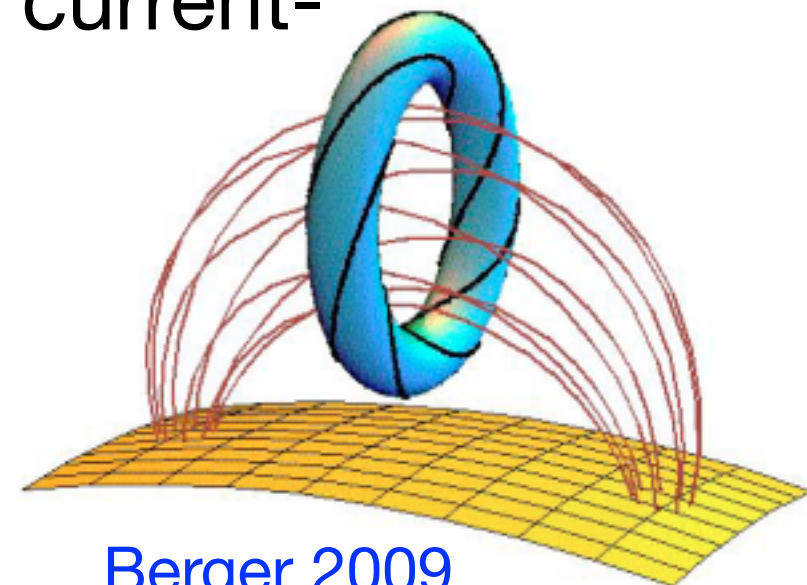


Relative Magnetic Helicity

- The relative magnetic helicity can be separated into two parts
 - $H_j = \int_{\Omega} \mathbf{B}_j \cdot \mathbf{A}_j d^3\vec{x}$ and $H_{pj} = 2 \int_{\Omega} \mathbf{B}_j \cdot \mathbf{A}_p d^3\vec{x}$
 - H_j is the self helicity of the current-carrying field.
 - H_{pj} is the mutual helicity between the current-carrying and the reference field.
 - Both parts are gauge independent.



Newly Defined Helicity



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