OVERVIEW OF SOME
ASPECTS OF
HMO THEORY

SCHRÖDINGER EQ.

\[ H\psi = E\psi \]

Eigenvalue

\[ x \times y^* \int d\mathbf{T} \]

E = \[ \frac{\langle \psi | H | \psi \rangle}{\langle \psi | \psi \rangle} \]

\[ \psi_i = \sum c_r \chi_r \]

\[ E_i = \frac{\sum c_r c^*_s \langle \chi_r | H | \psi_s \rangle}{\sum c^*_s c_s} \]

Want smallest \( E \) subject to the condition that the VARIATION THEOREM holds true.

\[ \sum (H_{ss} - E_s) c_s = 0 \]

For \( r = 1, 2, 3, \ldots \)

SECTORIAL EQUATIONS

\[ \sum (H_{rs} - E_s) c_s = 0 \]

\[ \sum (H_{rs} - E_s) c_s = (H_{rr} - E_{rr}) c_r + \sum (H_{rs} - E_s) c_s \]

\[ O = \sum (H_{rs} - E_s) c_s \]

\[ O = (\alpha - E_i) c_r + \sum \beta c_s \]

\[ O = x_i c_r + \sum \frac{c_s}{c^*_s} \]

SOLVE FOR \( x_i \). Then, use \( k_i \) to determine \( c_r \).