Jose Rizal University

College of Computer Studies Engineering

Computer Engineering Department

W10 - Webinar Report

CPE C409 – SEMINARS AND FIELDTRIPS

Submitted by:

Exiquiel John A. Pines

Submitted to:

Mrs. Monette Loy-A

Date Submitted:

October 9, 2023

Hosting Institution: **Institute of Computer Engineers of the Philippines (ICpEP)**

Seminar Title: **Quantum Computing for Computer Engineers**

Speaker: **Engr. Dylan Josh D. Lopez**

Seminar Date and Time: **September 15, 2023 / 9:35 PM**

Seminar Venue: **Webinar via Zoom**

On September 15, 2023, I attended the 3rd International Convention and 11th National Convention of the Institute of Computer Engineers of the Philippines. One of the talks was titled "Quantum Computing for Computer Engineers". The talk was led by Engr. Dylan Josh D. Lopez, the Chief Innovation Officer of Borq Technologies Inc.

Over the years, the field of computer engineering has made incredible strides, continuously developing to meet the ever-increasing demands of society. Technology has advanced steadily since the early days of manual computation until the invention of modern computers. But with the advent of quantum computing, the computing landscape is about to undergo a revolutionary change. In this essay, we examine the profound effects that quantum computing will have on computer engineers and the wider technological environment.

When compared to conventional computers, quantum computers operate according to a completely different set of principles. Instead of conventional bits, they use quantum bits, or qubits, which exhibit the remarkable property of simultaneously existing in both 0 and 1 states as well as in any combination of those states. This distinctive property distinguishes quantum computers from their classical counterparts by enabling them to carry out complex calculations at an astounding rate.

The notion of the "quantum advantage," which refers to the capacity of quantum computers to solve specific computational problems exponentially faster than current classical techniques, is one of the most important developments in the field of quantum computing. This advantage has a vast and diverse range of potential applications and the power to completely transform entire industries.

Computer engineers now have the chance to switch from conventional computer engineering to quantum technology engineering as quantum computing advances quickly. This transition demands a thorough grasp of quantum physics concepts as well as the capacity to design and use quantum algorithms. Numerous educational resources and training courses are being developed to support this developing field, giving computer engineers the fundamental knowledge and abilities necessary for success in the field of quantum computer engineering.

The IBM Quantum Composer is one such tool that helps computer engineers investigate the world of quantum computing. Engineers of various skill levels can design and test quantum circuits thanks to this user-friendly graphical interface. For computer engineers, it is a useful tool for gaining hands-on experience in creating quantum circuits and maximizing the power of quantum computers.

In conclusion, quantum computing is an innovative force that has the potential to transform many industries and the field of computer engineering. Its capacity to solve challenging issues at previously unheard-of speeds, as exemplified by the idea of the "quantum advantage," opens up new vistas of potential. To stay at the forefront of technological innovation and scientific discovery, computer engineers must embrace the transformative potential of quantum computing as we move forward. Unquestionably, quantum computing is the way of the future, and integrating it into computer experts' skill sets is crucial to staying ahead of the curve. For computer engineers

all over the world, quantum computing is a beacon of opportunity and change in this era of rapid technological advancement.

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W10 - Webinar Evaluation

CPE C409 – SEMINARS AND FIELDTRIPS

Submitted by:

Exiquiel John A. Pines

Submitted to:

Mrs. Monette Loy-A

Date Submitted:

October 9, 2023

Seminar Evaluation Form

Topic : Quantum Computing for Computer Engineers
Speaker : Engr. Dylan Josh D. Lopez
Date : September 15, 2023
Time : 2:25 pm

exiqueiljohn.pines@my.jru.edu Switch account

☁ Draft saved

* Indicates required question

Email *

☑ Record **exiqueiljohn.pines@my.jru.edu** as the email to be included with my response

Name *

Exiquiel John A. Pines

I. CONTENT

Relevance of the topic discussed *

	1	2	3	4	5	
Poor	○	○	○	○	◉	Excellent

Scope of the topics covered *

	1	2	3	4	5	
Poor	○	○	○	○	⊙	Excellent

Usefulness of activities *

	1	2	3	4	5	
Poor	○	○	○	○	⊙	Excellent

Clarity of the presentation *

	1	2	3	4	5	
Poor	○	○	○	○	⊙	Excellent

The presentation was well organized *

	1	2	3	4	5	
Poor	○	○	○	○	⊙	Excellent

Did you find the content practical and applicable to your interest? *

⊙ Yes

○ No

Did the content provide you with new insights or knowledge? *

Did the content provide you with new insights or knowledge? *

◉ Yes

◯ No

Which specific topics or areas of the content did you find most valuable? *

All

II. RESOURCE PERSON

Mastery of the topic *

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◉	Excellent

Effectiveness of the speaker *

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◉	Excellent

How well did the speaker engage with the audience (e.g., Q&A, discussions)? *

	1	2	3	4	5	
Poor	◯	◯	◯	◯	◉	Excellent

The speaker's presentation was clear and engaging *

	1	2	3	4	5	
Poor	○	○	○	○	◉	Excellent

Did the speaker engage the audience and maintain your interest? *

◉ Yes

○ No

What aspects of the speaker's presentation did you find particularly effective or valuable? *

All

III. OVERALL SATISFACTION

How satisfied are you with the overall seminar event? *

	1	2	3	4	5	
Very Dissatisfied	○	○	○	○	◉	Very Satisfied

List any suggestions you have for improving the presentation

Your answer

A copy of your responses will be emailed to exiqueiljohn.pines@my.jru.edu.

Seminar Evaluation Form

Your response has been recorded.

INSTITUTE OF COMPUTER ENGINEERS OF THE PHILIPPINES

presents this

Certificate of Participation

to

EXIQUIEL JOHN A. PINES

for his/her active and invaluable participation on
Topic: Quantum Computing for Computer Engineers
during the conduct of **3rd International Convention and 11th National Convention of the
Institute of Computer Engineers of the Philippines**,
held from the **14th** to the **15th of September 2023** *at* **The Farm @ Carpenter Hill
Koronadal City, South Cotabato, Philippines**, *with the theme*
"Engineering Digital Transformation for Smart and Sustainable Communities."

*Given this 15th day of September 2023 at The Farm @ Carpenter Hill
Koronadal City, South Cotabato, Philippines.*

ENGR. PERCILA M. PANAGDATO, PCpE
Overall Chairman, ICpEP IntNatCon 2023
President, ICpEP-R12

DR. ROBEN A. JUANATAS, PCpE
National President, ICpEP