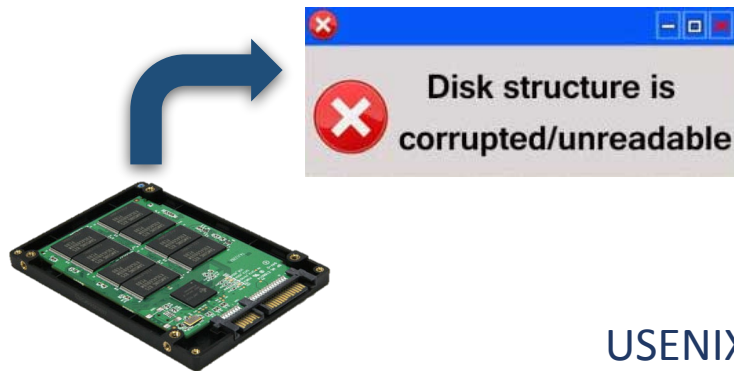# Evaluating File System Reliability on Solid State Drives

Shehbaz Jaffer, **Stathis Maneas**, Andy Hwang, Bianca Schroeder

Disk structure is corrupted/unreadable

Computer Science
UNIVERSITY OF TORONTO

USENIX ATC '19 Lightning Talk

Introduction & Motivation

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- How do these file systems deal with partial drive errors?

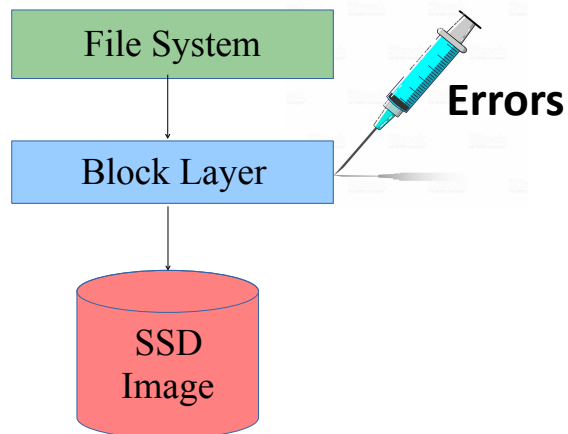# Research Questions & Methodology

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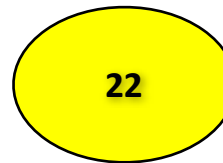**What we know** (IRON File Systems, 2005):

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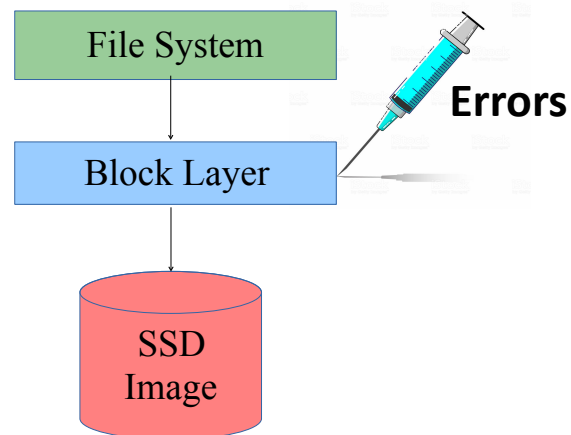
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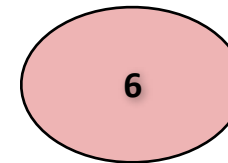- Does not consider file system checkers.

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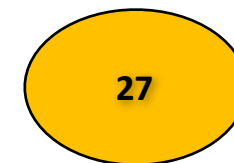# Research Questions & Methodology

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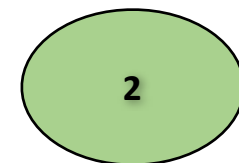- Can their system checker fix errors?

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7,128 Test Cases

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F2FS	☹️	☹️	• Does not detect and report write errors. • Can become unmountable due to data corruption. • System checker has room for improvement.