

EDITORIAL DESK

Greetings, Readers!

I am happy to share Volume-2 Issue-1 of the ECE Department's e-Newsletter "Bits and Bytes" with you. Our Department's Principle aim is to instil in ambitious engineers the zeal to accomplish their objectives and ambitions, as well as to ignite their young minds in order to achieve excellence in the field of Electronics and Communication. I must thank our worthy Principal Sir, Dr. Manpreet Singh Gujral, and Head of the Department, Dr. Davinder Singh Saini, who have encouraged students to actively participate to this edition. I also commend the students and the faculty for their enthusiastic participation in the initiative and its prompt completion. I applaud the student committee's diligent efforts in ensuring the success of the e-Newsletter.

The newsletter involves FDP/Workshops organized, Book Chapters, Journal/Conferences attended by the faculty members of the department, Workshops attended, Sessions Chaired, Student Achievements, and Tech news from all around the globe. I would appreciate any feedback on this e-newsletter, and our editorial board is pleased to be of assistance.

Wishing you Pleasant Nostalgia, and Best Wishes.

Dr. Shilpa Jindal (Editor Departmental Newsletter)

FDP/ Workshops Organised:

1. Dr. Anil K Rose, Professor of the ECE Dept coordinated a two-Week short-Term Course on "Advanced IoT applications using Arduino," from 30th January to 10th February 2023, at CCET, Sector-26 Chandigarh, the course organised by the Electrical Engineering Department NITTTR, Chandigarh, was attended by all the faculty members of the ECE Department.
2. Dr. Dinesh Sharma, Assistant Professor of the ECE Dept, organised a workshop on "Design Thinking, Critical Thinking and Innovation Design" at CCET, Sector-26 Chandigarh, on 13th March, 2023, where Dr. Jagriti Saini founder and owner of 'Eternal Restem' was the esteemed speaker.

Journal/Conference:

Dr. Anil Kumar Vaghmare, wrote a research paper on " Audio Source Separation by Estimating the Mixing Matrix in Underdetermined Condition using Successive Projection and Volume Minimisations" Springer, for the International Journal of Information Technology, which got accepted for publication on February, 22nd 2023.

Book Chapter:

- Dr. I. A. Khan, et.al, "IoT and UAV Technologies for Precision Farming during and Post COVID era: A Review," International Book Chapter on "Impacts of COVID-19 on Agricultural Sector (ICAS-2023), on easy-chair, Green Economics Institute, U.K.
- Dr. I. A. Khan, et.al, "IoT Based Smart Controller for Agricultural Storage to Combat Impacts of COVID-19," International Book Chapter on "Impacts of COVID-19 on Agricultural Sector (ICAS-2023), on easy-chair, Green Economics Institute, U.K.

Workshops / Conference attended/ Session Chair

1. Dr. I. A. Khan attended the 3rd Online International Conference on "Recent Trends in Renewable Energy and Advancement in Engineering and Technology (RTREAET-2023), " Sponsored by HAREDA, Govt. of Haryana, organized by M.E. College, Nuh (Haryana) held on 16th - 17th February 2023.
2. Dr. Anil Kumar Vaghmare, Attended a Webinar on "NEP-2020 Implementation Plan: Integrated Higher Education System" that was held on 13th March 2022 from 10.00 A.M to 11.30 A.M and was organized by UGC-Human Resource Development Centre (HRDC), JNTUH, Hyderabad.
3. Dr. Anil Kumar Vaghmare, Attended a Webinar on "NEP-2020 Implementation Plan: Innovation & Rankings" that was held on 20th March 2023 from 02.00 P.M. to 03:30 P.M and was organized by UGC-Human Resource Development Centre (HRDC), JNTUH, Hyderabad.
4. Dr. I. A. Khan acted as "Session Chair" for Track No. 04 in the 3rd Online International Conference on "Recent Trends in Renewable Energy and Advancement in Engineering and Technology (RTREAET-2023), " Sponsored by HAREDA, Govt. of Haryana, organized by M.E. College, Nuh (Haryana) held on 17th February 2023.

STUDENTS ACHIEVEMENTS

2020-2024 Batch (Present 3rd Year):

Ruman Sidhu (CO20550) of ECE 3rd year got her poem published in a book titled "Unwind" 'Volume-3'; which is available on Amazon as a paperback and kindle edition.

AMD'S NEW SECOND-GEN 3D V-CACHE CHIPLET DETAILS

-Shikher Gupta
(CO20559)

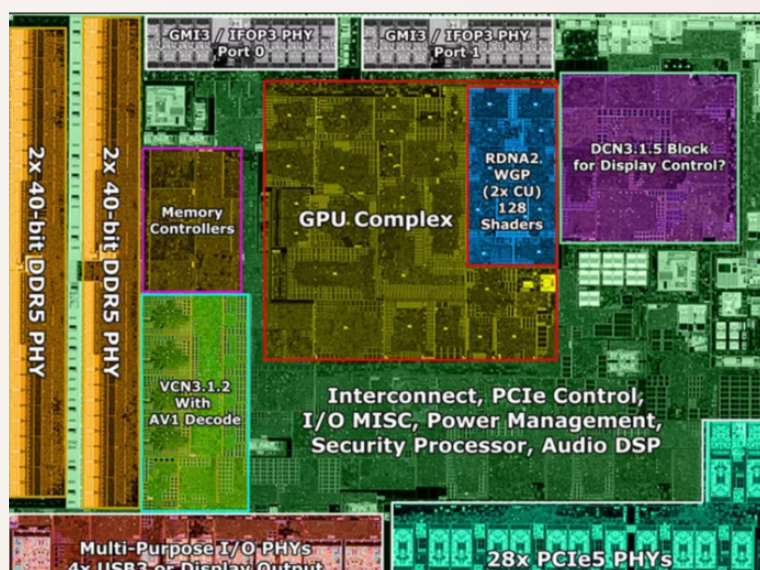
AMD's 3D-V cache technology is a chip-stacking method used in their CPUs to increase performance. It works by adding an additional L3 SRAM chiplet directly in the center of the compute die (CCD) chiplet, which isolates it from the heat generated by the cores. This cache boosts capacity to 96MB for the 3D V-Cache-equipped chiplet, thus improving performance for latency-sensitive applications like gaming.

The second generation of 3D V-Cache technology uses a 7nm L3 SRAM chiplet stacked on top of a smaller 5nm Zen 4 CCD. However, this creates a size mismatch that requires some adjustments. To connect the stacked L3 SRAM chiplet to the base die, AMD uses through-silicon vias (TSVs), with power TSVs carrying power between the chiplets, and signal TSVs carrying data between the units.

Overall, AMD's 3D V-Cache technology leverages the less expensive 7nm process node to boost the performance of its cutting-edge 5nm compute die. The second generation of this technology has been used in the Ryzen 9 7950X3D processor, which has a peak bandwidth of up to 2.5 TB/s, a 25% improvement over the previous 2 TB/s peak.

Links:

1. <https://www.tomshardware.com/news/amd-shares-new-second-gen-3d-v-cache-chiplet-details-up-to-25-tbs>
2. <https://www.amd.com/en/technologies/3d-v-cache>



TECH NEWS

1. Auto Expo: EV's in driver's seat. Tech News from Times of India, Page-5, January 11, 2023.
2. AICTE launches new courses in semiconductor industry. Tech News from Times of India, Page 4, February 19, 2023.
3. Elon Musk's SpaceX has been given the green light by the Federal Communications Commission to launch 4,425 satellites into Earth's lowest orbit as part of its Starlink internet service for broadband connections. Tech News from CNET, February 22, 2023.
4. According to new research, AI-generated writing, such as that created by GPT-3, has grown increasingly challenging to distinguish from human-written language. Tech News from India Times, March 5, 2023. <https://rb.gy/h5qn7o>
5. Graphene is a one-atom-thick strip of carbon atoms that is strong, light, and conductive, with potential applications in electronics, storage, and water purification. Tech News from SciTechDaily, March 16, 2023.
6. Prime Minister Narendra Modi on Wednesday unveiled the 6G vision document of the country. Tech News from The Hindu, March 23, 2023.
7. One web ready to enable global internet coverage. Tech News from Financial Express, Page 16, March 26, 2023
8. Cybercriminals Using ChatGPT Popularity to Spread Malware via Facebook Accounts, CloudSEK Says. Tech news from Gadget 360, March 27, 2023. <https://rb.gy/b21kon>
9. Europol sounds alarm about criminal use of ChatGPT, sees grim outlook. Tech news from The Indian Express, March 27, 2023.
10. Elon Musk's brain implant company Neuralink prepares to test devices on humans, looking for trial partners. Tech News from India Today, March 28, 2023.



Chandigarh College of Engg. & Tech.



CCET

Chandigarh College of Engineering and Technology (Degree Wing) Sector-26, Chandigarh, India

Principal: Dr. M.S.Gujral
HOD: Dr. Davinder Singh Saini
Published By: ECE Department

OUR TEAM:
InCharge: Dr. Shilpa Jindal
Designers: Vaibhav Kushwaha (CO19560)
Pravneet Kaur Bujrall (CO20544)
Arjun (CO21518)
Editor: Shobhna Manjhu (CO19552)
Ruman Sidhu (CO20550)



0172-2750947



principal@ccet.ac.in



www.ccet.ac.in