Parallel hardware is today's reality and concurrency lies at the heart of a program's performance: Sequential execution only exercises a fraction of the capabilities of modern processors and parallel implementations are required to fully utilize the available computing resources. Many programming models and language extensions for parallel computing tailored to various programming languages have been proposed. Yet, JavaScript, the lingua franca of the web, remains locked in the sequential past. With River Trail, our proposal for a data-parallel programming API for JavaScript, we address this shortcoming. In this talk, I will present the River Trail API, focusing particularly on the design process and particularities of extending a web technology like JavaScript.

I will discuss examples, show performance improvements and provide an outlook on our future work towards putting even more parallel computing power into the hands of web developers.