Outline

- Classification
- Sections in a Typical Research Paper
- Summaries of Sample Papers

Redwine/Riddle Maturation Model

Radical Solution
- Rate-Monotonic Scheduling (RMS) and Earliest Deadline First (EDF)

Enhanced Solution
- Enhancements/Extensions of RMS and EDF → CTI, RTRR, EDV, VED
Shaw’s Research Types

- Question: Development Method
- Result: Technique
- Validation: Analysis

Sections in a Typical Research Paper

- Algorithm description
- Theorems & Proofs
- Validation

Algorithm Description

- Similarities with existing algorithms
- Deficiencies of existing algorithms
- Improvements over existing algorithms
- Explanation of the algorithm

Theorems & Proofs

- Mathematical / Logical proofs
- Why the algorithm works (or should work)
- “New” papers rely more heavily on this than “extension” papers
Validation

- Simple Example with Explanation
- Sample Code
- Simulation
- Comparison to existing algorithms

RMS & EDF Algorithms

- Newman: Radical Solution
- Shaw:
  - Question: Development Method
  - Result: Technique
  - Validation: Analysis
- Relied heavily on proofs
- Simple example

CTI Algorithm

- Newman: Enhanced Solution
- Shaw:
  - Question: Development Method
  - Result: Technique
  - Validation: Analysis
- Extension of RMS
- Simple example, Simulation & Comparison

Real-Time Round Robin Algorithm

- Newman: Enhanced Solution
- Shaw:
  - Question: Development Method
  - Result: Technique
  - Validation: Analysis
- EDF in conjunction with time slots
- Simple example
EDV & VED Algorithms

- Newman: Enhanced Solution
- Shaw:
  - Question: Development Method
  - Result: Technique
  - Validation: Analysis
- Extension of EDF & HVF
- Simple example, Simulation & Comparison

Bibliography