

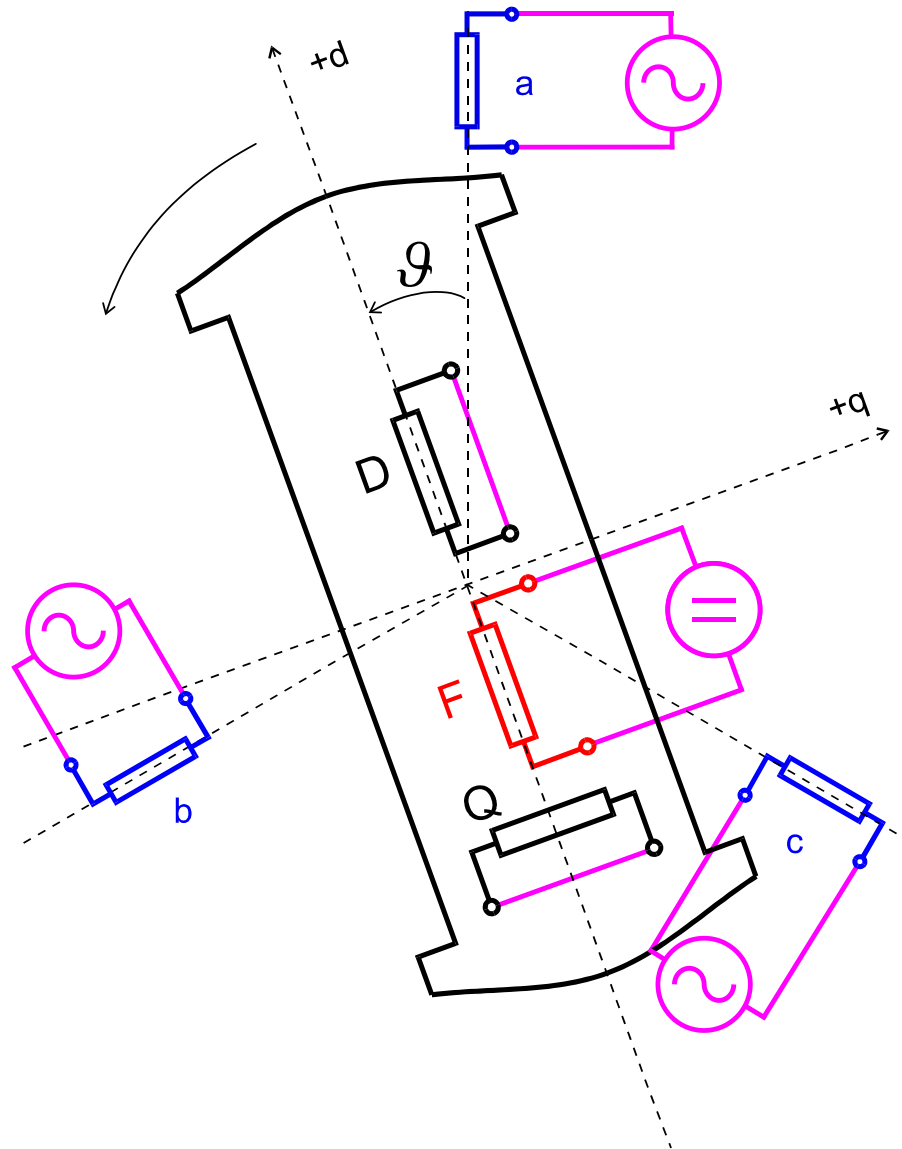
# Visualization of the coordinate system transformation of *a-b-c* to *d-q-0* and back, alias Park's transformation

2021

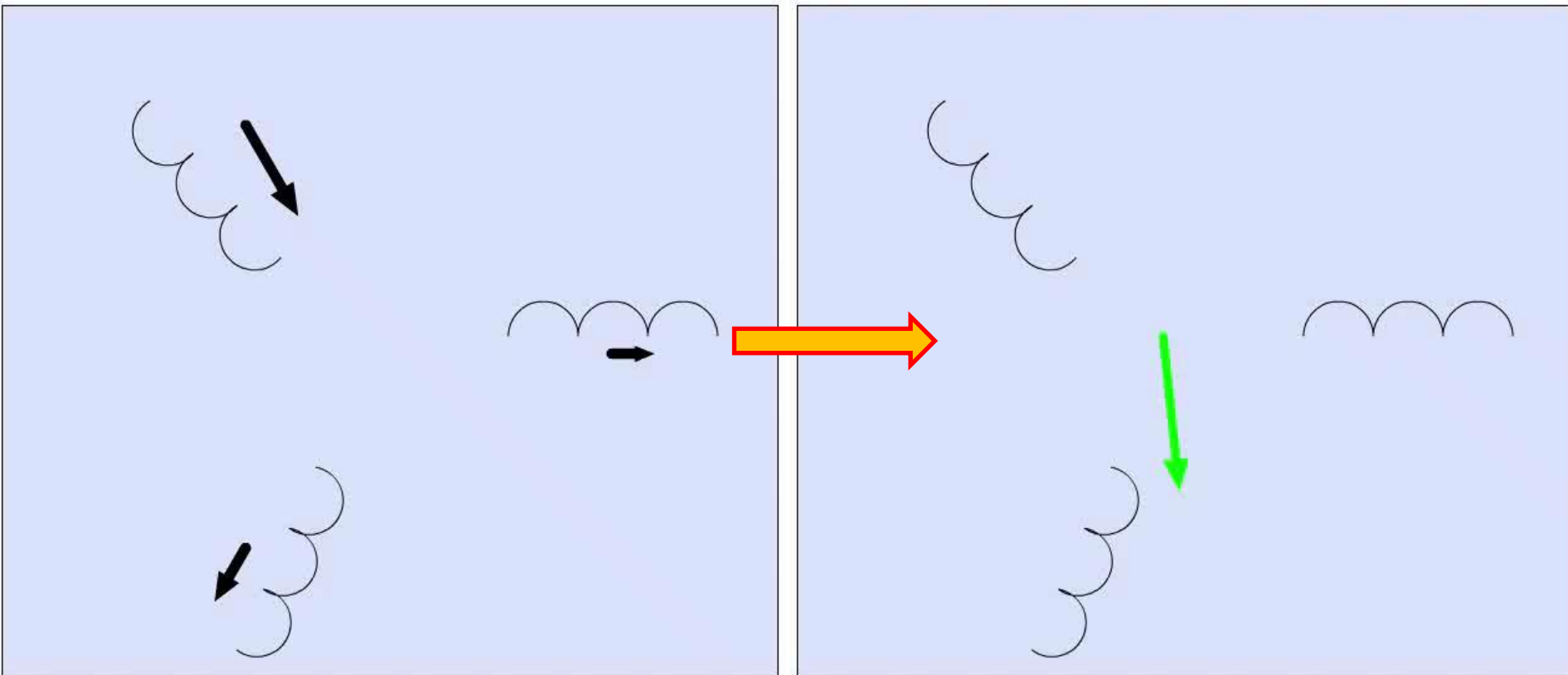
Doc. Ing. Karel Noháč, Ph.D.

# Magnetic fluxes in individual windings

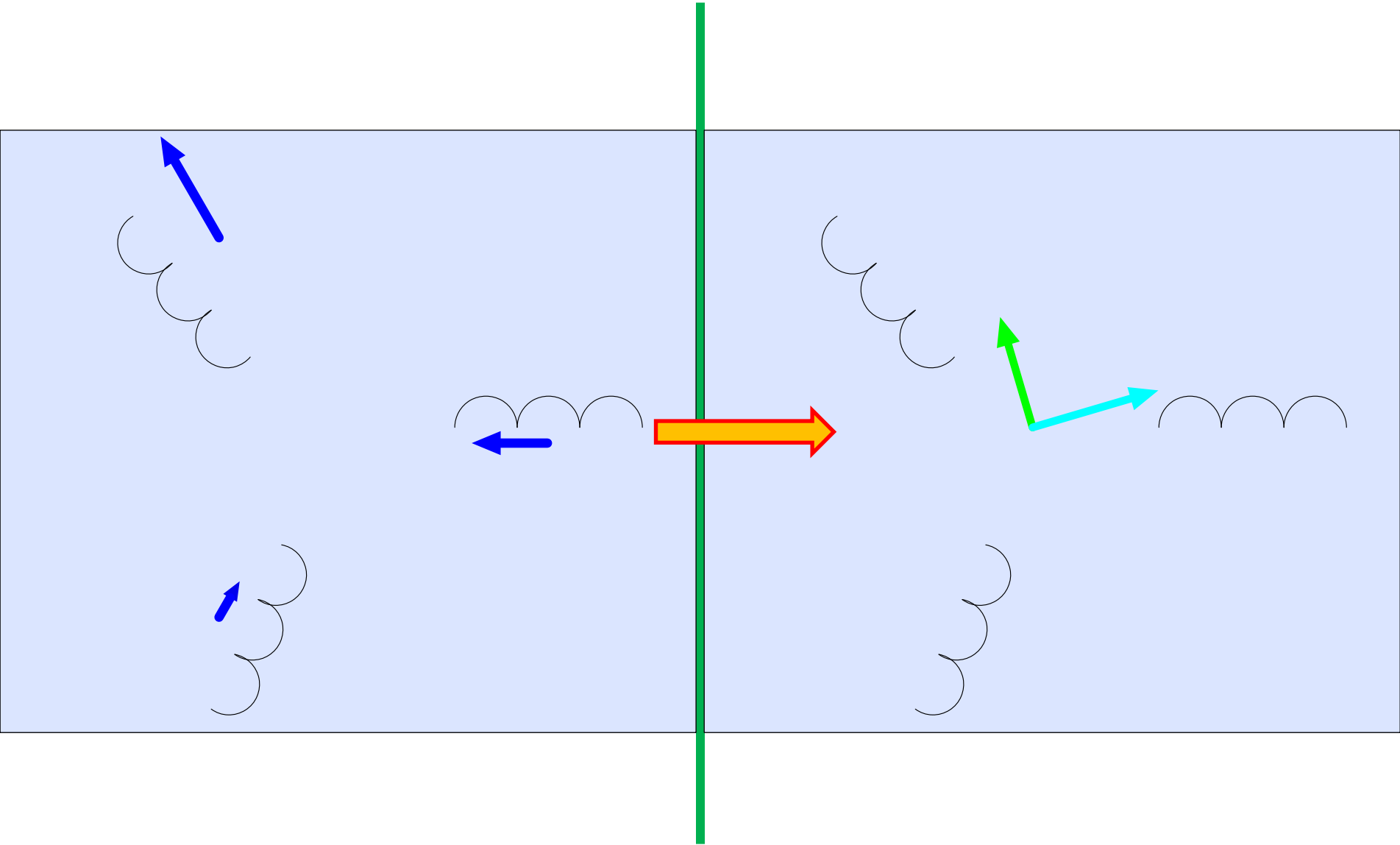
Simple substitution diagram of a synchronous machine



# Magnetic fluxes in stator windings

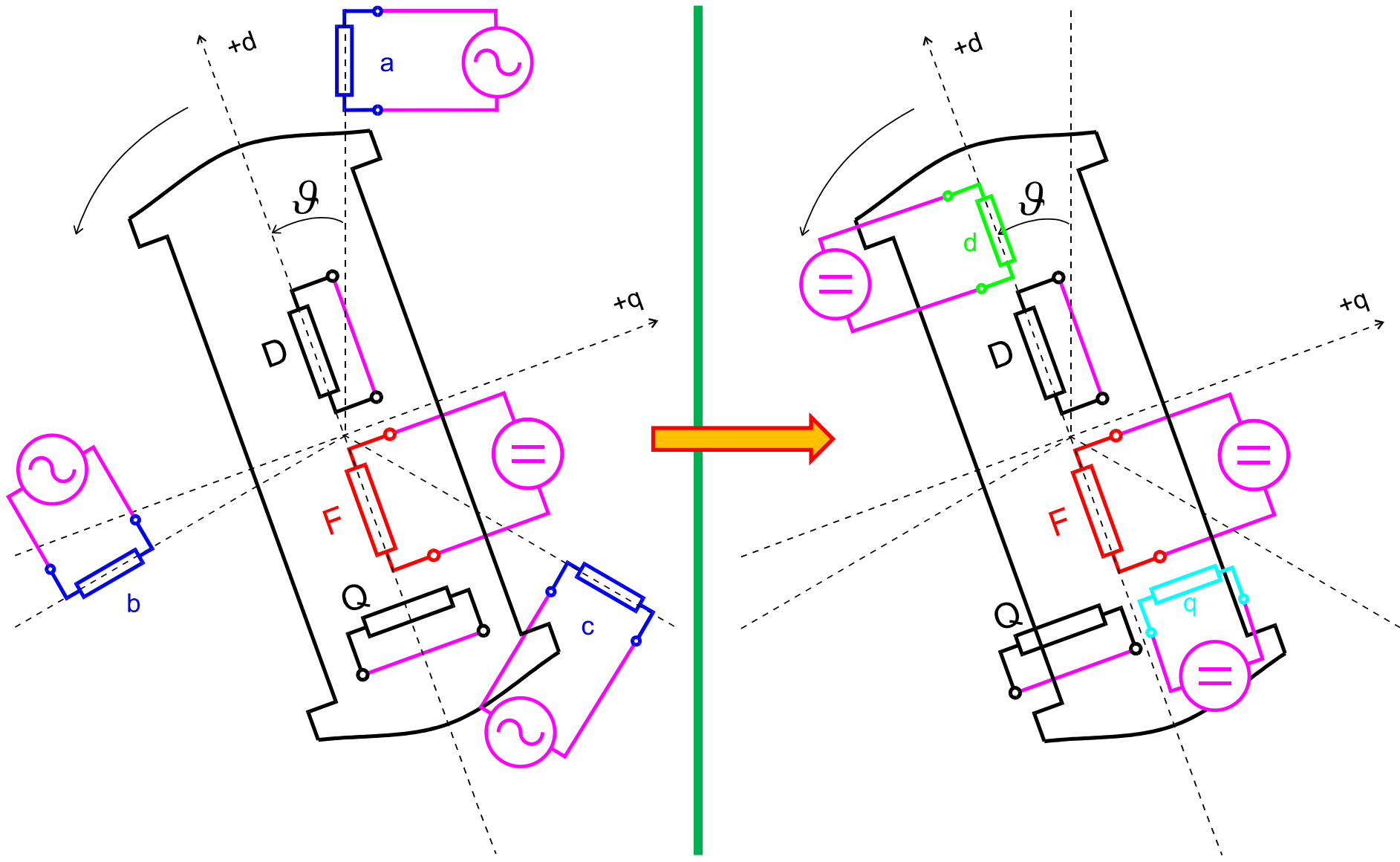


# Magnetic fluxes in stator windings

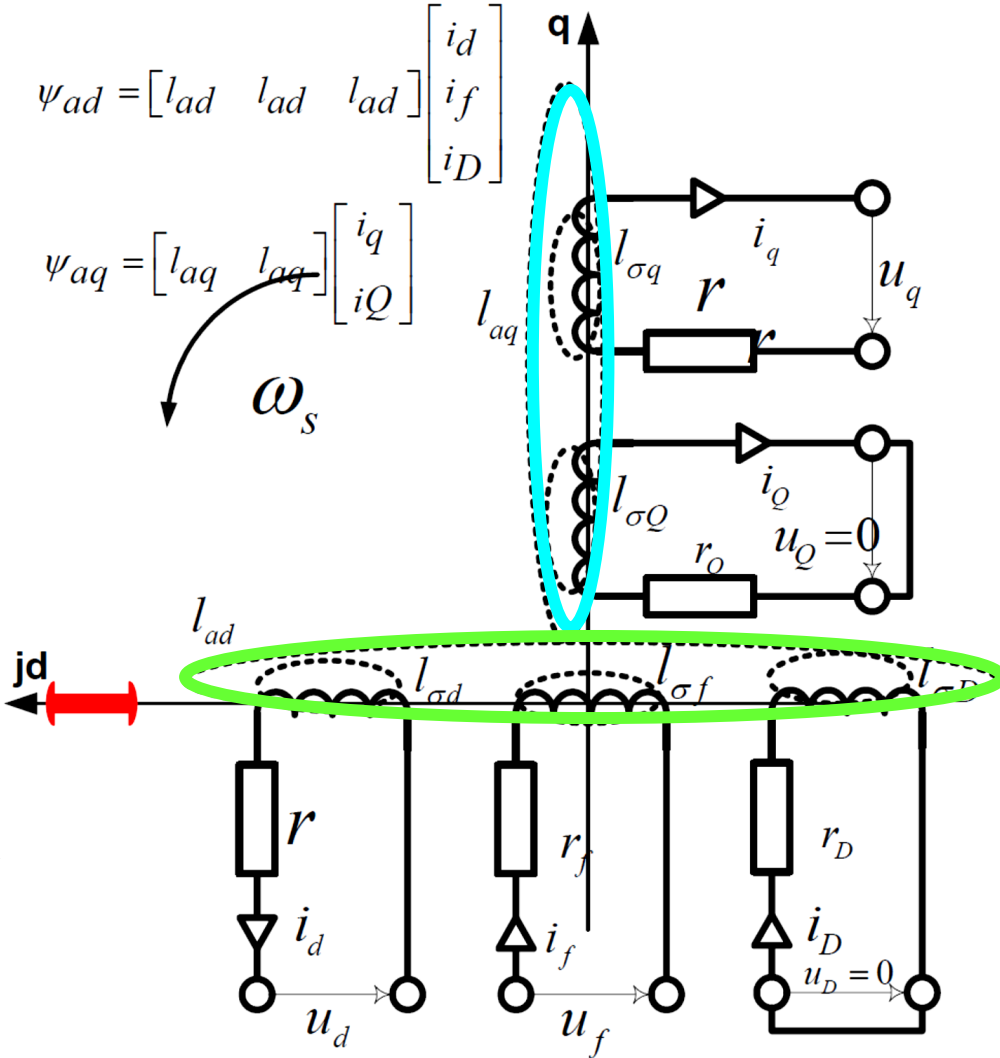
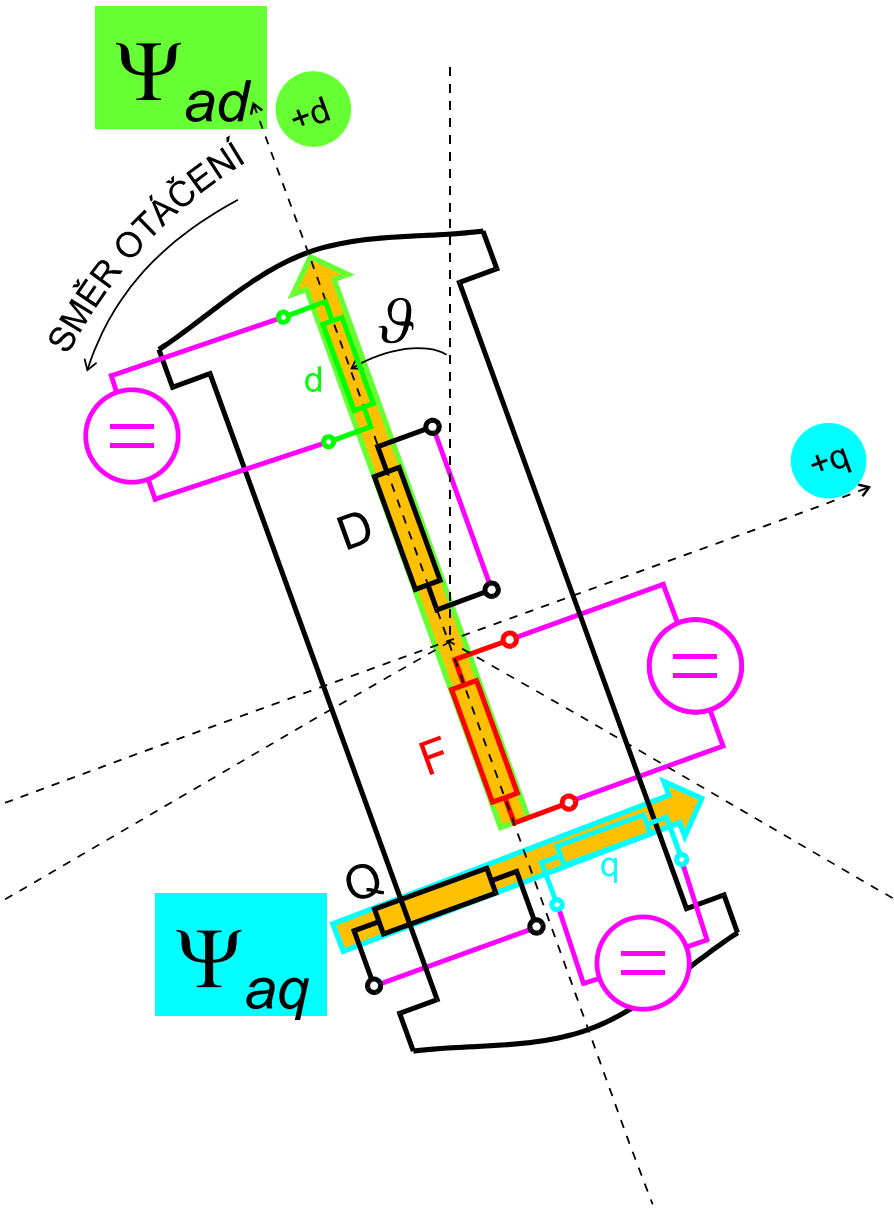


# Magnetic fluxes in individual windings

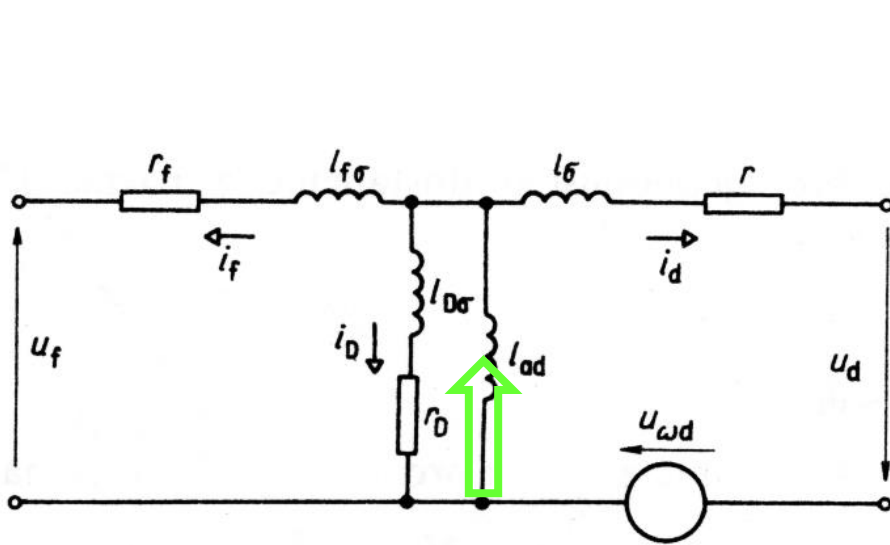
Simple substitution diagram of a synchronous machine



# Magnetic fluxes in individual windings



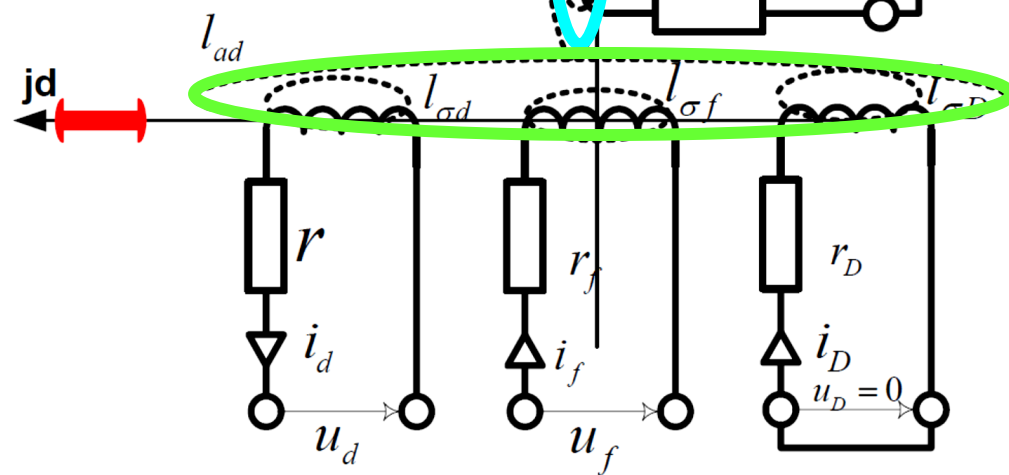
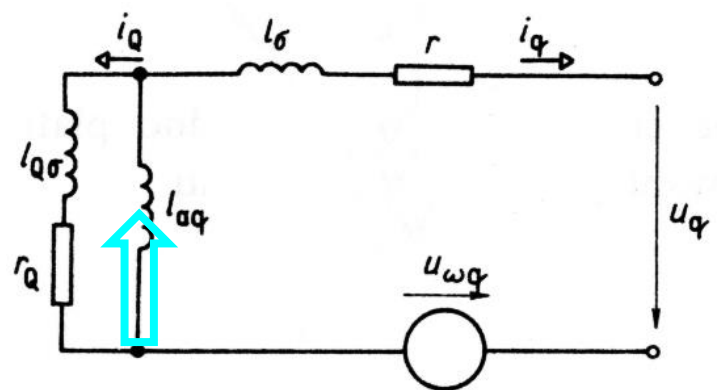
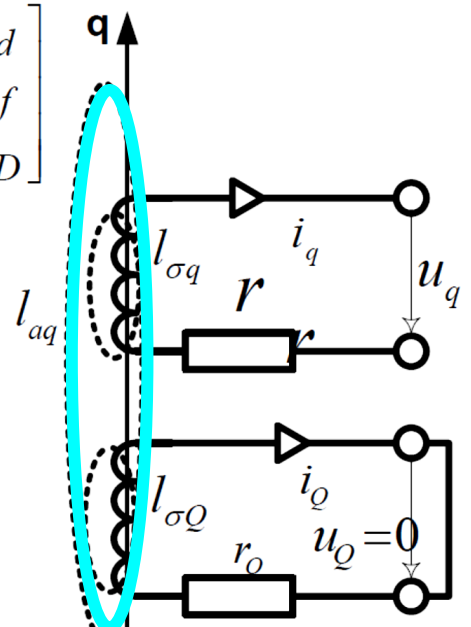
# Magnetic fluxes in individual windings



$$\psi_{ad} = \begin{bmatrix} l_{ad} & l_{ad} & l_{ad} \end{bmatrix} \begin{bmatrix} i_d \\ i_f \\ i_D \end{bmatrix}$$

$$\psi_{aq} = \begin{bmatrix} l_{aq} & l_{aq} \end{bmatrix} \begin{bmatrix} i_q \\ i_Q \end{bmatrix}$$

$\omega_s$



# Magnetic fluxes in individual windings

Salient (Hydro) vs Round (Turbo) Rotor Shape

