Abstraction of Cyber-Physical Interplays and Its Application to CPS Design

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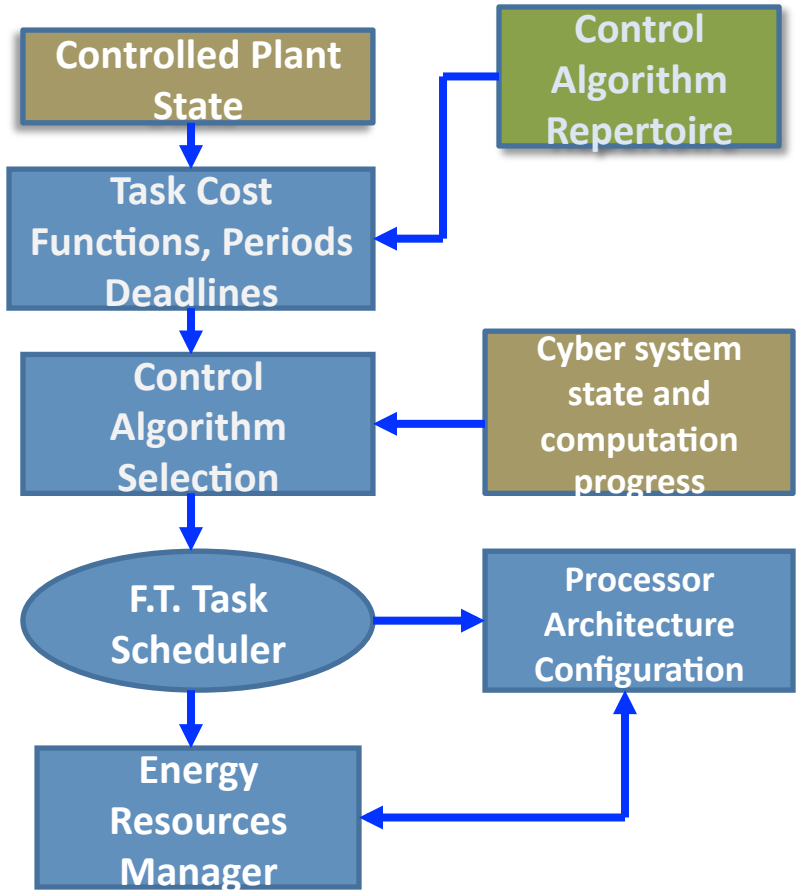
- Plant-to-Computer Interface: Specifies how the application's QoS degrades as a function of:
  - Current application and environmental state
  - Computational delays
  - Computational imprecision
  - Residual mission lifetime
- Computer-to-Plant Interface: Specifies
  - Task periods, precision levels, and priority rules
  - Use of energy reserves
  - Task milestones completion
  - Computational health