

# Master Degree in Information Technology Engineering for Health and Communication: Health Curriculum

*Electromagnetic interactions and diagnostic*

## RECALLS



# RECALLS

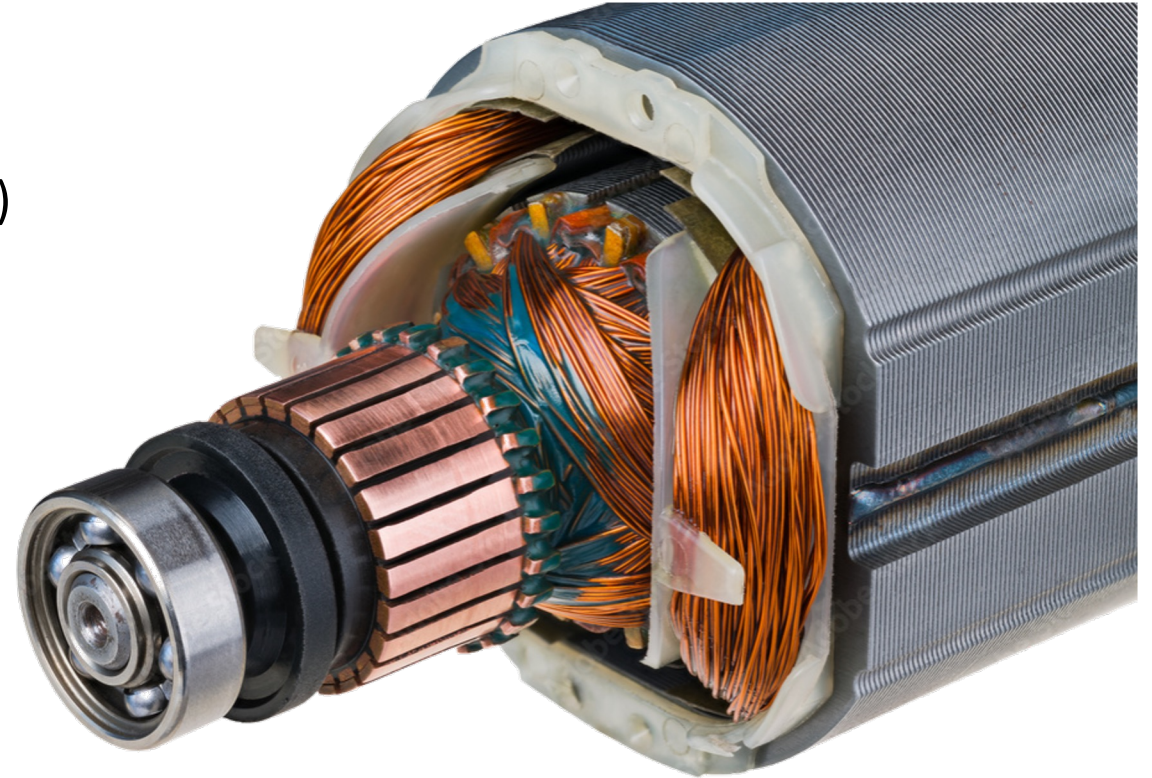
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## Basis:

- Complex numbers and complex-valued functions
- Vector fields and operators (rotor, gradient, divergence)
- Phasors and Fourier transform



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Maxwell's equations:

- Time-, phasor- and frequency domain
- Integral and differential forms
- Constitutive relationships



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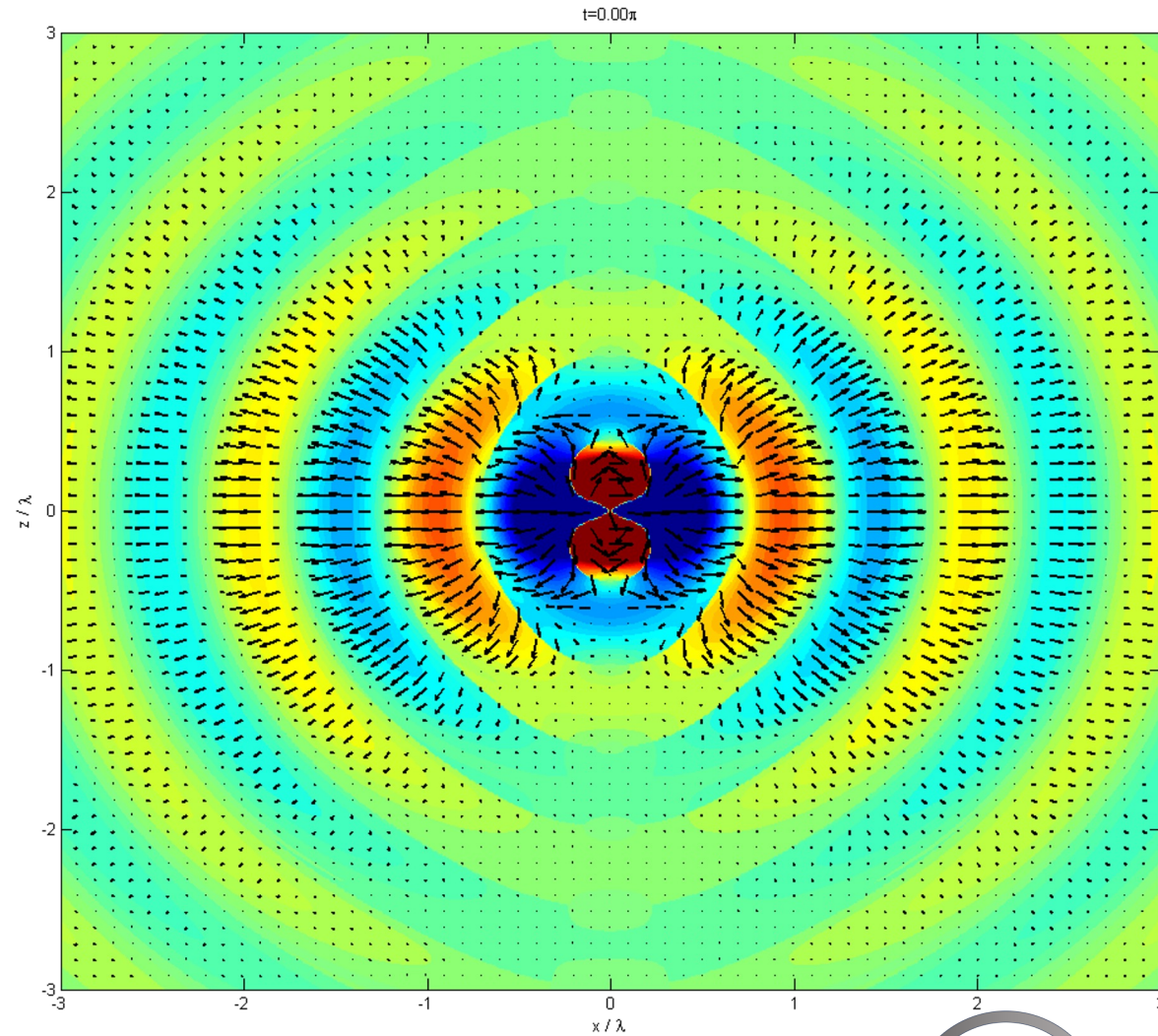
Polarization and wave polarimetry:





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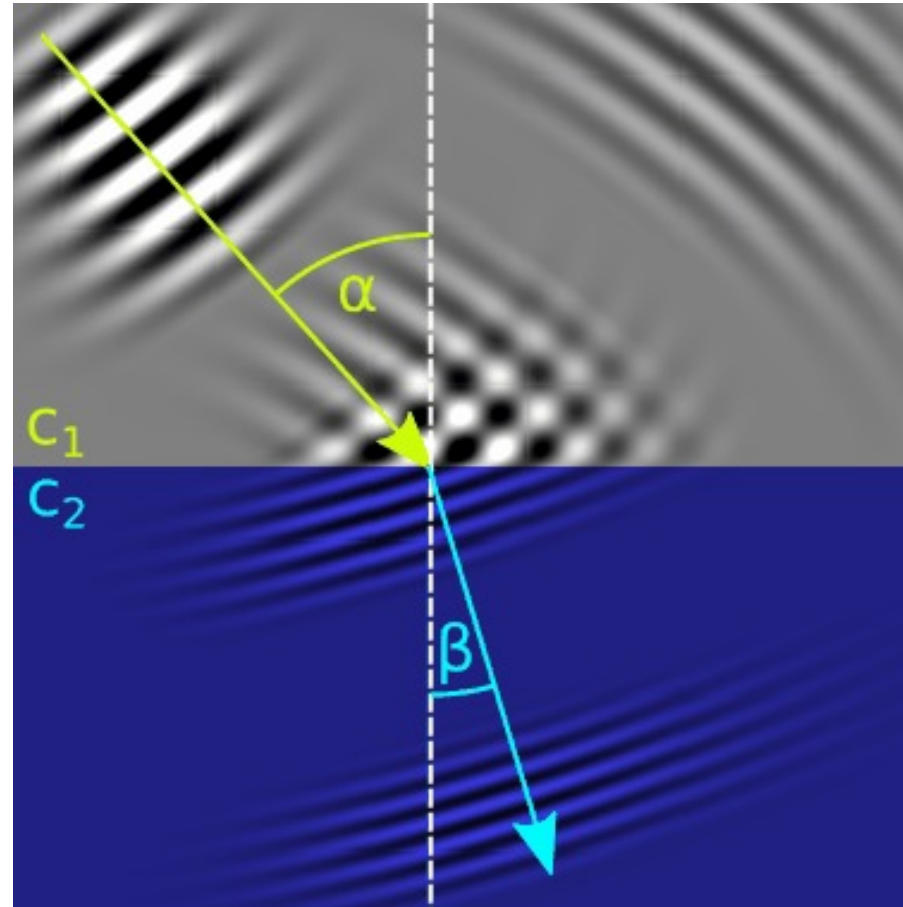
Poynting's theorem:



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## Plane EM waves:

- Free-space propagation
- Incidence
- Guided propagation



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## Antennas:

- Radiation pattern
- Main features
- Friis link

