



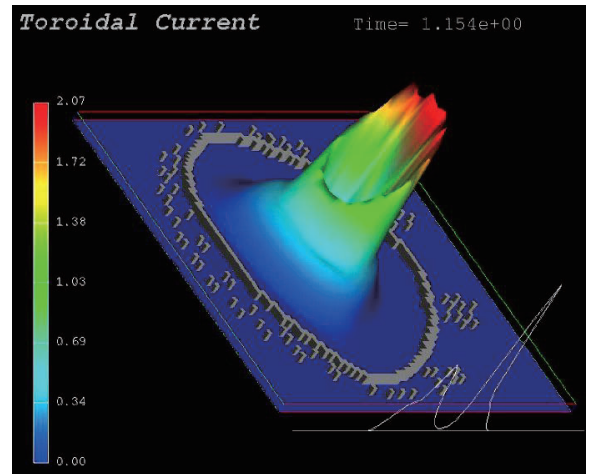
Application of Strong Magnetic Field: Nuclear Fusion & SMES (Superconducting Magnetic Energy Storage)

Laboratory for Zero-Carbon Energy

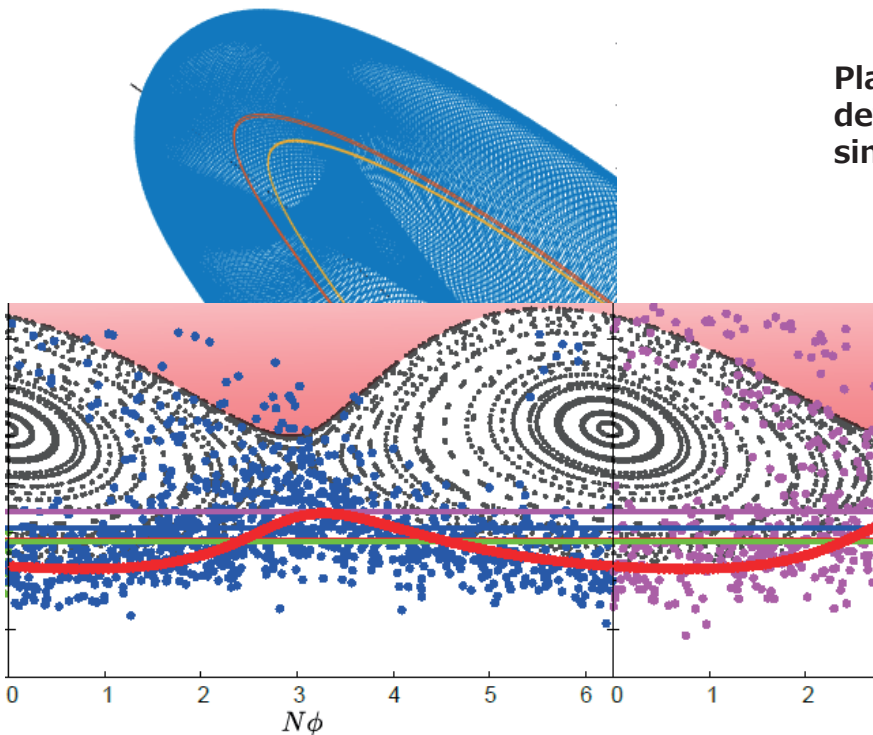
<http://www.zc.iir.titech.ac.jp/~htsutsui/>

- Equilibrium and Stability of Fusion Plasma
- Confinement of High Energy Particles
- Superconducting Magnetic Energy Storage

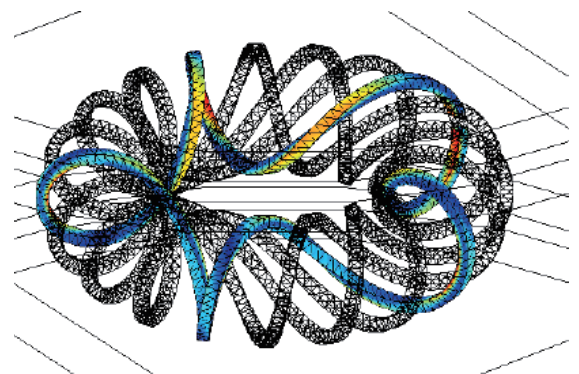
Magnetic confinement fusion is an approach to achieve thermonuclear fusion that uses magnetic fields to confine the high-temperature plasma. We study the equilibrium, stability and confinement of plasma by use of supercomputing and others. Superconducting magnetic energy storage (SMES) is also investigated by use of theory and technique developed in magnetic confinement fusion.



Plasma current distribution in a tokamak device by a MagnetoHydroDynamic simulation



Trajectories of a particle and its guiding center, and a trajectory by guiding center approximation near a banana tip. Time evolution of a particle positions in a Poincare map.



Distribution of stress in a Virial-Limit coil