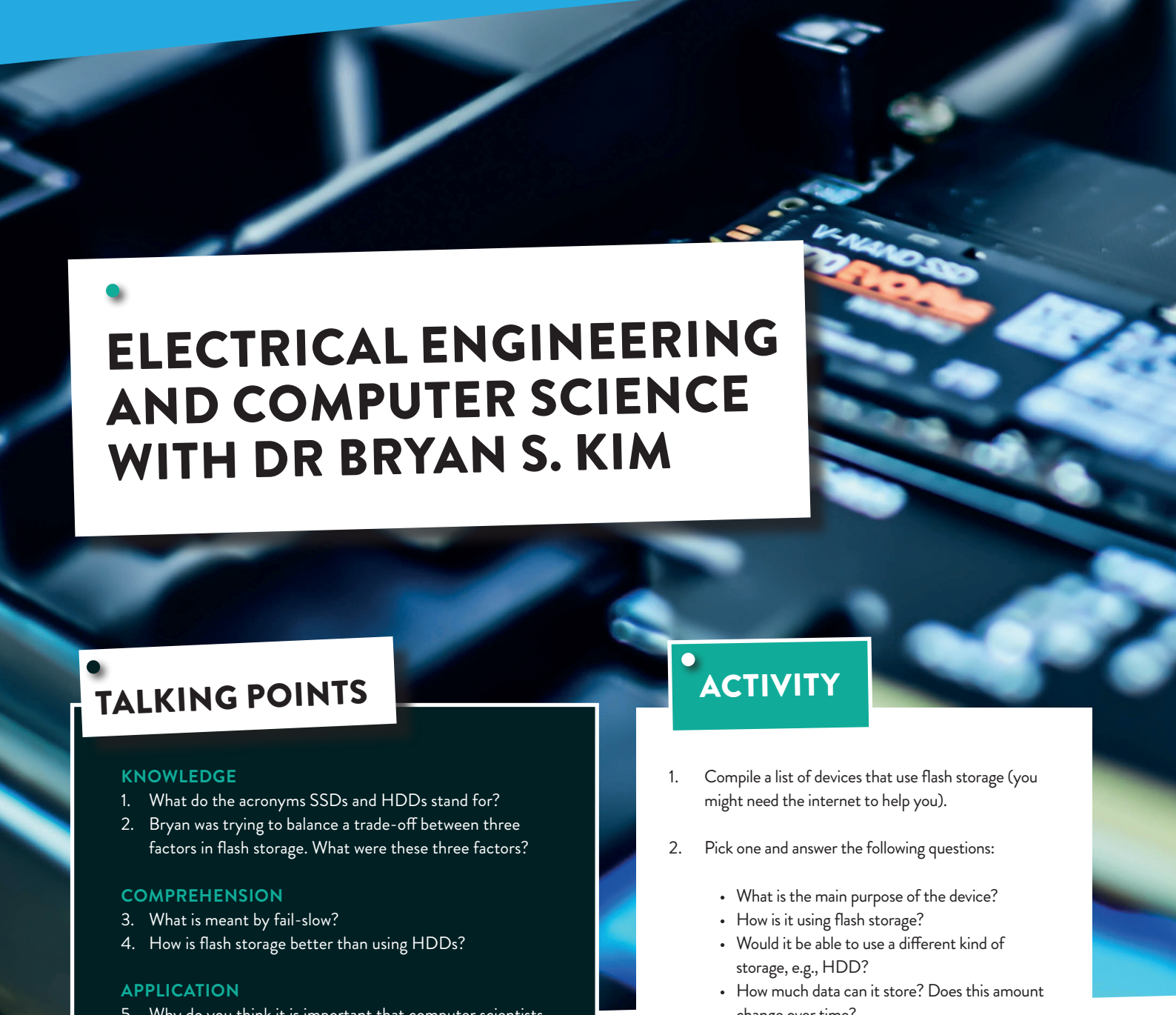


# ELECTRICAL ENGINEERING AND COMPUTER SCIENCE WITH DR BRYAN S. KIM

## TALKING POINTS

### KNOWLEDGE

1. What do the acronyms SSDs and HDDs stand for?
2. Bryan was trying to balance a trade-off between three factors in flash storage. What were these three factors?

### COMPREHENSION

3. What is meant by fail-slow?
4. How is flash storage better than using HDDs?

### APPLICATION

5. Why do you think it is important that computer scientists have a balance between written theory and hands-on practical research?

### ANALYSIS

6. What was the main issue Bryan was trying to solve in current flash storage systems?
7. What are some of the ways flash storage is being made more reliable now?

### EVALUATION

8. Bryan is creating a capacity-variant storage system. How effectively can this improve the current issues in flash storage?
9. Can you think of any potential issues Bryan may encounter when researching and implementing the new system?

### CREATIVITY

10. Bryan's research focuses on memory storage systems. What other aspects of our technology devices would you like to see improved? What might this look like?

## ACTIVITY

1. Compile a list of devices that use flash storage (you might need the internet to help you).

2. Pick one and answer the following questions:

   - What is the main purpose of the device?
   - How is it using flash storage?
   - Would it be able to use a different kind of storage, e.g., HDD?
   - How much data can it store? Does this amount change over time?
   - How reliable is the device's storage?
   - How could Bryan's research improve the performance and/or capacity of the storage?

3. Compare your answers with a classmate:
   Which device did they choose?
   How do their answers differ from yours?

## MORE RESOURCES

To explore an interest in computer science, Bryan recommends the Computerphile YouTube channel:

**www.youtube.com/user/Computerphile**

Syracuse University, where Bryan works, runs several ambassador programmes that do outreach in local schools and the wider community: **www.syracuse.edu**