

## **SERKAY OLMEZ**

Senior Staff Data Scientist—Longmont, CO

Nine years ago, Serkay Olmez joined Seagate as a test and integration engineer, working on various HDD products and later on the development of HAMR technology. Eventually, Serkay's exceptional skills in data analysis led to his current role as senior staff data scientist in the Seagate Research group.

With a PhD in theoretical high-energy physics, Serkay says his academic work in this field gave him a strong background in math. This was instrumental in his design of a mathematical model that predicts the durability and availability of erasure-coded data for Seagate's Storage Solutions group. "The math helped me push the model analytically to cases which were only accessible by numerical simulations," he says.

The level of sophistication of Serkay's model allows the storage solutions group to accurately predict the data durability and availability of the storage systems they design, based on the input parameters of the system. The model supports a wide range of features offered in the Seagate systems.

These features include distributed parity, where data is distributed to a pool of drives so that even if a drive fails, its data is not lost. It's restored quickly from the other drives in the pool. Another feature, hierarchical erasure coding, overlays multiple erasure-coding schemes to further improve data durability. Serkay's model is also applicable to a system feature called ReMan, which remanufactures a drive after a head fails, extending the life of the drive by configuring it to run with fewer heads.

Serkay's model is a potential game-changer in the world of storage systems. "We're planning to use it to engage at a deeper level with our partners and customers," he says.

And that can only lead to greater demand for Seagate's entire enterprise solutions portfolio, says Serkay's manager, Paul Kusbel, senior engineering director, Office of the CTO. "More and more, the success of our core products depends on an understanding of how they interact with the systems they are a part of. The results of Serkay's model are being used by some of our largest customers to guide their design decisions and to ensure the success of our products in their applications. Serkay is providing tools that will enable us to deliver the most competitive products in the market."