



LUDWIG-
MAXIMILIANS-
UNIVERSITÄT
MÜNCHEN

ARNOLD SOMMERFELD

CENTER FOR THEORETICAL PHYSICS



Sommerfeld Theory Colloquium

Prof. Leonid Glazman

Yale University

NONLINEAR LUTTINGER LIQUIDS

One-dimensional quantum fluids are usually described within the Luttinger liquid theory. This theory simplifies a real system by replacing the true spectrum of its particles with a linear one. Abandoning the simplification has proven to be difficult. This talk describes a breakthrough which allows one to evaluate the dynamic responses of a non-linearized fluid. The hallmark of the new theory is a set of new universal singularities of the dynamic response functions. It is applicable to a diverse group of systems, including, for example, electrons in quantum wires and cold atomic gases in one-dimensional traps.

Wednesday, 25th November 09, 10:30 h, Room 348 / 349, Theresienstr. 37 / III

Prof. J. v. Delft