J. Koivisto, A. Miksic, and M. Alava, *Spatial fluctuations in transient creep deformation*, *Journal of Statistical Mechanics: Theory and Experiment* **P07002** (2011).
13. \* J. Rosti, J. Koivisto, and M. Alava, *Statistics of acoustic emission in paper fracture: precursors and criticality*, *Journal of Statistical Mechanics: Theory and Experiment* **P02016** (2010).
14. M. Mustalahti, J. Rosti, J. Koivisto, and M. Alava, *Relaxation of creep strain in paper*, *Journal of Statistical Mechanics: Theory and Experiment* **P07019** (2010).
15. J. Rosti, J. Koivisto, L. Laurson, and M. Alava, *Fluctuations and scaling in creep deformation*, *Physical Review Letters* **105**, 100601 (2010).
16. J. Rosti, X. Illa, J. Koivisto, and M. Alava, *Crackling noise and its dynamics in fracture of disordered media*, *Journal of Physics D: Applied Physics* **42**, 214103 (2009).
17. \* J. Rosti, J. Koivisto, P. Traversa, X. Illa, J.-R. Grasso, and M. Alava, *Line creep in paper peeling*, *International Journal of Fracture* **151**, 281 (2008).
18. \* J. Koivisto, J. Rosti, and M. Alava, *Creep of a fracture line in paper peeling*, *Physical Review Letters* **99**, 145504 (2007).

## **B Non-refereed scientific articles**

19. A. Miksic, J. Koivisto, J. Rosti, and M. Alava, *Strain fluctuations from DIC technique applied on paper under fatigue or creep*, *Procedia Engineering* **10**, 2678 (2011).
20. A. Miksic, J. Koivisto, E. Mykkänen, J. Saarenpää, M. Alava, K. Mustonen, P. Karppinen, T. Karppinen, and E. Hægström, *Deformation, acoustic emission and*

*ultrasound velocity during fatigue tests on paper*, EPJ Web Conferences **6**, 42016 (2010).

21. J. Koivisto, J. Lehtinen, J. Rosti, and M. Alava, *Digital Image Correlation and Acoustic Emission Studies of Creep Fracture*, Proceedings of 12<sup>th</sup> International Conference on Fracture, Ottawa (2009).

#### **D Publications intended for professional communities**

22. J. Rosti, J. Koivisto, and M. J. Alava, *Paper Stretches Unevenly*, Physical Review Focus **26**, 9 (2010).

#### **G Theses**

23. J. Koivisto, *Fracture propagation and prediction in heterogeneous materials*, PhD Thesis, Aalto University (2013).

24. J. Koivisto, *Fracture of fibrous materials*, MSc Thesis, Helsinki University of Technology (2007).

#### **I Audiovisual material, ICT software**

25. J. Koivisto, *Industrial scale nanomaterials manufactured in seconds*, [youtu.be/FmDdgYg533c](https://youtu.be/FmDdgYg533c), popularizing science at Slush (2016).

26. A. Chieco, J. Koivisto, C. Thomas, and D. Durian, *Three phases of Granular Matter*, Stand at the Philadelphia Science Week, Philadelphia, USA (2014).

27. J. Aro, *Ylioppilaskoe hakkerotiin omaperäisillä keinoilla - koe sabotoitiin morsettamalla äänikortilta*, media coverage on my solution to Finnish matricular examination hacking constest, Yle uutiset 8.10. (2013).

28. J. Koivisto, J. Rosti, S. Tuomisto, S. Seppälä, A. Miksic, and M. Alava, *ST Digital Image Correlation software*, <https://github.com/jhkoivis/stdic> (2012).

29. J. Koivisto, J. Rosti, M. Myntti, S. Seppälä, and M. Alava, *Lumikki measurement environment*, <https://github.com/jhkoivis/lumikki> (2012).

30. *Paperi repeää tasaisessa vedossa epätasaisesti*, media coverage for Rosti et al. PRL **105**, 100601 (2010), Yle 15.09. (2010).