Basic Research:
...systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind.
Special Interests:

**Near Optimization**  $f$: a function of interest. Don’t find only
\[ \hat{x} \equiv \arg \max f(x). \]  
Find \( \{ x : f(x) \geq f(\hat{x}) - \epsilon \} \)

**Stochastic Hybrid Systems**  A system of equations for variables
that evolve through time. Some variables evolve continuously (think differential equations); others evolve in jumps (think Markov processes). Either type may evolve stochastically.

**anything else**  special data types, DoE, . . .