1. Advances in computational electromagnetics (with potential applications to multiscale/multiphysics problems)

High-frequency and asymptotic methods
Integral-equation methods
FDTD methods
FEM methods
Hybrid methods
Fast Solvers
Transient Simulation Approaches
High-order methods
Techniques for Inverse problems

2. Multiphysics computations

EM-acoustic phenomena
EM-quantum phenomena
EM-thermal phenomena
EM-mechanical phenomena
EM-circuit simulation
EM-device simulation
EM-thermal-mechanical simulation
EM- device-circuit simulation
Modeling of other physical effects in electromagnetic structures

3. Multiscale computations

Non-uniform meshing, multigrid and subgridding methods
Multilevel Algorithms
Domain Decomposition Methods
Hierarchical and multiresolution basis functions

4. Surrogate modeling and optimization

Optimization methods
Surrogate models and space mapping
Uncertainty quantification

5. Special hardware and other emerging methods

Machine learning based computational methods

Parallel and special-processor-based computational methods
Quantun computer based methods
Other emerging computational techniques