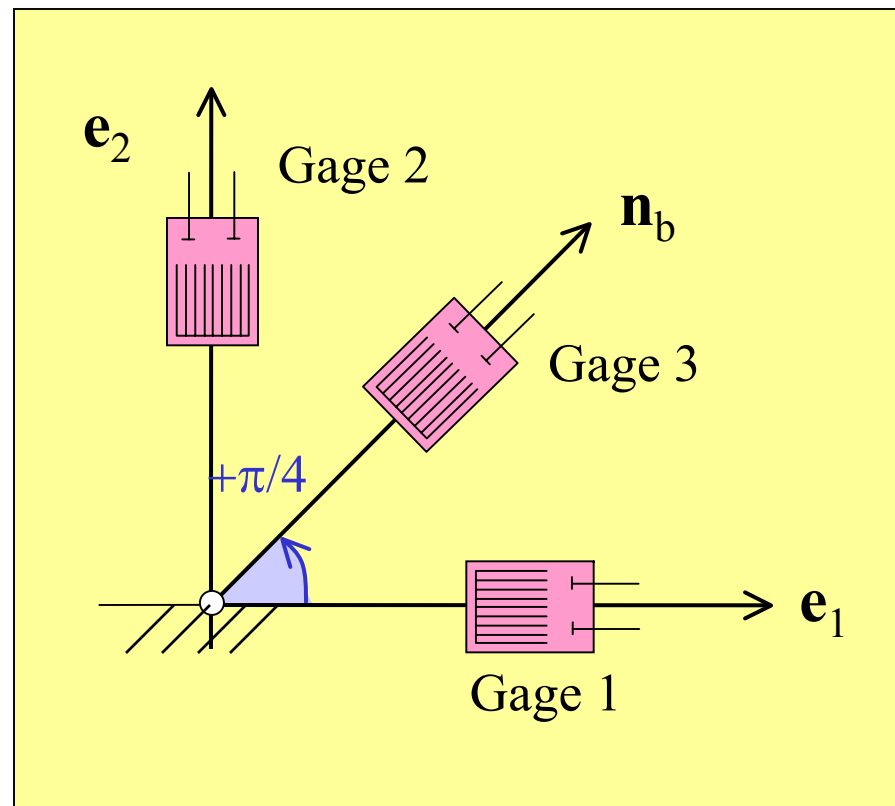


# Strain Gage Rosette Graphical Determination

Measurement:

3 Relative Length  
Variations from  
Strain gages

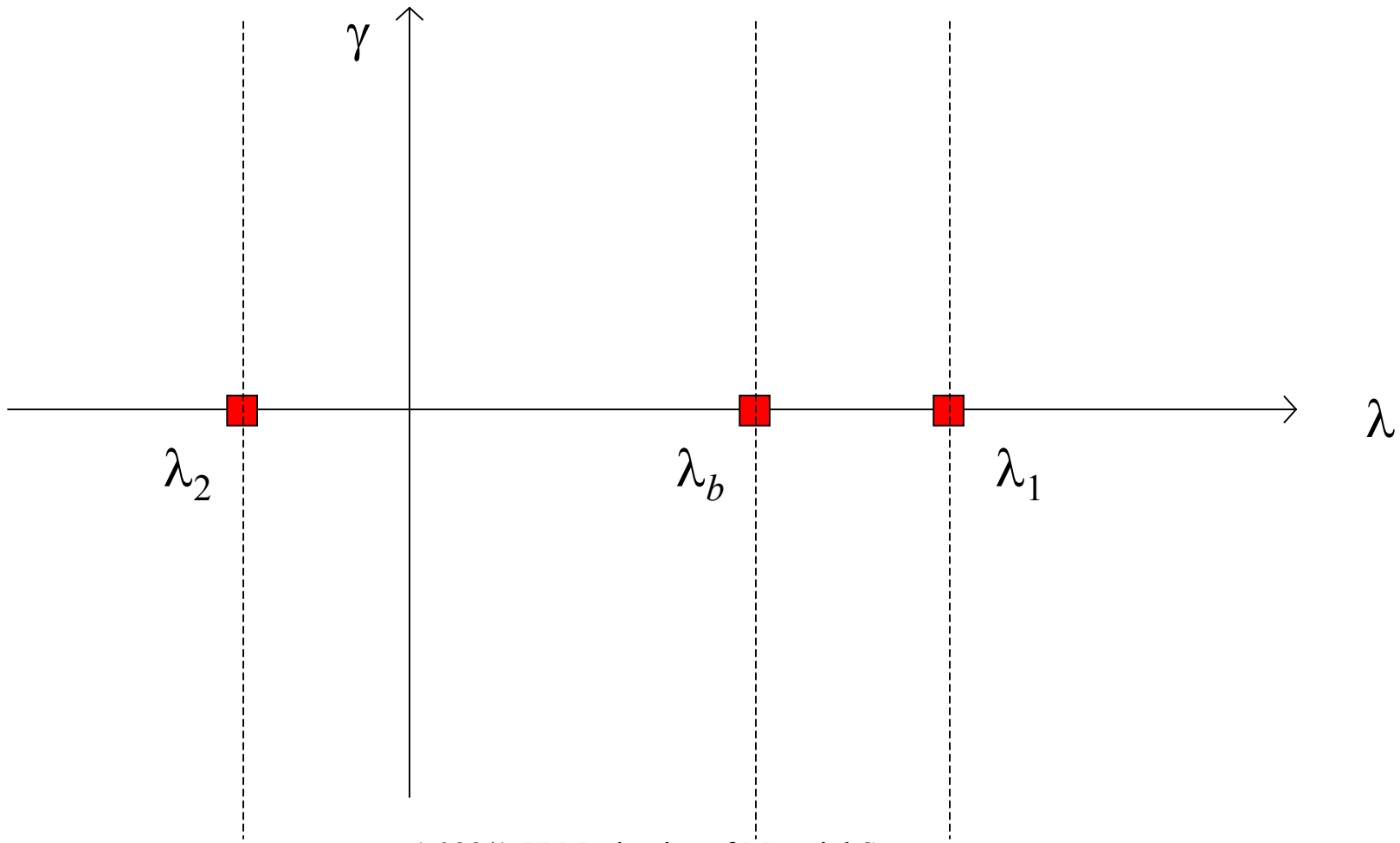
$\lambda_1, \lambda_2, \lambda_b$



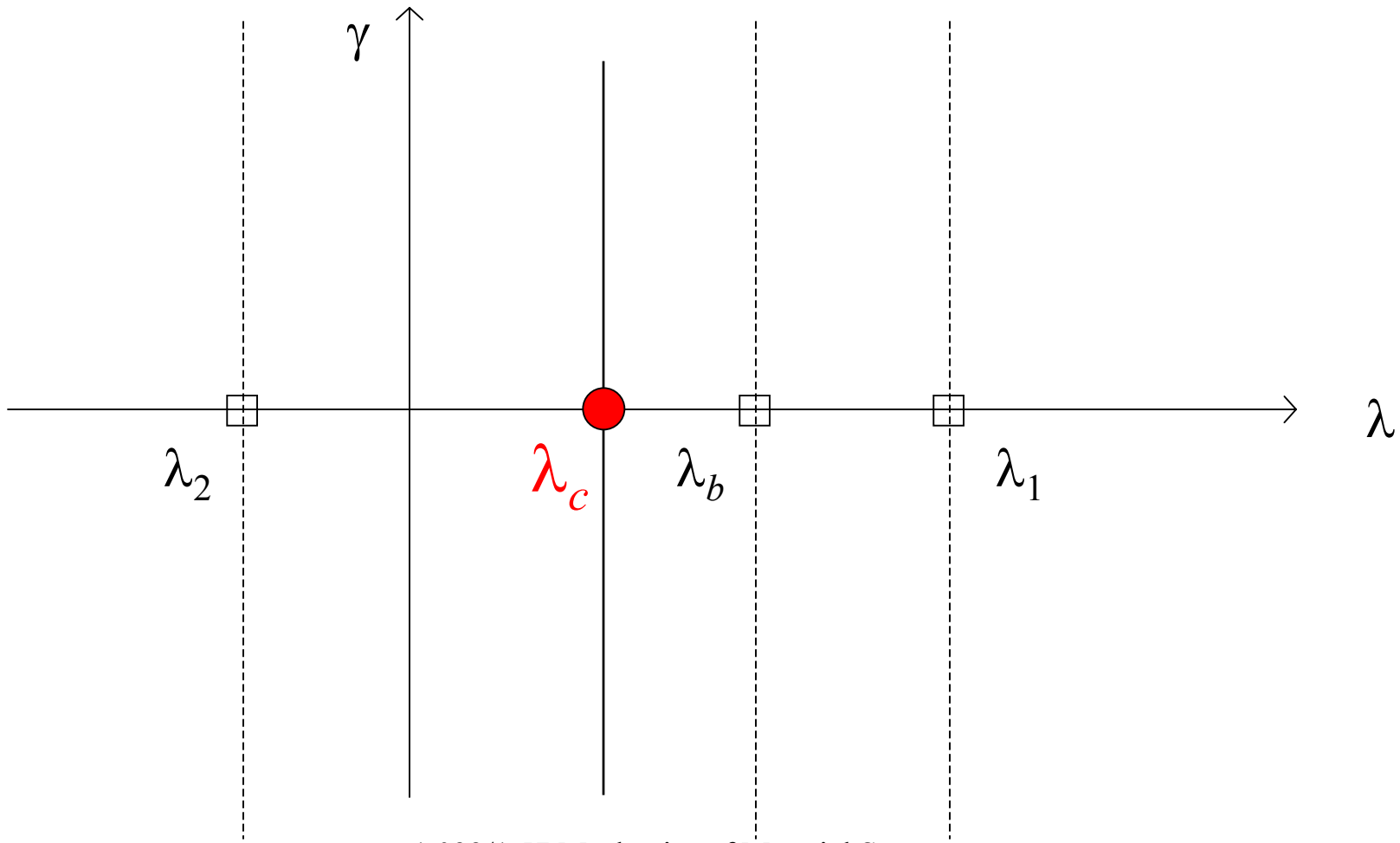
Aim:

Find  $\varepsilon_{12} = \gamma(\mathbf{e}_1, \mathbf{e}_2)$

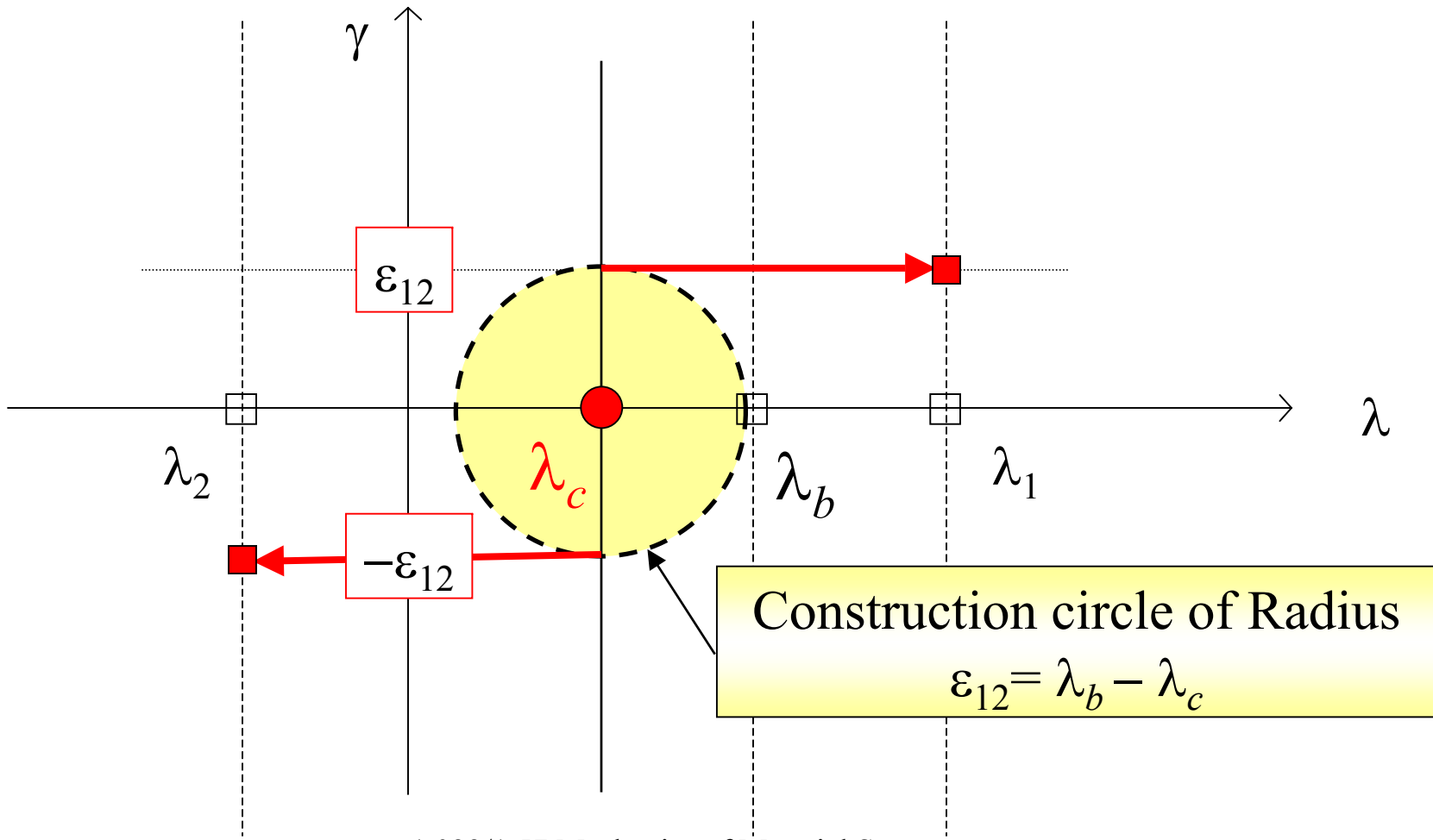
# 1. $\lambda_i$ ( $i=1,2,b$ ) in Mohr Plane



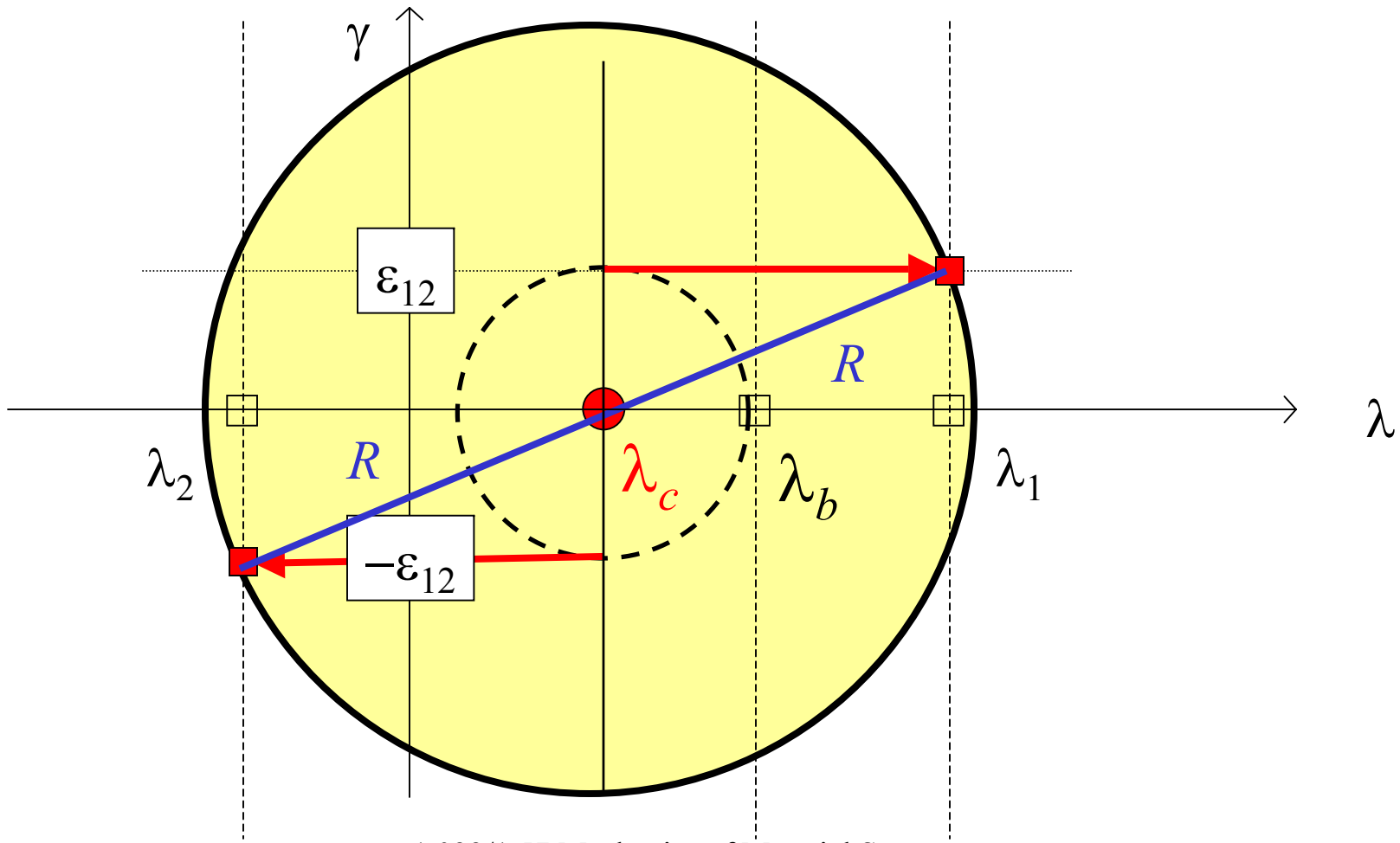
## 2. Center: $\lambda_c = (\lambda_1 + \lambda_2)/2$



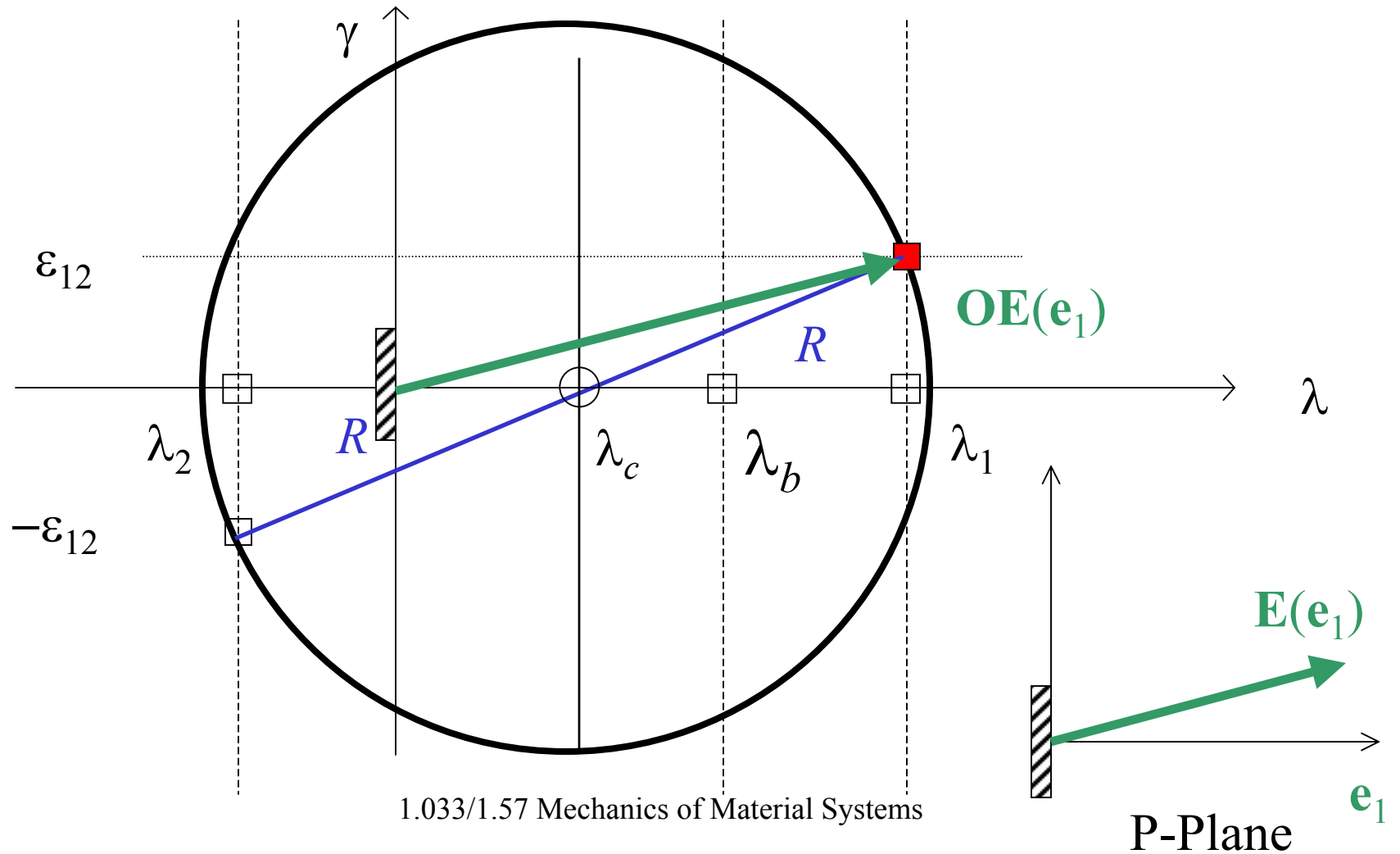
$$3. \quad \varepsilon_{12} = \lambda_b - (\lambda_1 + \lambda_2)/2 = \lambda_b - \lambda_c$$



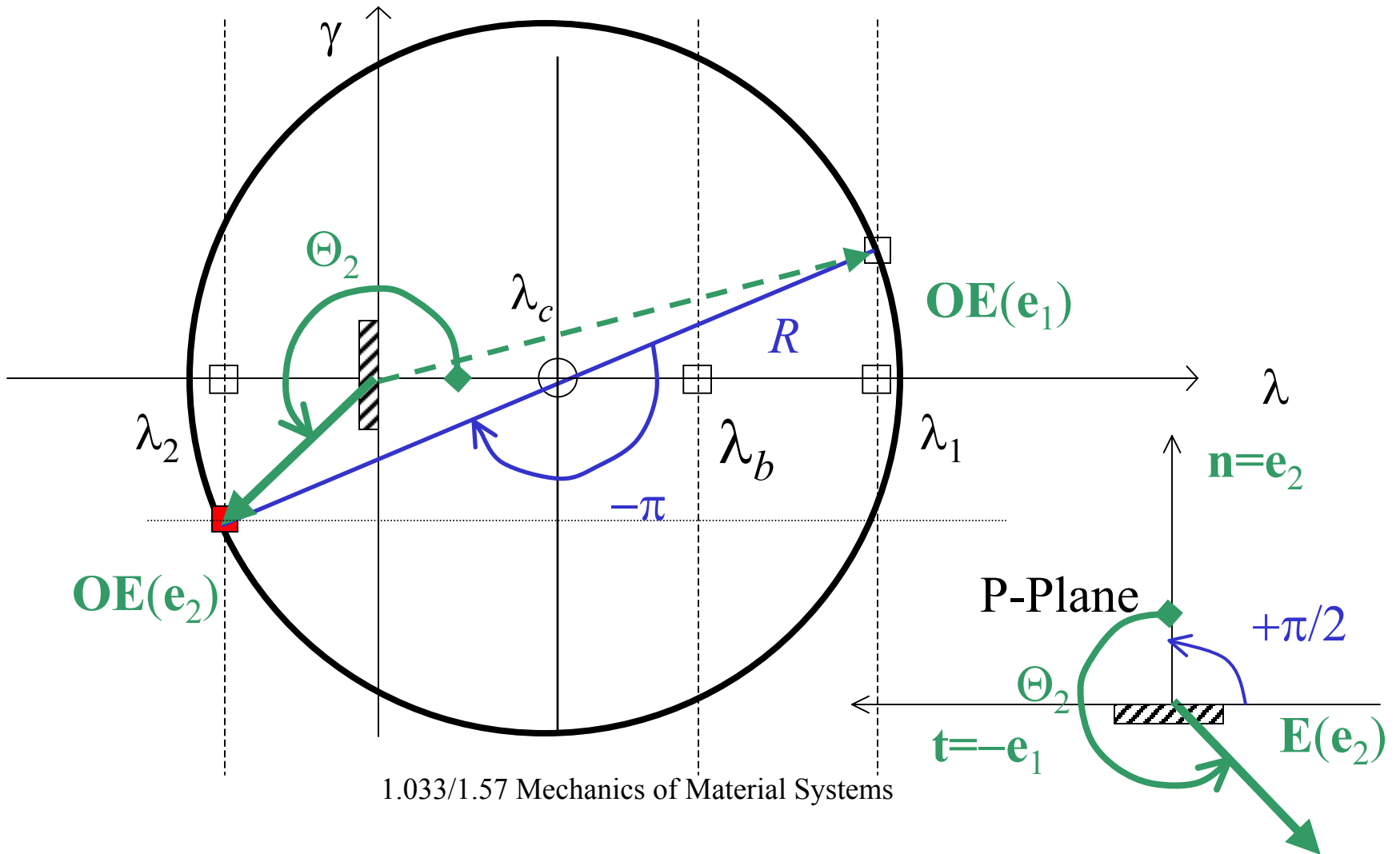
# 4. The Mohr Circle



# 5. The Strain Vectors: $\mathbf{OE}(\mathbf{e}_1)$



# 6. The Strain Vectors: $\mathbf{OE}(\mathbf{e}_2)$



# 7. The Strain Vectors: $\mathbf{OE}(\mathbf{n}_b)$

