"Weekend Workshop on Block & File System Drivers" by **Anil Pugalia**

Day 1

+ Session 1: Understanding the Block Drivers

- Understanding a Generic Hard Disk
- Request Queue Ecosystem
- Kernel APIs & Data Structures
- Creating a RAM Block Device
- Partitioning a Block Device

+ Session 2: File System Design & Implementation

- Hardware File System & Formatting
- File System Design & Challenges
- Virtual File System & its Role

Day 2

+ Session 3: File System Implementation (Contd.)

- Kernel File System
- The 5 Operation Sets
- Coding for the bunch of System Calls

+ Session 4: File System in Action

- Modifications, Enhancements, Feature Additions

+ Wrap Up

- Conclusion
- What Next?

Caution: All sessions are highly interactive & hands-on with 'C' coding

Hands-On Details

+ *Understanding the Block Drivers*

- Experiments with a RAM-based Block driver
- Creating Partitions and Formatting them

+ *File System Design & Implementation*

- Designing a custom File System
- Application to Format the custom File System
- Coding for the custom File System
- Mounting the custom File System

+ *File System in Action & TODOs*

- Experiments with fundamental File System operations triggered by cd, touch, mkdir, cp, rm, ...
- Add the feature of (efficient) renaming of files (Homework)
- Enhance the File System to Support bigger file sizes (optional Homework)