

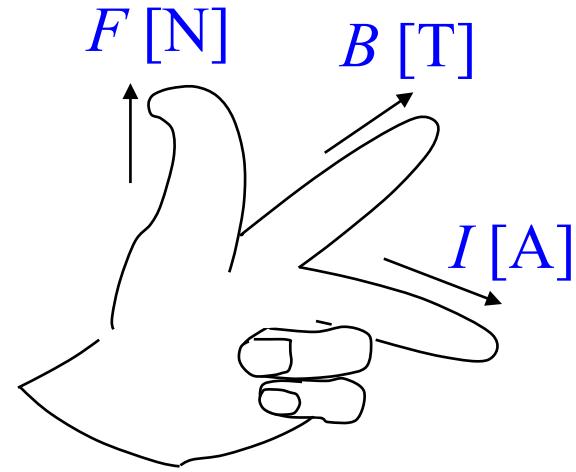
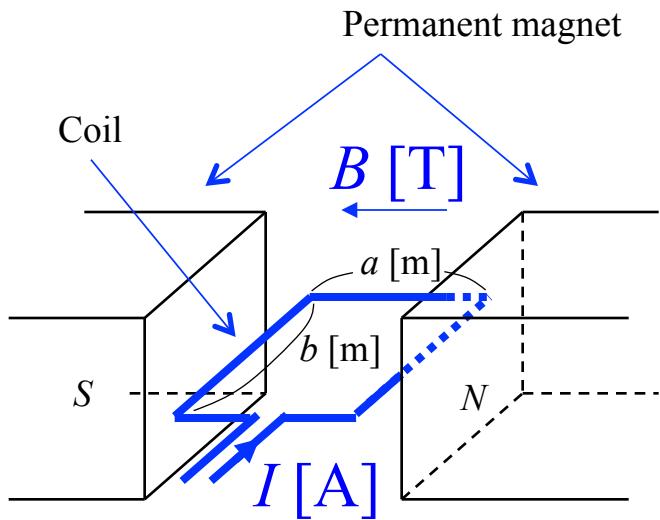
# Power Electronics

## No. 8: Principle of DC motor

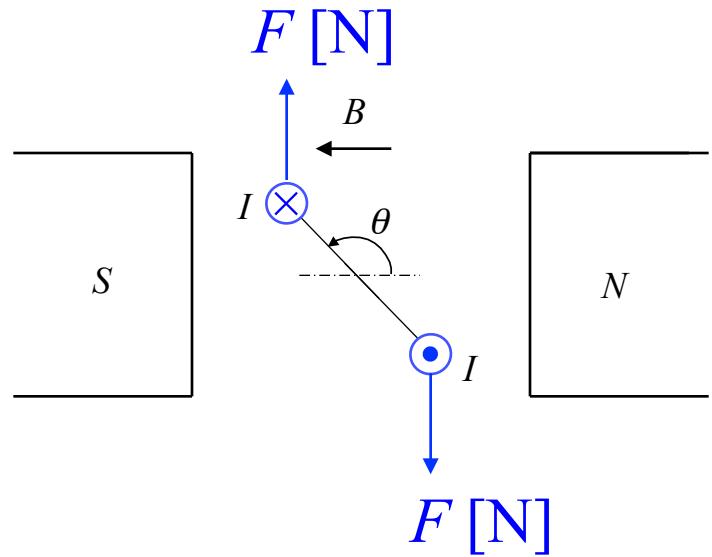
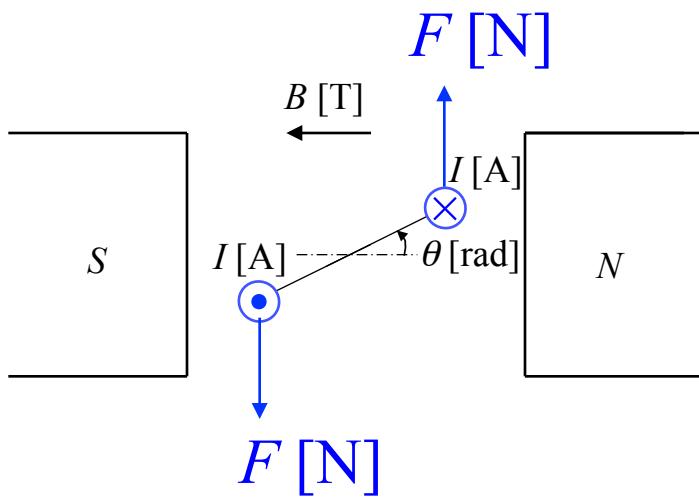
Takeshi Furuhashi

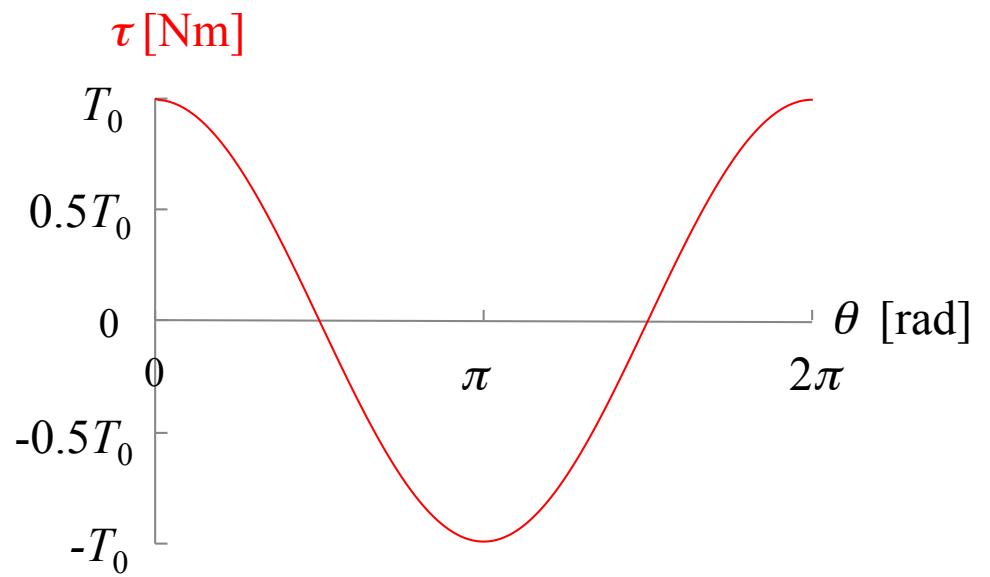
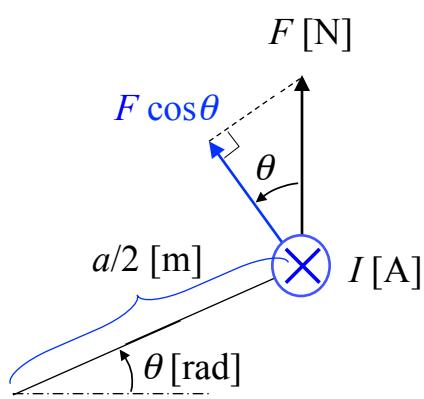
Furuhashi\_at\_cse.nagoya-u.ac.jp

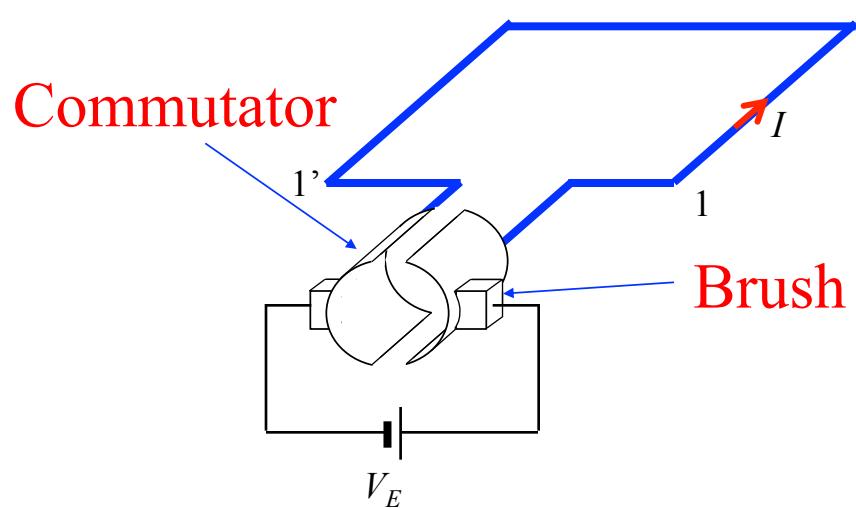
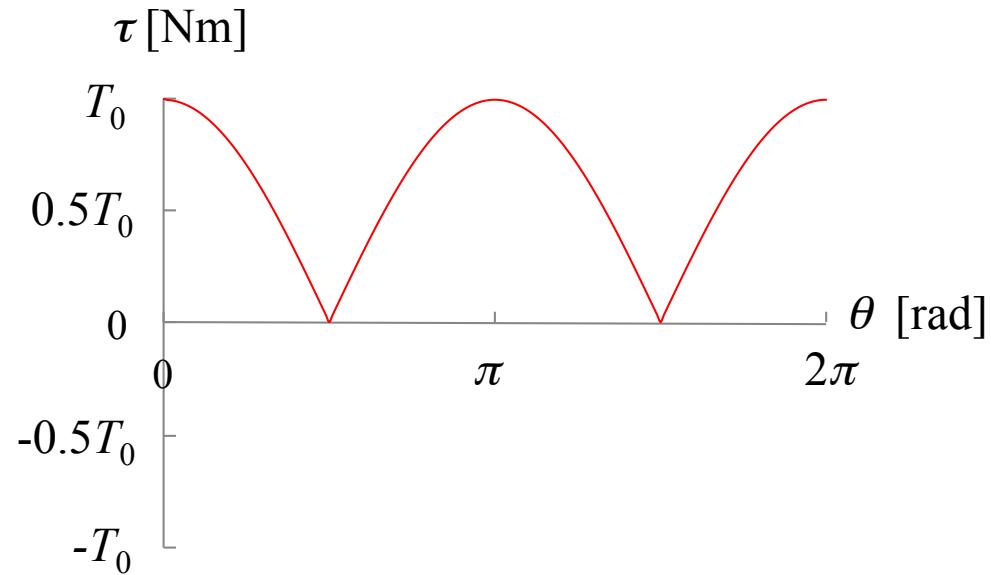
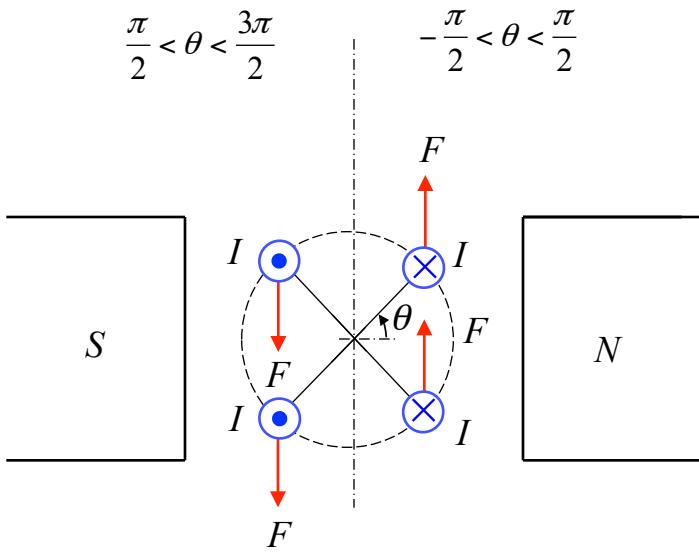
# Torque generation



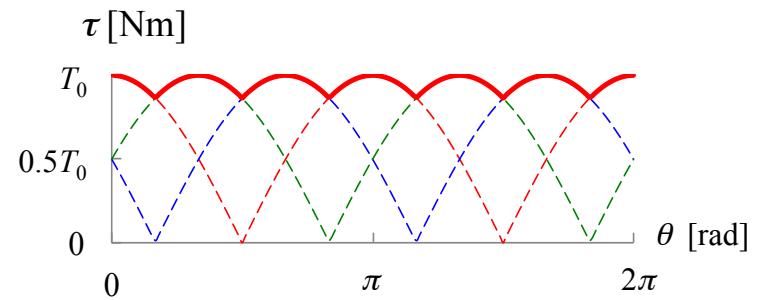
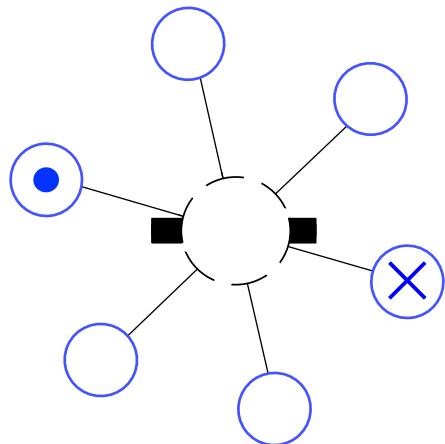
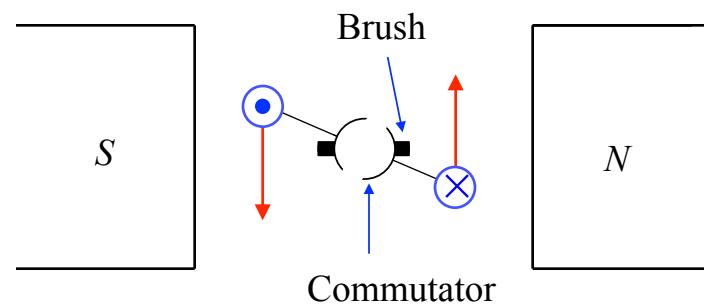
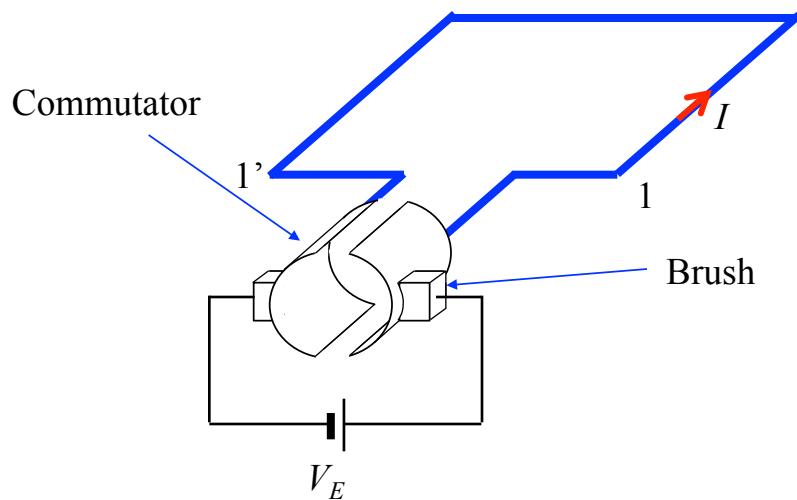
Fleming's Left Hand Rule

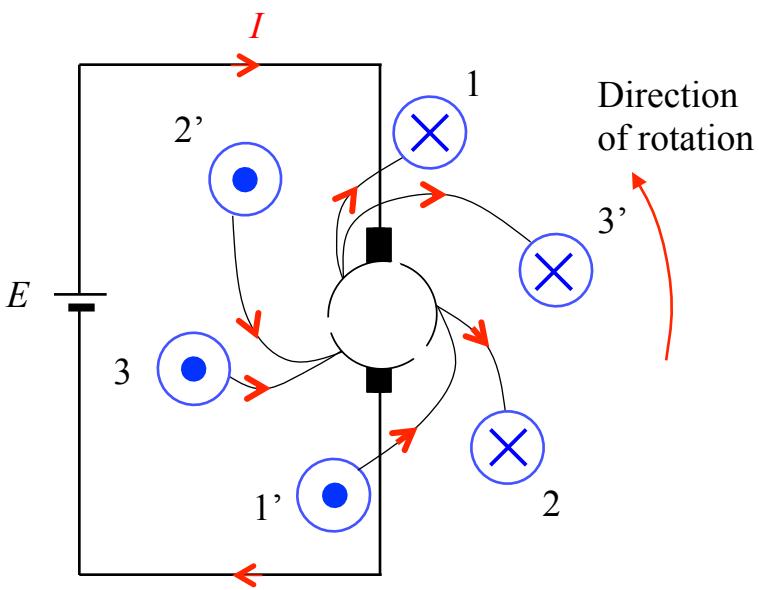
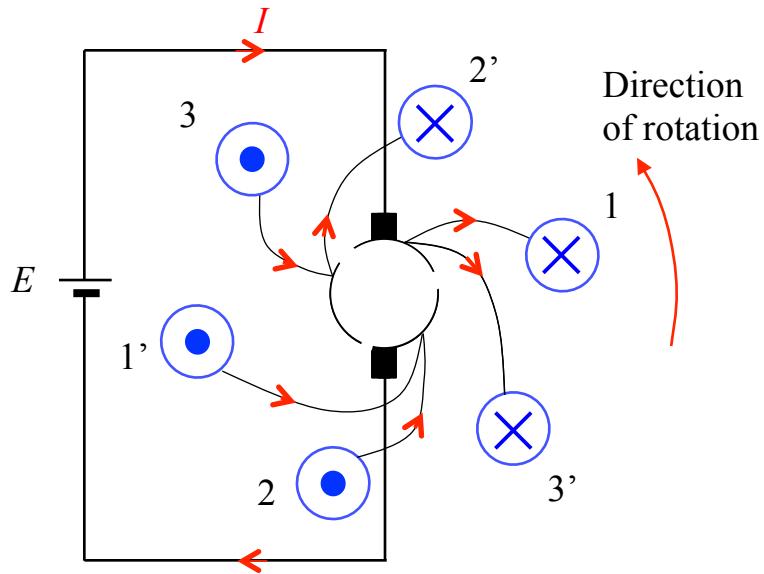




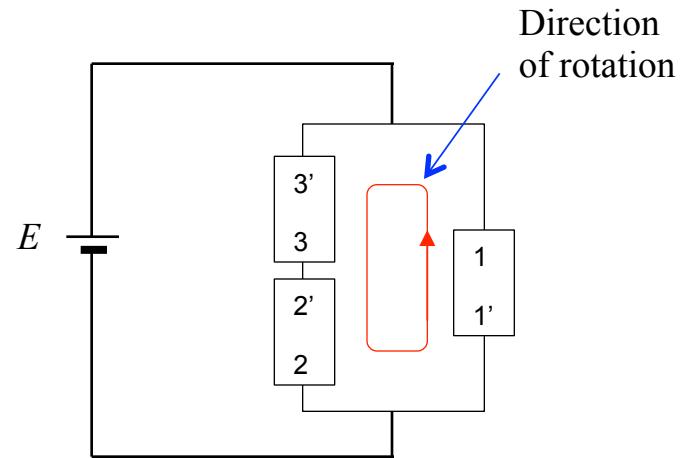


# Smoothing torque ripple





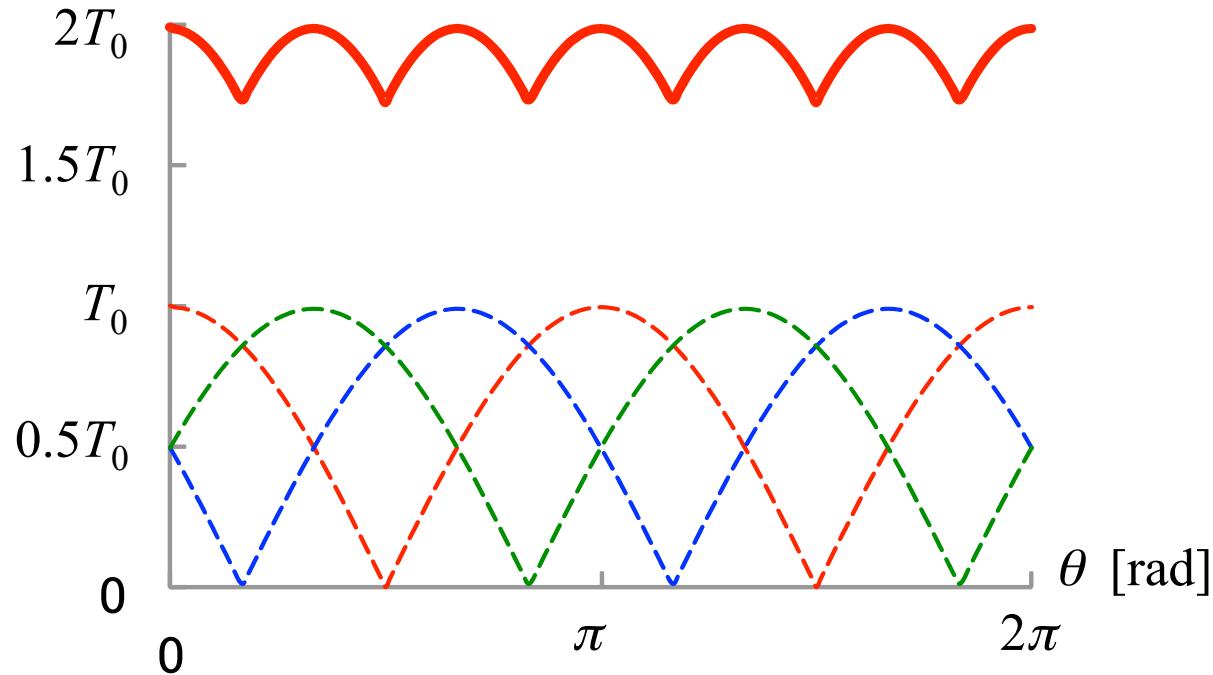
(a) Connections of coils and commutators



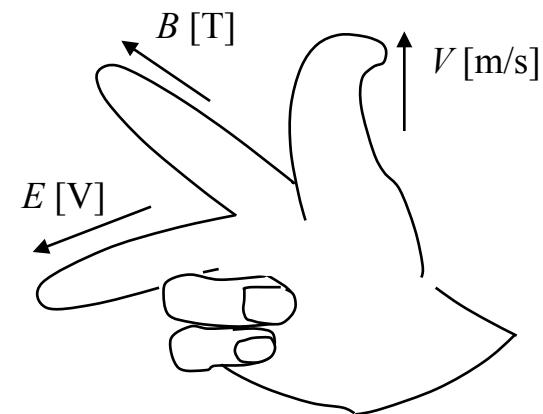
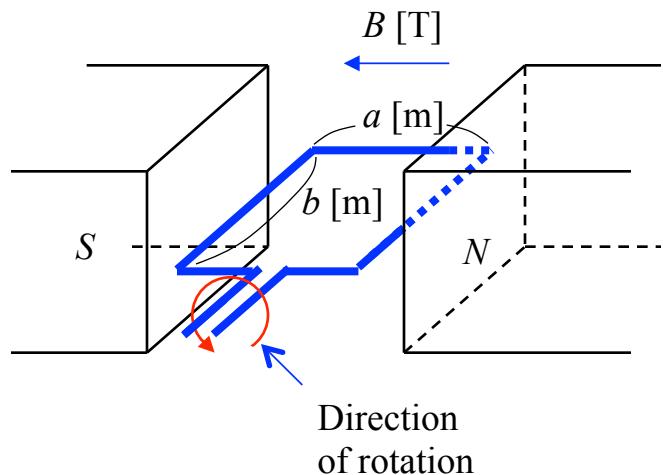
(b) Connections of coils

# Smoothing torque ripple

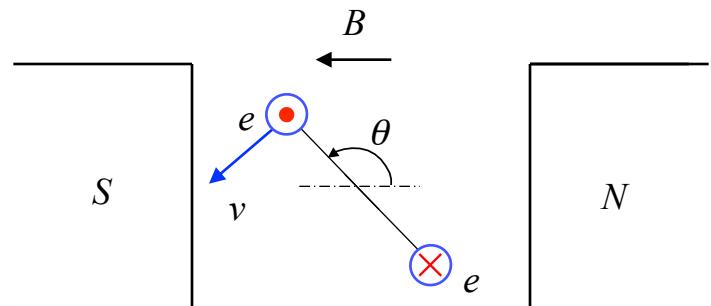
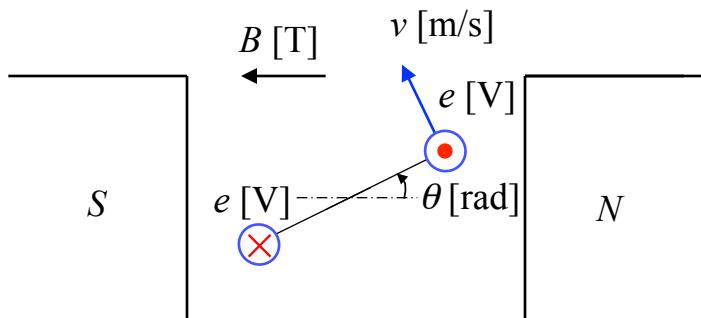
$$\Sigma \tau$$



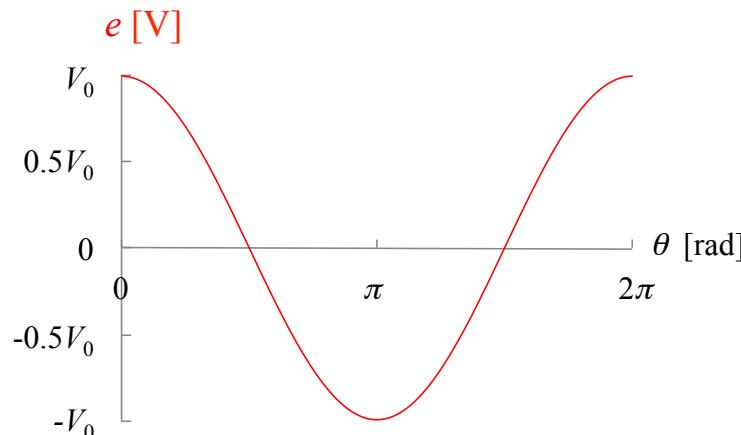
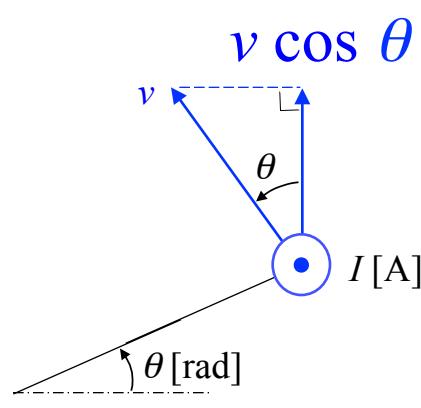
# Voltage generation



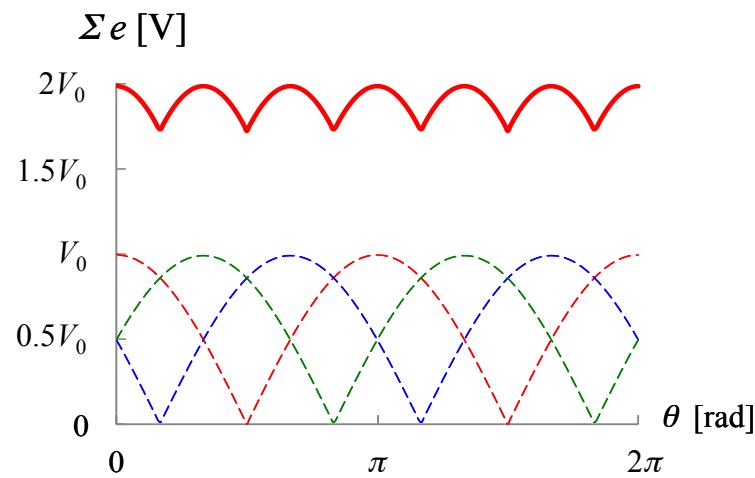
Fleming's Right Hand Rule



# Voltage generation



Smoothing voltage ripple



# Photos of DC motor

