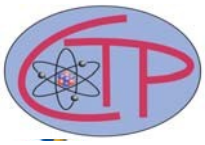

NEW YORK CITY COLLEGE OF TECHNOLOGY
Physics Department
Center for Theoretical Physics

100 Years of Superconductivity

Presented by:

Distinguished Professor
Eugene M. Chudnovsky

Lehman College of CUNY, CUNY Graduate Center
New York, NY, USA

Thursday, November 08 at noon
Namm, Room 823

Abstract

One hundred years of superconductivity will be reviewed in a one hour talk. The story begins with a seminal discovery of superconductivity in mercury by Heike Kamerlingh Onnes in 1911. I will attempt to reconstruct the atmosphere of great physics discoveries of 1920's that led to understanding of physics of solids and electrons in metals. The next landmarks in superconductivity would be Meissner effect (1933), Londons theory (1935), and discovery of superfluidity of helium (1937). The effect of the WW-II on condensed matter physics will be discussed and the post war competition for developing microscopic theory of superconductivity will be detailed. It includes Ginzburg-Landau theory (1950), the work of Frohlich on electron-phonon interaction (1950s), and the work of Abrikosov on vortices (1957). This effort culminated in the microscopic theory of electron pairing developed by Bardeen, Cooper, and Schrieffer (1957), followed by the discovery of Josephson effect (1962). Modern history will be covered that includes high-temperature superconductors and experiments on supersolidity. Future of superconductivity research will be discussed.

Light refreshments will be served.