

**WG14 N2783**

## **C Floating Point Study Group Teleconference**

July 21, 2021

11:00 AM EDT, 8:00 AM PDT, 3:00 PM UTC

Join from PC, Mac, Linux, iOS or Android:

<https://iso.zoom.us/j/93822427230?pwd=NXk2amY5TjB5MWpsSVBzQW1VemVyUT09>

Password: 363940

Or iPhone one-tap :

US: +16692192599,,93822427230# or +16699006833,,93822427230#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 219 2599 or +1 669 900 6833 or +1 213 338 8477 or +1 408 638 0968 or +1 206 337 9723 or +1 253 215 8782 or +1 346 248 7799 or +1 602 753 0140 or +1 720 928 9299 or +1 971 247 1195 or +1 470 250 9358 or +1 470 381 2552 or +1 646 518 9805 or +1 646 876 9923 or +1 651 372 8299 or +1 786 635 1003 or +1 267 831 0333 or +1 301 715 8592 or +1 312 626 6799 or 877 853 5247 (Toll Free) or 888 788 0099 (Toll Free)

Meeting ID: 938 2242 7230

Password: 363940

International numbers available: <https://iso.zoom.us/u/addZHTdMjO>

Or Skype for Business (Lync):

<https://iso.zoom.us/skype/93822427230>

CFP Wiki: <http://wiki.edg.com/twiki/bin/login/CFP/WebHome>

### **Draft Agenda**

#### **Meeting logistics**

Note taker, mail out notes

#### **Introduction of attendees**

#### **Approval of agenda**

#### **Notes from 2021-06-23 meeting**

Posted on CFP wiki

#### **Study group logistics**

Next meeting dates: Wednesday, August 18?

#### **C++ liaison**

CFP C23 changes summary page for the C++ liaison study group

## C23 integration

Latest C2X drafts:

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2596.pdf>

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2573.pdf>

<http://www.open-std.org/jtc1/sc22/wg14/www/docs/n2478.pdf>

Part 1

Part 2

Part 3

Part 4ab

Part 5abcd

IEC 60559:2020 support

## Carry-over action items

Fred: WG14 N2714 Add "a" before "NaN" in last bullet.

[N2714](#) 2021/05/09 Tydeman, hypot()

Jim: [CFP 1997]: Range error definitions of overflow and underflow.

Overflow: "ordinary accuracy" not defined, but OK.

Underflow: exact minimum normal is underflow. Seems wrong. But no better wording.

AI: Jim Submit to WG14.

- [\[Cfp-interest 2006\] Re: Als related to range errors clarifications](#) *Fred J. Tydeman*
  - [\[Cfp-interest 2007\] Re: Als related to range errors clarifications](#) *Jim Thomas*
    - [\[Cfp-interest 2008\] Re: Als related to range errors clarifications](#) *Fred J. Tydeman*
      - [\[Cfp-interest 2009\] Re: Als related to range errors clarifications](#) *David Chen*
      - [\[Cfp-interest 2011\] Re: Als related to range errors clarifications](#) *Jim Thomas*
      - [\[Cfp-interest 2010\] Re: Als related to range errors clarifications](#) *Jim Thomas*
    - [\[Cfp-interest 2012\] Re: Als related to range errors clarifications](#) *David Hough CFP*
      - [\[Cfp-interest 2013\] Re: Als related to range errors clarifications](#) *Jim Thomas*

[N2746](#) 2021/05/30 Thomas, C23 proposal - overflow and underflow definitions

- [\[Cfp-interest 2038\] Underflow](#) *Fred J. Tydeman*
- [\[Cfp-interest 2044\] Re: Underflow](#) *Jim Thomas*
  - [\[Cfp-interest 2045\] Re: Underflow](#) *Fred J. Tydeman*
    - [\[Cfp-interest 2047\] Re: Underflow](#) *Jim Thomas*
    - [\[Cfp-interest 2048\] Re: Underflow](#) *Fred J. Tydeman*

## Action items from 2021-06-23 meeting

Jim/Rajan: Look into what we proposed for TS part 4 and the status of it.

- [\[Cfp-interest 2056\] AI about status of TS part 4 revision proposal](#) *Jim Thomas*

Jim: Put the CFP C23 changes summary page for the C++ liaison study group on the agenda for next meeting.

Rajan: Re CFP2024: Ask Paul if there are other values and if it is a real problem.

- [\[Cfp-interest 2024\] values of FE\\_TONEAREST...](#) *Paul Zimmermann*

Fred: Draft a response to the remquo issue brought up in CFP1974.

- [\[Cfp-interest 1974\] remquo\(\)](#) *Fred J. Tydeman*
  - [\[Cfp-interest 1975\] Re: remquo\(\)](#) *David Hough CFP*
    - [\[Cfp-interest 1979\] Re: remquo\(\)](#) *Paul Zimmermann*

- [\[Cfp-interest 1983\] Re: remquo\(\)](#) *David Hough CFP*
- [\[Cfp-interest 2035\] remquo\(\)](#) *Fred J. Tydeman*
  - [\[Cfp-interest 2039\] Re: remquo\(\)](#) *Jim Thomas*
    - [\[Cfp-interest 2041\] Re: remquo\(\)](#) *Fred J. Tydeman*
      - [\[Cfp-interest 2043\] Re: remquo\(\)](#) *Jim Thomas*
        - [\[Cfp-interest 2046\] Re: remquo\(\)](#) *Fred J. Tydeman*
          - [\[Cfp-interest 2050\] Re: remquo\(\)](#) *Jim Thomas*

Fred/Jim: Create a paper re CFP2030 to propose a response.

- [\[Cfp-interest 2025\] FLT HAS SUBNORM is 0: what is fpclassify\(<subnormal>\)?](#) *Fred J. Tydeman*
  - [\[Cfp-interest 2026\] Re: FLT HAS SUBNORM is 0: what is fpclassify\(<subnormal>\)?](#) *David Hough CFP*
    - [\[Cfp-interest 2027\] Re: FLT HAS SUBNORM is 0: what is fpclassify\(<subnormal>\)?](#) *Steve (Numerics) Canon*
      - [\[Cfp-interest 2030\] Re: FLT HAS SUBNORM is 0: what is fpclassify\(<subnormal>\)?](#) *Jim Thomas*
- [\[Cfp-interest 2036\] Subnormals](#) *Fred J. Tydeman*
  - [\[Cfp-interest 2040\] Re: Subnormals](#) *Jim Thomas*
    - [\[Cfp-interest 2042\] Re: Subnormals](#) *Fred J. Tydeman*
- [\[Cfp-interest 2037\] subnormal < subnormal](#) *Fred J. Tydeman*
- [\[Cfp-interest 2049\] Re: Subnormals](#) *Jim Thomas*
  - [\[Cfp-interest 2051\] Re: Subnormals](#) *Steve (Numerics) Canon*
  - [\[Cfp-interest 2052\] Re: Subnormals](#) *Steve (Numerics) Canon*
    - [\[Cfp-interest 2053\] Re: Subnormals](#) *David Chen*
      - [\[Cfp-interest 2054\] Re: Subnormals](#) *Steve (Numerics) Canon*
      - [\[Cfp-interest 2055\] Re: Subnormals](#) *David Chen*

Rajan: Send N2751 to JeanHeyd.

[N2751](#) 2021/06/20 Thomas, C23 proposal - signbit cleanup with typo fix

## Other issues

Others?