GEORG-AUGUST-UNIVERSITÄT
GÖTTINGEN

Mathematics and Computer Science (B.MES.108)
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Part 1: Linear Algebra for Non-Mathematicians

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$$(AB)^\top = B^\top A^\top \qquad \mathbb{R}^n \xrightarrow{T} \mathbb{R}^m$$
$$\vec{v} = \sum_{i=1}^{n} \alpha_i \hat{e}_i \qquad A = Q\Lambda Q^{-1}$$
$$\mathrm{Rot}(\theta) = \begin{bmatrix} \cos(\theta) & -\sin(\theta) \\ \sin(\theta) & \cos(\theta) \end{bmatrix} \qquad A\vec{v} = \lambda\vec{v}$$
$$T(\alpha\vec{u} + \beta\vec{v}) = \alpha T(\vec{u}) + \beta T(\vec{v})$$
$$\langle \hat{e}_i, \hat{e}_j \rangle = \delta_{ij}$$