Several open positions available in

Condensed Matter Theory

at the Institute for Theoretical Physics A of the RWTH Aachen
and the Institute for Solid-State Research at the Research Center Jülich.

2 postdoc positions
salary class TV-L E13
initially offered for one or two years with a possible extension
and

3 PhD student positions
salary class 3/4 TV-L E13
typically running for three years.

Various topics are proposed:

- Hybrid quantum dot systems with fermionic normal, ferromagnetic and superconducting
  electrodes and bosonic heat baths with thermal and electrical non-linear bias.
- Time-dependent phenomena in quantum dots and low-dimensional, strongly correlated sys-
  tems (switching/quenches, adiabatic driving).

The positions are offered within four different research groups at the Institute for Theoretical
Physics A of the RWTH Aachen. Prof. V. Meden focuses on development and application of
equilibrium as well as non-equilibrium RG methods to quantum dots and wires. Dr. D. Schuricht
is leading an Emmy-Noether junior research group focusing on non-equilibrium transport and dy-
namics in nanostructures and low-dimensional systems. Prof. J. Splettstoesser is heading a junior
research group funded by the NRW-Rückkehrerprogramm working on time-dependent transport.
The Helmholtz-University junior group in Jülich of Prof. M. R. Wegewijs is closely connected
within the framework of the Jülich-Aachen Research Alliance (JARA-FIT) and deals with quantum tran-
port through single-molecule devices. The four groups are actively collaborating and joint projects
are envisaged involving combinations of the above topics.

Within the Institute for Theoretical Physics at RWTH Aachen a broad platform is provided for re-
search on mesoscopic physics, spintronics, molecular electronics, quantum information process-
ing, quantum field theory and renormalization group, and strongly correlated electron systems. In
these fields three professors (C. Honerkamp, V. Meden, H. Schoeller) and five junior group lead-
ers (S. Andergassen, R. Mazzarello, D. Schuricht, J. Splettstoesser, M. R. Wegewijs) are active
using modern analytical as well as numerical techniques.

Candidates should have a strong background in mesoscopic physics or alternatively in strongly
correlated electron systems. They should be familiar with techniques of quantum many-body
physics and interested in learning new approaches.

For any of the announced positions please send your application, including a short CV, describ-
ing your research interests and plans, a list of publications as well as the contact details of two
reference persons to:

schuricht@physik.rwth-aachen.de (electronic submission preferred)

or

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