



Welcome!

C++ Distilled: Language Focus

Core C++ VI, 12/04/18

The C++ Lands

Its amazing creatures and weird beasts

explorer
Alena (<http://alenacpp.blogspot.com>)

cartographer
Jim (<http://jim.pp.ru>)

Core C++ Goals

- **Diverse community**
- **Broad range of topics**
- **Monthly meetings**





Presence



www.meetup.com/CoreCpp/

CoreCppIL <https://goo.gl/FYnqKu>



@corecpp twitter.com/corecpp

C++ Slack: #ug_il_corecpp



github.com/CoreCppIL/Meetups



NEW

www.facebook.com/corecpp/



Share your blog posts

- Retweet/post from group's account
- Post to Facebook page

Adi Shavit

adishavit@gmail.com

@adishavit 

Michael Gopshtein

mgopshtein@gmail.com

@michael_gop 

michael.gopshtein 



Call For Action



- **Give talks!**
 - 30min – 1h full talk
 - 10-15-5min lightening talk (Core Guidelines, any other subject)
- Share interesting posts for “news” section
- Photos/Videos
- **Sponsor us!** Host us



Invite your friends!
Tweet, post, like,
blog, share!



Next Meetup

28 May (Mon)

Modiin ShellTech

<https://isocpp.org/wiki/faq/conferences-worldwide/>

C++ Conferences

- Next time...
 - [ACCU](#), 11-14/Apr, Bristol UK
- Register:
 - [C++now](#), 6-11/May, Aspen (Colorado US). Program is online
 - [NDC Oslo](#), 11-15/Jun
- **Submit:**
 - [NDC TechTown](#), 27-30/Aug, Kongsberg (Norway) **will pay your flight + hotel***
 - [CppCon](#), 23-29/Sep, Bellevue (near Seattle) **pays too***
 - [code:dive](#), 7-8/Nov, Wroclaw, Poland **free registration**
 - [Meeting C++](#), 15-17/Nov, Berlin [soon]
- Later:
 - [Italian C++](#), 23/Jun, Milan



Developing Talk Ideas



Jon Kalb

2018-04-09

comments, how to

As a conference organizer, I'm always in speaker recruitment mode. Engaging presentations are the life blood of conferences and stimulate the most important part of a conference—the attendee discussion outside of scheduled sessions.

| *I don't know what to talk about.*

http://slashslash.info/2018/04/talk_ideas/

Jacksonville ISO C++ Meeting

- span
- `[[no_unique_address]]`

```
struct Empty {}; // empty class

struct X {
    int i;
    [[no_unique_address]] Empty e;
};
```

- ~~typename~~ (sometimes)
- `[[likely]]` and `[[unlikely]]`
- `<chrono>` to support calendars and time zones

SG15 (Tooling): 1st meeting

SG16 (Unicode)
new study group

Major Features

Feature	Status	Depends On	Current Target (Conservative Estimate)	Current Target (Optimistic Estimate)
Concepts	Concepts TS v1 published and merged into IS		C++20	C++20
Ranges	Ranges TS v1 published	Concepts	Core in C++20 and rest in C++23	C++20
Contracts	Proposal		C++23	C++20
Modules	Modules TS v1 published		C++23	C++20
Coroutines	Coroutines TS v1 published		C++23	C++20
Executors	Proposal		TS in C++20 timeframe and IS in C++23	C++20
Networking	Networking TS v1 published	Executors	C++23	C++20
New and future and async	Concurrency TS v1 published	Executors	C++23	C++20
Reflection	TS working paper		TS in C++23 timeframe and IS in C++26	TS in C++20 timeframe and IS in C++23



C++ IS schedule

2017.2 – Toronto	First meeting of C++20
2017.3 – Albuquerque	<i>Try to front-load “big” language features including ones with broad library impact (incl. try to merge TSes here)</i>
2018.1 – Jacksonville	
2018.2 – Rapperswil	
2018.3 – San Diego	<i>EWG: Last meeting for new C++20 language proposals we haven’t seen before EWG → LEWG: Last meeting to approve C++20 features needing library response LEWG: Focus on progressing papers on how to react to new language features</i>
2019.1 – Kona	<i>* → CWG,LWG: Last meeting to send proposals to wording review (incl. TS merges) C++20 design is feature-complete</i>
2019.2 – Cologne	<i>CWG+LWG: Complete CD wording EWG+LEWG: Working on C++23 features + CWG/LWG design clarification questions C++20 draft wording is feature complete, start CD ballot</i>
2019.3 – Belfast	CD ballot comment resolution
2020.1 – TBD	CD ballot comment resolution C++20 technically finalized, start DIS ballot

C++ News

- [FLIP](#) 23/Jul: 1st IL conference on λ (submissions open)

- bit.ly/CppCastSurvey



(((Jon Kalb))) @_JonKalb · Mar 27

If you listen to CppCast, you should respond. If you don't listen to CppCast, you should. #CppCast #Cpp

- <https://blogs.msdn.microsoft.com/oldnewthing/20180328-00/?p=98365>

(about atomics and memcpy)



- <https://abseil.io/tips/142>

(multiparameter constructors and 'explicit')



RSVP in the Meetup
page now to enter the license draw



Mission statement:

Photorealistic wearable Augmented
Reality experience.



Current AR challenges

UX



Resolution

31.5 arcseconds

For 110x110 degrees:
12,600x12,600 pixels
= **19** 4K screens

Realtime Tracking



Target response time:
5 milliseconds

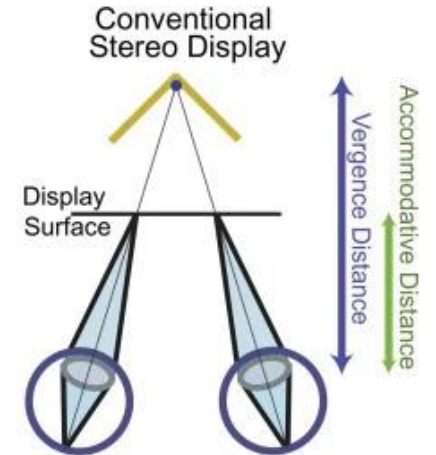
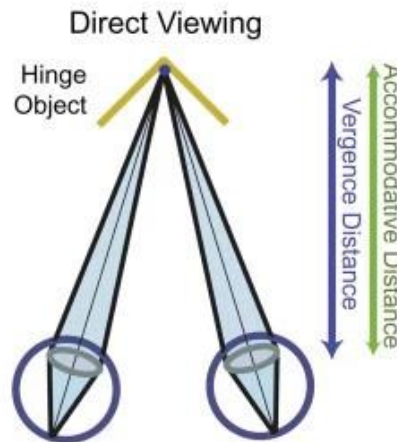
Size

Whole day
wearable




Brightness

Outdoor use



The logo for the GPU Technology Conference is a green parallelogram with a white border. Inside, the text "GPU" is written in a large, bold, white sans-serif font. To its right, the words "TECHNOLOGY" and "CONFERENCE" are stacked vertically in a smaller, white, all-caps sans-serif font.

GPU TECHNOLOGY
CONFERENCE

- By  **NVIDIA.**
- 4 days, 1 pre-conference training day, expo, posters
- Annual conference:
San Jose / Munich / Taiwan / **Israel** / Washington DC / Japan
- 8.5K participants
- 990 sessions
 - AI ~350
 - Automotive ~115
 - Graphics, rendering ~140
 - GPU programming/tools/languages ~200

DGX Station

- *Personal Supercomputer*
- 500 Tflops
- 20,480 CUDA cores
- 2,560 Tensor cores







Real Time Ray Tracing (RTX)

VR/AR



ZED SHAW'S HARD WAY SERIES



Learn the **C** the **HARD WAY**

Practical Exercises on the Computational Subjects You Keep Avoiding (Like C)

ZED A. SHAW

LEARN JAVA THE EASY WAY

A HANDS-ON INTRODUCTION TO PROGRAMMING

BRYSON PAYNE

COVERS JAVA 8 AND 9



no starch press

Agenda

- GTC Trip Report **v**
- C4GC: Concurrency ([Dima Danilov](#))
- Moving to C++17: personal experience ([Yair Friedman](#))

- Template Metaprogramming is Fun ([Sasha Goldshtein](#))



Dima Danilov

Dima Danilov is a Sr. SW Engineer at LiveU and a long-term C++ enthusiast. He has ~10 years experience in software development in various fields such as embedded, video, application performance management and traffic capture/analysis. Dima is a die-hard fan of flying squirrels.

Yair Friedman

Yair is a secure software professional at Intel Jerusalem. He is also modern C++ evangelist and have been coding in C++ for 27 years. Yair is also a Monty Python fan and always expects the Spanish inquisition.

Sasha Goldshtein

Sasha Goldshtein is the CTO of Sela Group, a Microsoft MVP and Regional Director, and an international consultant and trainer. Sasha contributes to numerous open source projects around Linux and Windows performance and diagnostics, delivers C++ 11/14/17 training courses, and helps customers diagnose hard issues in production systems. Sasha is a frequent conference speaker and blogger.

5 Min

-5 Min

