

# Many-Body Systems out of Equilibrium

Winter Term 2018/19

# Content

- ▶ Nonequilibrium Green's functions: need of a “Keldysh” contour

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- ▶ Correlated systems: electron-electron and electron-phonon interactions
- ▶ Time-dependent phenomena
- ▶ Connection with methods for Open Quantum Systems (Master equations)

# Literature

- ▶ Many-body and Green's functions in equilibrium:[Bruus and Flensberg(2004), Fetter and Walecka(1971)]

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- ▶ Many-body and Green's functions in equilibrium: [Bruus and Flensberg(2004), Fetter and Walecka(1971)]
- ▶ Lecture notes from M. Jarrell [Jarrell(????a)]

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- ▶ A DFT approach [van Leeuwen(????)]

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- ▶ More advanced on nonequilibrium mesoscopic systems [Brandes(2005), Schoeller(2009)]
- ▶ A collection of references [Many(????)]



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