

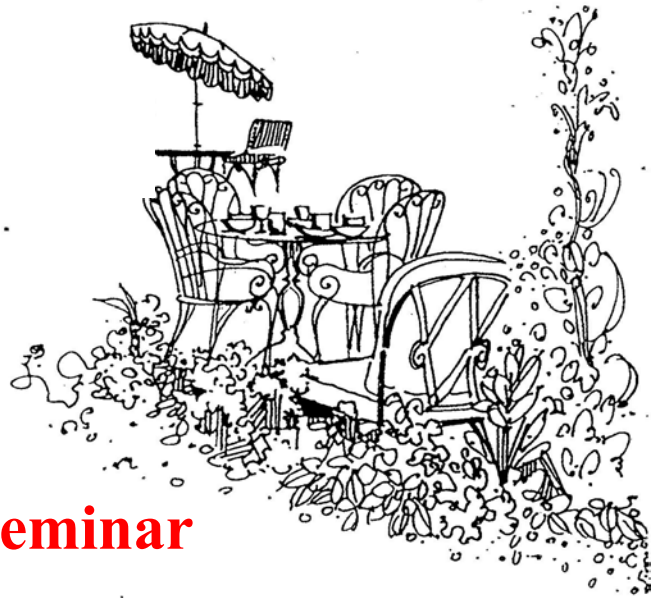
Chez Pierre

Presents ...

Monday, February 22, 2021

12:00pm Noon

Broadcast via Zoom



Chez Pierre Seminar

Igor Mazin – George Mason University

"Conventional high temperature superconductivity: from A15 to MgB2 to superhydrates"

I will review in a rather popular-science way, mostly for the benefits of the younger generation, the history of the half-century long quest for the room-temperature superconductivity, concentrating on the conventional electron-phonon mechanism. I will outline several stages, characterized by different paradigms, which can be tagged in a Potterian way thus:

- (1) A-15 and the concept of an upper bound on T_c
- (2) V.L. Ginzburg and the concept of a negative dielectric function
- (3) MgB2 and the concept of doped covalent bonds
- (4) H3S and the concept of MgB2 on steroids
- (5) superhydrates and the concept of artificially stabilized metal hydrogen

I am dedicating this talk to G.M. Eliashberg on occasion of his 90th birthday.