

EINLADUNG

- Zeit: Donnerstag, 12. November 2009, 15.00 Uhr
- Ort: Seminarraum I1 (4017), Ahornstr. 55
- Referent: Dipl.-Inf. Stefan Richter
- Thema: **World Libraries — Towards Efficiently Sharing Large Data Volumes in Open Untrusted Environments while Preserving Privacy**

Abstract Public libraries have served an invaluable function for a long time. Yet in an age of digital media, traditional methods of publishing and distributing information become increasingly marginalized. In this talk, we pose the question if and how information technology can be employed to find functional alternatives, conforming to the needs of society that have been changed by information technology itself. To this end we introduce the concept of *world libraries*: Massively distributed systems that allow for the efficient sharing of large data volumes in open, untrusted environments while preserving privacy. After defending the utility of our definition with philosophical, economical, and legal arguments, we examine anonymous file sharing systems with regard to their applicability for world libraries. We identify reasons why these systems have failed to achieve popularity so far, as well as promising principles and structures for successful world library implementations. Of these, *distributed hash tables* (DHTs) turn out to be particularly important. That is why we study their security and privacy properties in detail. Using both analytical models and simulation, weaknesses in earlier approaches are shown, leading us to the discovery of the first practical DHT that scalably defends against active adversaries. Finally, we summarize our findings and their impact on world library design.

Es laden ein: Die Dozenten der Informatik