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## Class Is Now in Session

**BSD** got its start in the research community, having been funded, in part, by DARPA during the 1970s and '80s. As is demonstrated in this issue, FreeBSD has continued its close cooperation with research and teaching. Kirk McKusick takes us through the history of the Fast File System, the longest lived of the Unix filesystems, and the subject of continuous research and upgrading from 1979 to the present day. FFS is the de-facto standard for deployment on servers, desktops, laptops, and embedded systems. Recent research on trusted computing and capability systems at the University of Cambridge has brought us CHERI, a rethinking of computer architecture that extends the hardware with support for security features. The operating system for CHERI is FreeBSD, and the experience building this system and what it means for the future of computing are covered by Brooks Davis in "CHERI: Building a Foundation for Secure, Trusted Computing Bases." Courses on operating systems have not changed much over the 40 years that Unix and Unix-like systems have predominated within universities. The flavors have changed, but not the way in which these courses are taught. The advent of advanced tracing systems, like DTrace, a standard feature of FreeBSD, has allowed a rethinking of how OS courses are taught. Robert Watson at the University of Cambridge has been teaching a graduate level course using tracing and FreeBSD for the last two years, and I've been teaching a version for practitioners at various conferences and in industrial settings. Our experiences in building and deploying this course, which is also available online under a permissive license, are detailed in "Teaching Operating Systems with FreeBSD—Through Tracing, Analysis, and Experimentation."

The *Journal's* columns continue to track all that's going on in FreeBSD. Dru Lavigne interviews Gleb Smirnov, who works on FreeBSD for Netflix, as well as being a member of the FreeBSD Project's core, release engineering, and security teams. Our latest Ports Report discusses some significant changes in the ports tree which everyone should be tracking closely. And Steven Kreuzer digs into the upcoming 11 RELEASE to show us what's new and exciting in the head of the FreeBSD development branch.

Most people think of open source as occurring mostly online, but it turns out that meeting in person remains an important way of keeping a project moving along smoothly and for introducing new people to the project. Check out the report on FOSDEM by Rodrigo Osorio. FOSDEM is a huge conference with over 5,000 attendees every year.

We're well into 2016 and we've already had our first major BSD Conference, AsiaBSDCon, in Tokyo, Japan. BSDCan is coming up in June and EuroBSD in the fall. There will be a lot of chances to meet and greet with the FreeBSD world. If you can't get there we'll bring you the news here at *FreeBSD Journal*.

Sincerely,

George Neville-Neil

For the *FreeBSD Journal* Editorial Board