P260.3 Working Group
Minutes of July 2, 2024 from 11 am to 1 pm PDT
Webex Teleconference Meeting

1. Call to Order
Call to order at 11:02 am (PDT).

2. Roll Call of Attendees

Last, First Name	Affiliation	Member Status Voting (VM) Non-Voting (NVM)	Present
Curey, Randy (Chair)	Northrop Grumman	VM	Yes
Balma, Peter	Retired, Self	VM	Yes
Brown, Richard	NPL	VM	No
Edwards, Doug (Secretary)	Siemens	VM	Yes
Flowers, Keith	Siemens	VM	Yes
Shirley, Eric	NIST	VM	Yes
Webb, John	ABB	VM	Yes
Sullivan, Paul	DuPont	NVM	No

3. Determination of Quorum
Quorum was met and maintained through meeting.

4. Approval of Agenda
No objections. Agenda was approved by acclamation.

5. Approval of Previous Meeting Minutes
P260.3 WG Minutes (2024-06-18.R1) No objections. Minutes were approved by acclamation.

6. Call for Patents / Copyright
- Chair reminded all of the IEEE-SA Patent policy.
- Chair reminded all of the IEEE-SA Copyright policy.
- No Patent or Copyright issues reported.

7. Participant behavior
- Chair reminded all of the IEEE Behavior – Individual Method principles.

8. Chair's Remarks
No remarks.

9. Continue review of draft – creating D11 draft.
All section/bullet numbers are based on the D11 number. The numbering did change from the previous published document and previous drafts.

Per previous minutes, was to start back at 11.9.14 left hand derivative. However, started back at 11.8.11 – adjoint.

a) Based in previous action item for 11.8.11 & 11.8.12, went back to "adjugate"

11.8.11 – adj: Discussed change from "adjoint" to "adjugate".
Updated per
- https://en.wikipedia.org/wiki/Adjugate_matrix
- www.mathwords.com
- Review is that the two (2) websites are in agreement with each other.
- Added statement that "adjugate" is also known as the classical adjoint, and it is the transpose of the cofactor matrix.
- The symbol "adj" is not changed.

b) 11.8.9 – det: Corrected spelling. Changed from "determinate" to "determinant".

c) 11.8.12 – A^{-1}: No change. The symbol "adj" (11.8.11) did not change per discussions above.

d) 11.9.1: Compared to the original document, the bolds are removed.

e) 11.9.2 – 11.9.13: No issues

f) 11.9.13 – Asymptotically equal to: Although there are various symbols found online, the choice is made to not change the symbol stay with " $\simeq$ "based on:
- The previous standard had this symbol – not making change from previous standard.
- The Unicode# 2243 for this symbol is described as "asymptotically equal to."
- Other symbols that were found (on various internet sites) were compared to the names associated with their Unicode system symbols. The names for the various symbols in the Unicode tables were found to not be "asymptotically equal to."

g) 11.9.14 – left hand derivative: Corrected formula
left hand derivative of $f(x)$ evaluated for $x = a$:
$$\lim_{x \to a^-}\{[f(a) - f(x)]/(a - x)\}$$

h) 11.9.15 – right hand derivative: Corrected formula
right hand derivative of $f(x)$ evaluated for $x = a$:
$$\lim_{x \to a^+}\{[f(x) - f(a)]/(x - a)\}$$

i) 11.9.16 – derivative (slope): Corrected formula
derivative (slope) of $f(x)$ evaluated for $x = a$:
$$\lim_{x \to a}\{[f(x) - f(a)]/(x - a)\};$$
$$\{f'(a^-) = f'(a^+)\} \Rightarrow \{f'(a) \equiv f'(a^\pm)\}$$

j) 11.9.17 – 2nd derivative: No issues

k) 11.9.18 – nth derivative: Symbol updated to superscript.

l) 11.9.19 to 11.9.23: No issues

m) 11.9.24 – nth derivative: Action Item (Randy) – attempt to update the (n) to be font size 8.

n) 11.9.25 & 11.9.26 - partial derivative: Accepted

o) 11.9.27 – partial derivative: Accepted

p) 11.9.27 to 11.9.30 (D11) reworked as follows:
- Add 2nd partial derivative (11.9.28).
- Sorted previous (D10) 11.28 to be new line 11.9.30.

11.9.28	$\dfrac{\partial^2}{\partial^2}$	$\dfrac{\partial^2 u}{\partial x^2}$	second partial derivative of $u(x, y, \cdots)$ with respect to x; partial derivative of $\dfrac{\partial u}{\partial x}$ with respect to x
11.9.29	$\dfrac{\partial^n}{\partial^n}$	$\dfrac{\partial^n u}{\partial x^n}$	nth partial derivative of $u(x, y, \cdots)$ with respect to x
11.9.30	$\dfrac{\partial^2}{\partial\,\partial}$	$\dfrac{\partial^2 u}{\partial y \partial x}$	partial derivative of $\dfrac{\partial u}{\partial x}$ with respect to y

q) 11.9.31 – total differential: Corrected to:

total differential of $u(x, y, \cdots)$: $\dfrac{\partial u}{\partial x}\,dx + \dfrac{\partial u}{\partial y}\,dy + \cdots$

r) 11.9.32 – Jacobian: As the symbol "det" is also used for ?>>>>, added note "(For a different meaning of this symbol, see 11.8.9.)

Jacobian of $u_i(x_1, x_2, x_3, \cdots, x_n)$; $i = 1, 2, 3, \cdots, n$

(see 11.9.27)

(For a different meaning of this symbol, see 11.8.9.)

s) 11.9.33 to 11.9.35: Accepted

t) 11.9.36 to 11.9.38: Accepted

u) 11.9.39 Cauchy principal value - f: The symbol (Unicode 2A0D) is used – "finite part integral". This symbol is not found in the equation editor.

v) 11.9.40: Corrected capital A & B to lower case.

$F(b) - F(a)$; $F(x)$ is usually an antiderivative

w) 11.9.41 – convolution: Accepted

x) 11.9.42 & 11.43: Action Item (Randy). Split into three (3) equation cells so that all text is not "in one line."

y) 11.9.43: Action Item (Randy). Split into three (3) equation cells so that all text is not "in one line.".
Also – changed from infinite to "n".

z) Start back **Table 11.10 – Complex variables**.

10.   **Next Meeting –** Per Meeting Poll.

11.   **Adjourned at 1:03 pm (pdt).**

Reported by,
Doug Edwards
P260.3 Secretary