

## **Morrel Cohen**

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## Looking back at seven decades in condensed matter physics

I started research in solid state physics in 1950. I have witnessed it evolve into contemporary condensed matter physics over the ensuing seven decades. This talk focusses on several of the key events in the first three of those decades, the '50s, '60s, and '70s, that were fundamental to the emergence of many of the currently exciting areas active today. Being a theorist, I'll emphasize the theoretical advances. Among those that I'll of necessity touch on briefly are the introduction of topological reasoning, the growing role of spin-orbit coupling, explaining superconductivity, the discovery of disorder-induced localization, and the evolution of powerful electronic structure computation methods. Looking backward, 1950 was a time of great opportunity. Looking forward, 2019 is a time of even greater opportunity. Condensed matter physics has provided an excellent illustration of Vannevar Bush's 1945 thesis "Science the Endless Frontier".

> Monday November 11, 2019 Starts at 12:15 PM Coffee at 12:00 PM Physics Conference Room, SB B326