Department of Physics
University of Paderborn

Paderborn, 3rd May 2016

Exercise

Computational Optoelectronics and Photonics

Dr. M. Reichelt SS 2016

PROBLEM SHEET IV
Please prepare by next exercise.

5. **Combining things**
   Let's first combine miscellaneous things before we move on to the core of the lecture - the calculation of absorption spectra.

   - How does damping enter Eqs. (3) SHEET III? Does it have to be added in the $\dot{\omega}$, $\dot{\phi}$, or both equations? Think of the damped harmonic oscillator.
   - Solve the equations of the coupled pendulums with damping. Do a "simple" Fourier-Transform and show that this yields the same eigenfrequencies as to compared to the last problem.