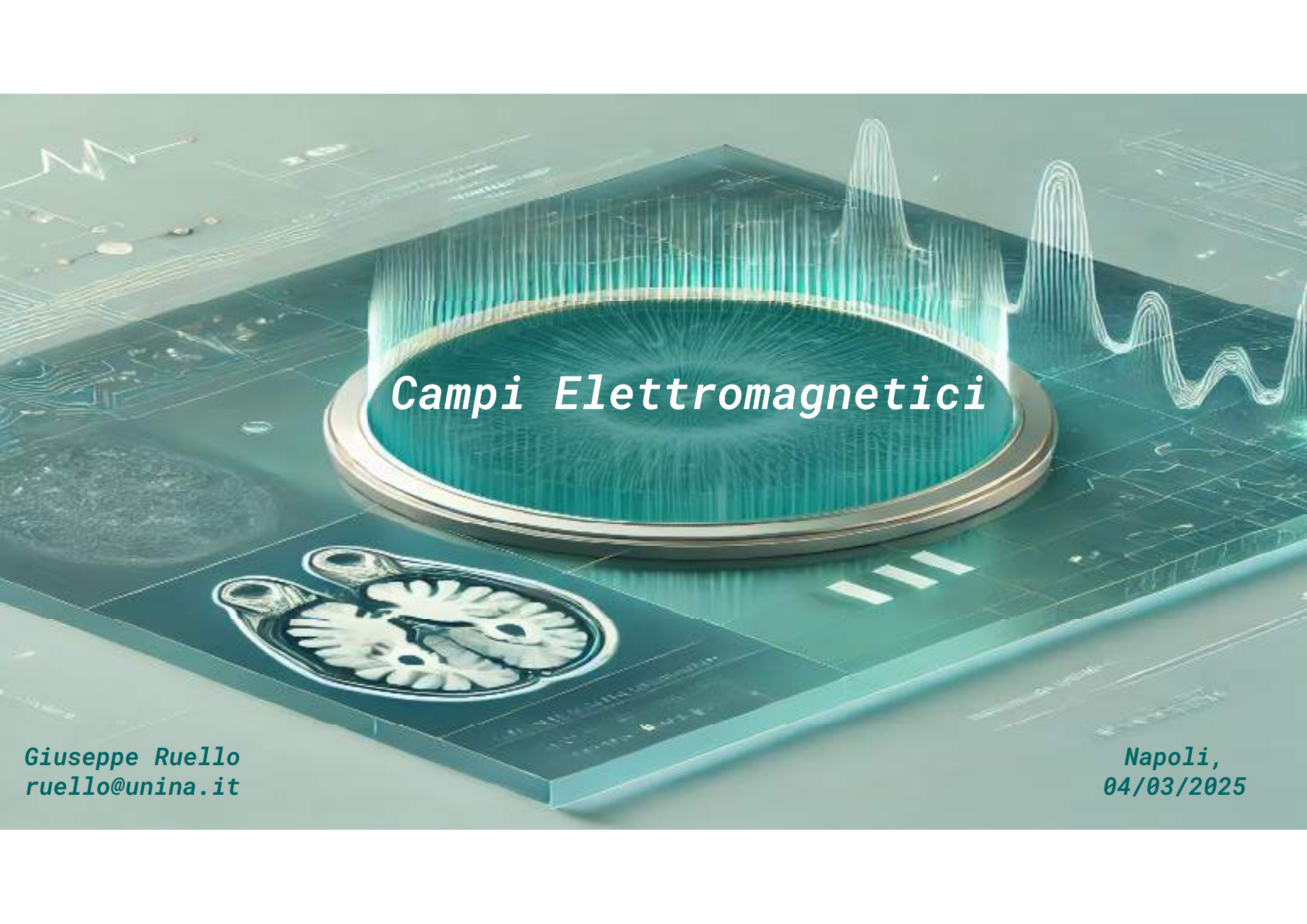




Campi Elettromagnetici

Giuseppe Ruello
ruello@unina.it

Napoli,
04/03/2025

Cosa sono i Campi Elettromagnetici?



Cosa sono i Campi Elettromagnetici?



Perché Campi Elettromagnetici?

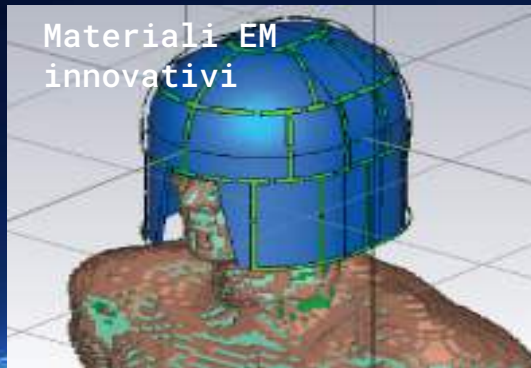


Campi Elettromagnetici in diagnostica

Risonanza
Magnetica



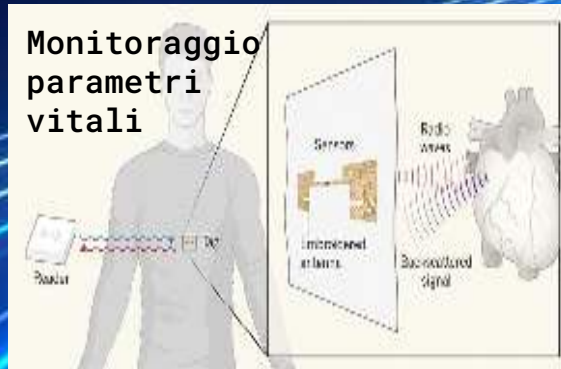
Materiali EM
innovativi



Navigazione
in chirurgia



Monitoraggio
parametri
vitali

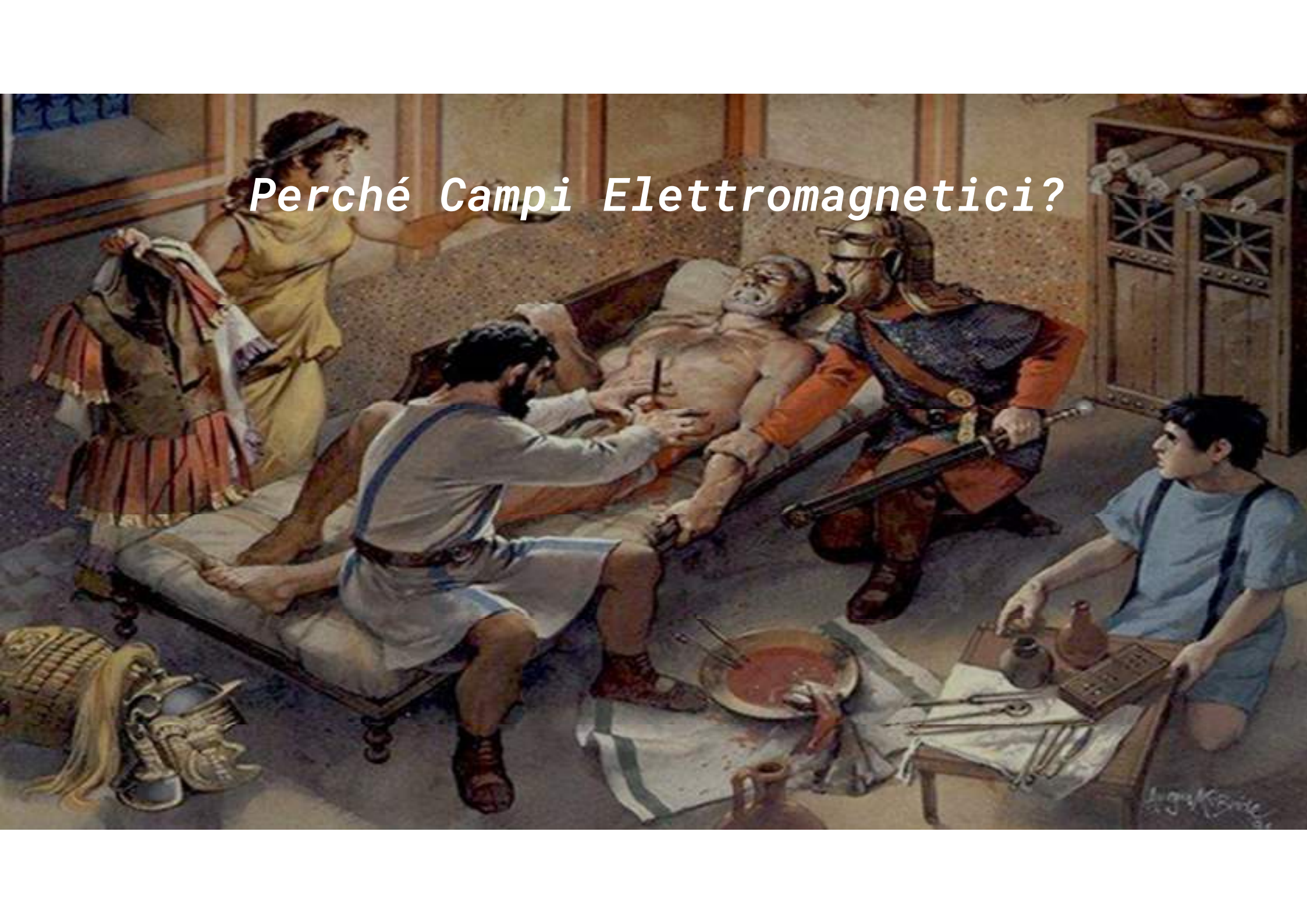


Sensori
Indossabili



Elettro-
Magneto-
encefalogramma

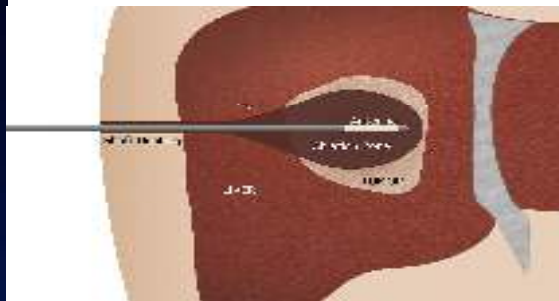




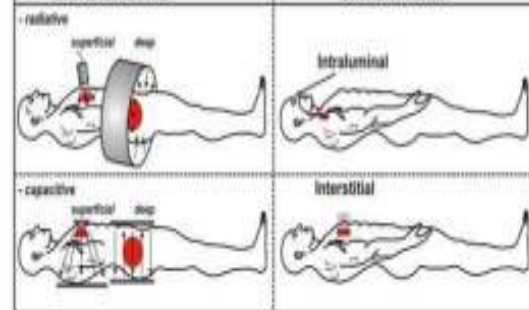
Perché Campi Elettromagnetici?

Campi Elettromagnetici in terapia

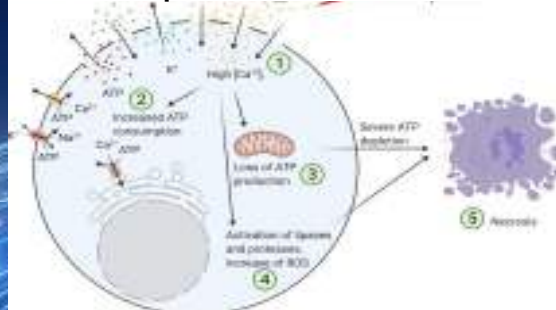
Ablazione tumori



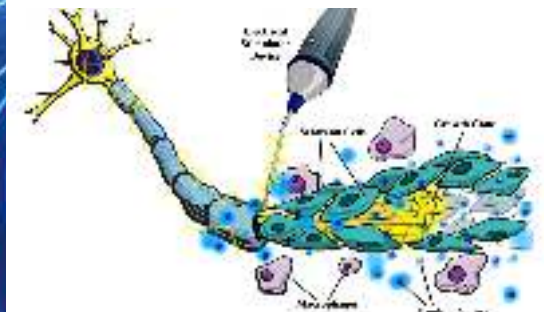
Ipertermia



Elettroporazione



Stimolazione elettrica



Stimolazione magnetica



Perché Campi Elettromagnetici?



Argomenti del corso

Trasmittitore

Mezzo trasmissivo (canale)

Ricevitore



Gli strumenti

$$\left\{ \begin{array}{l} \oint_c \underline{e} \cdot \hat{i}_c dc = -\frac{\partial}{\partial t} \int_s \underline{b} \cdot \hat{i}_n dS \\ \oint_c \underline{h} \cdot \hat{i}_c dc = \frac{\partial}{\partial t} \int_s \underline{d} \cdot \hat{i}_n dS + \int_s \underline{j} \cdot \hat{i}_n dS \\ \oint_s \underline{d} \cdot \hat{i}_n dS = q \\ \oint_s \underline{b} \cdot \hat{i}_n dS = 0 \end{array} \right.$$

q : carica elettrica

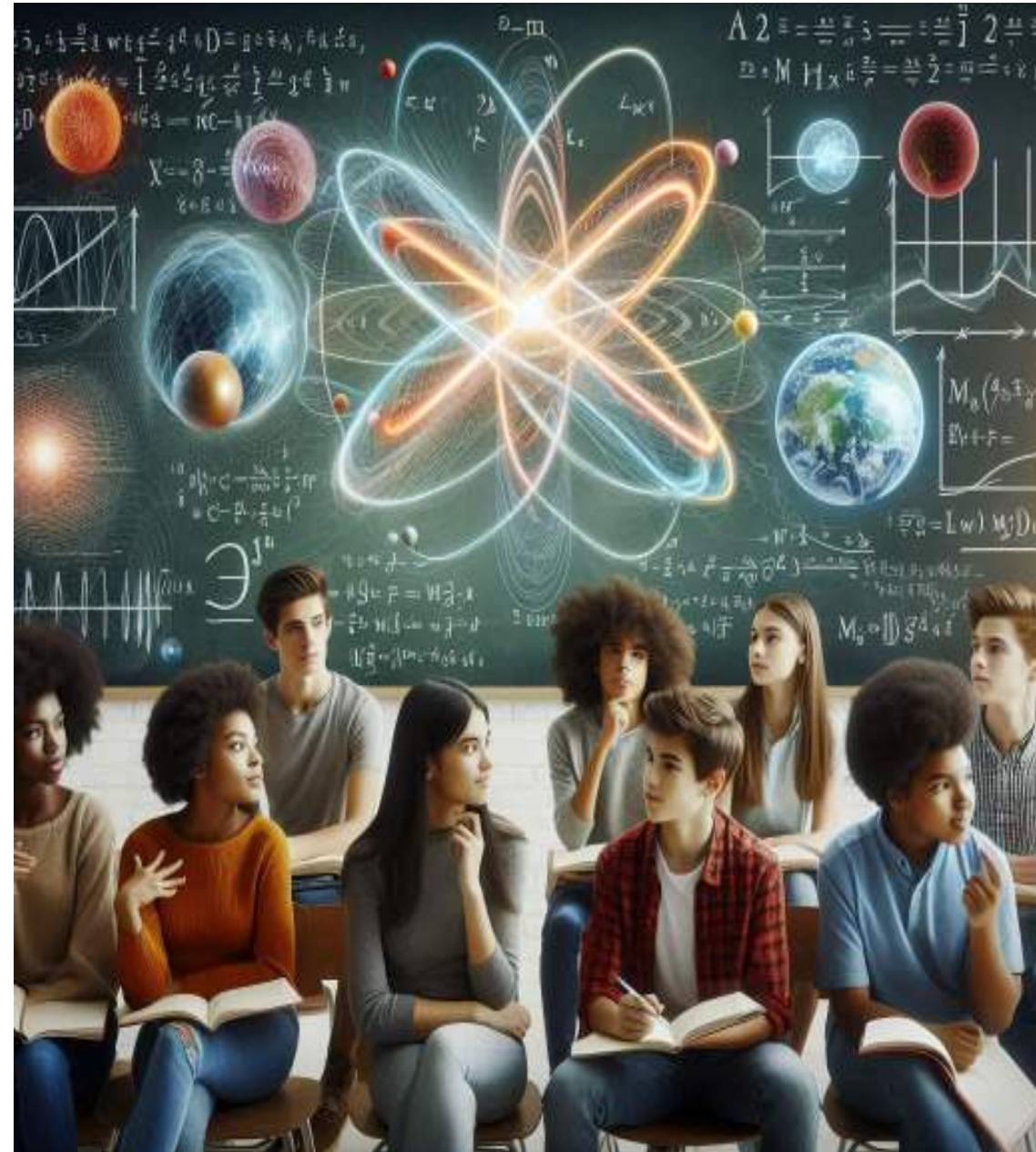
$\underline{j}$: densità di corrente

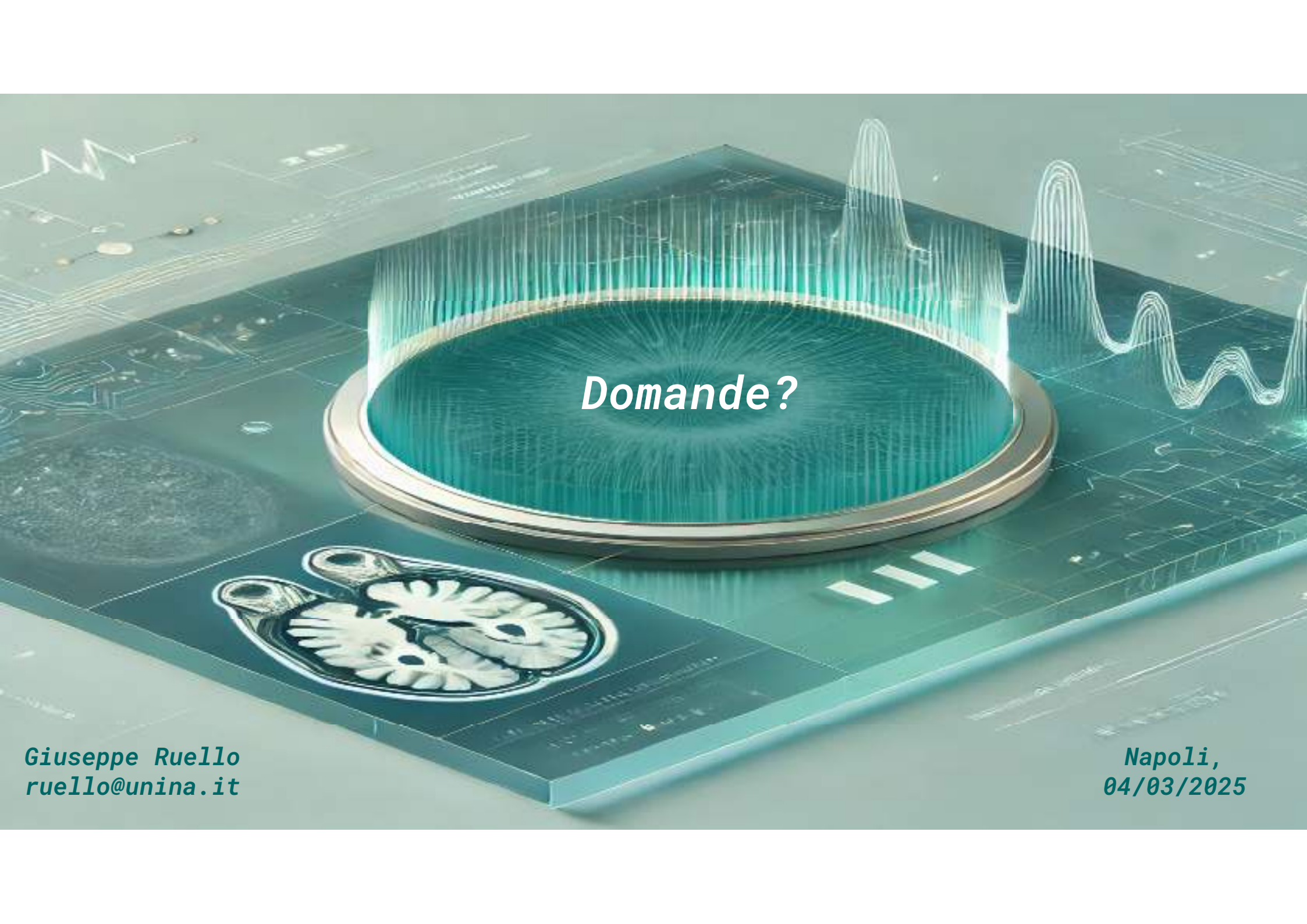
$\underline{e}$: campo elettrico

$\underline{h}$: campo magnetico

$\underline{d}$: induzione elettrica

$\underline{b}$: induzione magnetica





Domande?

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