

# Presentations

## Talks, Slide Decks, Blog Posts, and other Presentations

There are many talks publicly available on the web that contribute to knowledge of HotSpot internals. Here are some good ones.

*Note to maintainers: Please maintain lists in reverse chronological order, with links marked by date.*

### Talks

- Christian Hagedorn (February 2021)  
[New Test Framework with IR Verification](#)  
Compiler Staff Meeting
- Tobias Hartmann (October 2019)  
[Java - Quo Vadis?](#)  
Voxxed Days, Lugano, Switzerland
- Roland Westrelin  
[Loop Strip Mining in C2](#) (January 2018)  
Compiler Team Offsite, Santa Clara
- Igor Veresov  
[AOT/Graal changes walkthrough](#) (January 2018)  
Compiler Team Offsite, Santa Clara
- Igor Veresov and Vladimir Kozlov  
[Ahead of Time Compilation](#) (January 2018)  
Compiler Team Offsite, Santa Clara
- Vladimir Ivanov  
[Project Panama - Status Update](#) (January 2018)  
Compiler Team Offsite, Santa Clara
- Tobias Hartmann and Roland Westrelin  
[State of the Values](#) (January 2018)  
Compiler Team Offsite, Santa Clara
- Tobias Hartmann  
[What's Cool in Java 8, and New in Java 9 - From a VM engineer's perspective](#) (April 2017)  
Oracle Code Berlin, Germany
- Tobias Hartmann, Zoltán Majó  
[HotSpot VM Under the Hood](#) (Feb 2016)  
Bucharest Technology Week, Romania
- Vladimir Ivanov  
[State of java.lang.invoke Implementation in OpenJDK](#) (August 2015), [video](#)  
Santa Clara, JVM Language Summit
- Tobias Hartmann  
[Efficient Code Cache Management for Dynamic Multi-Tiered Compilation Systems](#) (September 2014)  
PPPJ in Krakow, Poland
- Vladimir Kozlov  
[Loop optimizations in HotSpot VM Server Compiler](#) (October 2011)  
[The C2 Register Allocator](#) (March 2014, slides by Niclas Adlertz)  
Compiler Team Offsite, Santa Clara

### Posts

- Vladimir Ivanov  
[Invokedynamic: Deep Dive](#) (Mar 2015)  
The most detailed available description of Method Handles and Invokedynamics in HotSpot
- Aleksey Shipilëv  
[Black Magic of \(Java\) Method Dispatch](#) (Feb 2015, updated 2016)  
Everything you wanted to know about Black Deviously Surreptitious Magic in low-level performance engineering.

### Other sites

- [Compiler and JVM Research at JKU](#)  
Collaboration with Institute for System Software at JKU (since 2001) on dynamic compiler optimizations and JVM-related research topics.
- [Aleksey Shipilëv: One Stop Page](#)  
Blog and presentations on Java and the JVM implementation and performance.