



KeyNote

IEEE CS GEC Barton Hill
Your Key Into Our Tech World

1ST SEPTEMBER 2020

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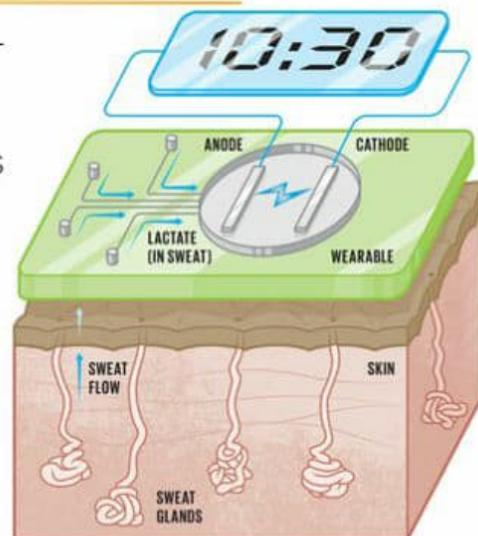
Lightmatter's Mars Chip Performs Neural-Network Calculations at the Speed of Light

Engineers have been trying hard to figure out how to perform neural-network calculations faster and more efficiently. Another contender has just entered the arena, computing with light. An interferometer splits incoming light into two beams, which then take two different paths. The resulting two beams are then recombined. The field amplitude of the light at the output will be the amplitude of the light at the input times the cosine of half of the phase difference between the light traveling in its two arms. If you can control that phase difference in some convenient way, you then have a device that works for multiplication.

-via IEEE Spectrum

Immersive Display Creates panoramic Virtual Screens

Biofuel cells can generate enough watts for fitness trackers and health monitors. Here's how a wearable turns sweat into energy: A fuel cell consists of two electrodes—an anode and a cathode—with an electrolyte between them. The fuel goes into the anode, where a



catalyst separates its molecules into electrons and protons. The protons pass through a membrane to the cathode, while the electrons flow into a circuit.

- vis IEEE Spectrum

IEEEXtreme Corner

IEEEXtreme Prizes

- **1st Place:** Full Paid Trip to any IEEE Conference (10,000\$ Max / Per Team)
- **2nd Place:** Cash award of 400\$ / Member
- **3rd Place:** Cash award of 300\$ / Member
- **4th-10th Place:** IEEEXtreme wireless phone charger worth 45\$
- **Top 100 Teams :** Gift Bundle including an exclusive "Top Coder" T-Shirt for all members in the team.
- **Top 30 Proctors:** Based on Participant Feedback from Survey (50\$ Amazon Gift Card/Each).

• **IEEE Computer Society** is currently accepting nominations for the **Richard E Merwin scholarship** award. Nominations are being accepted until the deadline of **30th September this year.**

More information available on <https://www.computer.org>

• **IEEE Future Networks Initiative, IEEE Bangalore Section and IEEE India Council** are organizing the **IEEE 5G World Forum 2020 (5GWF'20)**, held virtually on **10 September - 10 October 2020.**

Register now: <https://ieee-wf-5g.org/registration/>

Advanced registration rates are still available for **QCE 2020**, the highly-anticipated

• **IEEE International Conference on Quantum Computing and Engineering**, taking place on October 12-16, 2020. Discount pricing available for sign ups before September 12.

More information: <https://qce.quantum.ieee.org/>

PAST EVENTS

- Zircon Pursuit - An Online Treasure Hunt
- Webinar on Competitive Programming and Off Campus Placement.

Automatic Text Summarisation Using Natural Language Processing

Automatic text summarisation is a way of detecting important sentences from the source text and automatically making an abstract of it. This is performed by topic identification followed by text extraction in which sentences are selected based on scores given in basis of it's importance . At last the text generation is done by creating a new shorter text with same information content. The Applications include computer reading a summarised www page in mobile, Summarising reports, newspaper, extracting keyword and getting summaries of text, searching in foreign languages

by Devika Dinesh, S IT

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Send in your answer at
ieeecsgecbh@gmail.com

Data Mining in Today's World

Data mining is a cornerstone of analytics, helping you develop the models that can uncover connections within millions or billions of records. Unlike a few years ago, everything is bind with data now and by collecting and inspecting them, people are able to discover some patterns. Even the whole data set is a junk, there are some hidden patterns that can be extracted by combining multiple data sources to provide valuable insights.

This is called as Data Mining.

Data mining is often combined with various sources of data including enterprise data that is secured by an organization and has privacy issues and sometimes multiple sources are integrated including third party data, customer demographics and financial data etc. The amount of data available is a critical factor here. Since we are going to discover patterns in sequential or non-sequential data, correlations, to determine if the amount of obtained data is of good quality, as .much as data available is good

-By Abhouma S Sunil, S3 ECE