
WS2019/20: Proseminar on Theoretical Physics

Website: https://tu-dresden.de/mn/physik/itp/ket/studium/lehre/proseminar_ws19

Time and location: Wednesday 14:50 at BZW/A120

Lecturer: Hong-Hao Tu (hong-hao.tu@tu-dresden.de)

Office hours: Appointment via email.

Literature:

1. S. Hutzler, G. Delaney, D. Weaire, and F. MacLeod, *Rocking Newton's cradle*, *Am. J. Phys.* **72**, 1508 (2004).
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3. M. Z. Rafat, M. S. Wheatland, and T. R. Bedding, *Dynamics of a double pendulum with distributed mass*, *Am. J. Phys.* **77**, 216 (2009).
4. E. Bormashenko and A. Kazachkov, *Rotating and rolling rigid bodies and the "hairy ball" theorem*, *Am. J. Phys.* **85**, 447 (2017).
5. C. G. Gray and E. F. Taylor, *When action is not least*, *Am. J. Phys.* **75**, 434 (2007).
6. J. Hanc, E. F. Taylor, and S. Tuleja, *Deriving Lagrange's equations using elementary calculus*, *Am. J. Phys.* **72**, 510 (2004).
7. A. Marchewka, D. S. Abbott, and R. J. Beichner, *Oscillator damped by a constant-magnitude friction force*, *Am. J. Phys.* **72**, 477 (2004).
8. J. F. Hall, *Fun with stacking blocks*, *Am. J. Phys.* **73**, 1107 (2005).
9. M. G. Stewart, *Precession of the perihelion of Mercury's orbit*, *Am. J. Phys.* **73**, 730 (2005).
10. C. W. Wong and K. Yasui, *Falling chains*, *Am. J. Phys.* **74**, 490 (2006).
11. C. P. Poole, J. L. Safko, and H. A. Farach, *Orbits of central force law potentials*, *Am. J. Phys.* **73**, 40 (2005).
12. M. Nauenberg, *Curvature in orbital dynamics*, *Am. J. Phys.* **73**, 340 (2005).
13. J. M. J. van Leeuwen, *The domino effect*, *Am. J. Phys.* **78**, 721 (2010).
14. E. H. Yong and L. Mahadevan, *Probability, geometry, and dynamics in the toss of a thick coin*, *Am. J. Phys.* **79**, 1195 (2011).
15. J.-Y. Chastaing, E. Bertin, and J.-C. Géminard, *Dynamics of a bouncing ball*, *Am. J. Phys.* **83**, 518 (2015).
16. S. Flach, M. V. Ivanchenko, O. I. Kanakov, and K. G. Mishagin, *Periodic orbits, localization in normal mode space, and the Fermi-Pasta-Ulam problem*, *Am. J. Phys.* **76**, 453 (2008).
17. J. C. Sprott, *Anti-Newtonian dynamics*, *Am. J. Phys.* **77**, 783 (2009).
18. D. P. Jackson, D. Mertens, and B. J. Pearson, *Hurricane Balls: A rigid-body-motion project for undergraduates*, *Am. J. Phys.* **83**, 959 (2015).