

$$\mathbb{E}\left[du(t)du^*(t)\right] = \mathbf{U}(t)dt; \qquad \mathbb{E}\left[y(t)y^*(t)\right] = \mathbf{Y}(t);$$

$$\mathbb{E}\left[dr(t)dr^*(t)\right] = \mathbf{R}(t)dt; \qquad \text{``o'': Hadamard Product};$$