

## Stress Notations

Cauchy (early work)

$$\begin{matrix} A & F & E \\ F & B & D \\ E & D & C \end{matrix}$$

Poisson

$$\begin{matrix} P_3 & Q_3 & R_3 \\ P_2 & Q_2 & R_2 \\ P_1 & Q_1 & R_1 \end{matrix}$$

Coriolis, St. Venant,  
Maxwell, Cauchy (later  
work)

$$\begin{matrix} p_{xx} & p_{xy} & p_{xz} \\ p_{yx} & p_{yy} & p_{yz} \\ p_{zx} & p_{zy} & p_{zz} \end{matrix}$$

Neuman, Kirchhoff  
Rieman, Love

$$\begin{matrix} X_x & X_y & X_z \\ Y_x & Y_y & Y_z \\ Z_x & Z_y & Z_z \end{matrix}$$

Kelvin

$$\begin{matrix} P & V & T \\ V & Q & S \\ T & S & R \end{matrix}$$

Clebsch

$$\begin{matrix} t_{11} & t_{12} & t_{13} \\ t_{21} & t_{22} & t_{23} \\ t_{31} & t_{32} & t_{33} \end{matrix}$$

Pearson

$$\begin{matrix} \hat{xx} & \hat{xy} & \hat{xz} \\ \hat{yx} & \hat{yy} & \hat{yz} \\ \hat{zx} & \hat{zy} & \hat{zz} \end{matrix}$$

Current Notation

$$\begin{matrix} \sigma_{xx} & \sigma_{xy} & \sigma_{xz} \\ \sigma_{yx} & \sigma_{yy} & \sigma_{yz} \\ \sigma_{zx} & \sigma_{zy} & \sigma_{zz} \end{matrix} \quad \text{or} \quad \begin{matrix} \sigma_{11} & \sigma_{12} & \sigma_{13} \\ \sigma_{21} & \sigma_{22} & \sigma_{23} \\ \sigma_{31} & \sigma_{32} & \sigma_{33} \end{matrix}$$