



IEEE New York Monitor

Advancing Technology for Humanity

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Sunset on the Hudson as seen from the sparingly visited Fort Totten, Queens

Photo: Cristina Arduino

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Currently, the New York Section of IEEE comprises of the following Active Chapters of the IEEE Societies:

- **Computational Intelligence**
- **Computer**
- **Communications**
- **Technology Management**
- **Engineering in Medicine and Biology**
- **Instrumentation and Measurement**
- **Power and Energy**
- **Industrial Applications**
- **Solid State Circuits/Electron Devices**
- **Systems, Man and Cybernetics**
- **Vehicular Technology**
- **Broadcast Technology**

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The following Affinity Groups as defined by IEEE

- **Consultants' Network (CN)**
- **Life Members Affinity Group (LMAG)**
- **Women in Engineering (WIE)**
- **Young Professionals (YP)**

JOIN IEEE SOCIETIES' CHAPTERS IN NY SECTION

THE IEEE RULES REQUIRE that to maintain a status as **active**, each Chapter or Affinity Group must offer at least two presentations or technical visits per year. However, our normal activities are now on temporary hold due to the COVID-19 crisis. We'll surely jump into action once the NY health authorities allow us to do so. In the meantime, keep your eyes

open for any notice and attend any virtual presentation or discussion. There are many offered by IEEE. Later, when we get back to some form of normalcy. In the meantime, you can help the Societies of your interest maintain their active status by your participation.



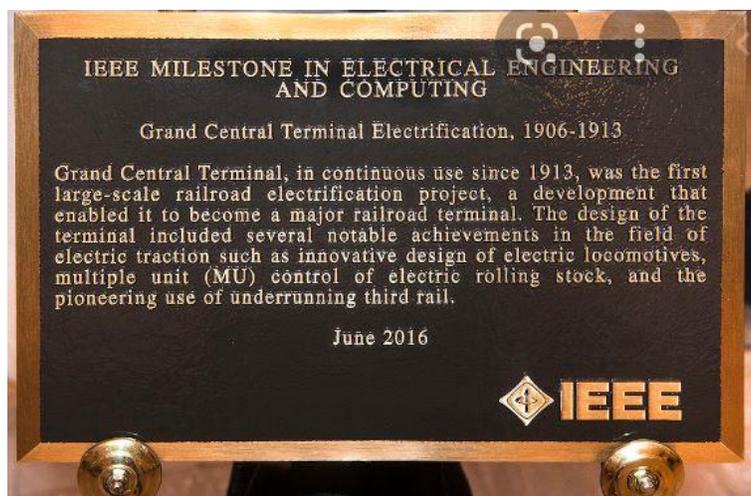
The predecessor of IEEE was founded as the [American Institute of Electrical Engineers](#) (AIEE) in 1884. During several subsequent years New York City was a unique meeting place for professional engineers. Only in 1902 the AIEE directors felt the need of widening its borders to engineers from other parts of the country and abroad and decided to the creation of local Sections. The first two Sections to be established were in Chicago and Ithaca. New York electrical engineers had to wait until 1921 for the creation of their own Section. As far as I know the Section has

been active then. In 1963 AIEE merged with the Institute of Radio Engineers (IRE) to form the present Institute of Electrical and Electronics Engineers (IEEE). The merged organization decided to continue with the Section though rules and regulations had to be modified and adapted. New York Section has, therefore, a birthright to celebrate the 100th birthday. We in the ExCom wanted to do it in a gala style, inviting all its members enticing them with eats and drinks. But who could predict the vagaries that COVID-19 would cause?

Milestone Project

Did you read the news item on our Milestone project in the last issue of the NY Monitor? Now I have heard from Joe Cunningham. He has been able to identify the person at Brookesville Properties who is doggedly pursuing the project. That is good news for us. We should be able to proceed further as soon as COVID 19 gives us a respite.

How many of us have gone through a location that has been marked as one of the IEEE Milestones? One is very near to us and we pass through it thousands of times without knowing that it exists in real life. GRAND CENTRAL TERMINAL. If you have not seen the terminal from the “inside out” I urge you to make an effort to do that. It is a remarkable piece of engineering, architecture and art. Seriously!



2021 will be remembered as the year of civilian spaceflights

It really would be a coincidence that two billionaires, Richard Branson and Jeff Bezos cranked up their companies to launch space bound vehicles paving the way for ordinary earthlings to experience weightlessness for a short time. But the tickets to space will not be cheap. It is being said that depending on which company's spaceship you choose a RT ticket for *one* may not be less than \$200k.

Richard Branson's Virgin Galactic was the first the first to crash through the Earth-space barrier on July 11, 2021. I woke up early and with some trepidation of my heart watched the full video reporting of the flight on television. The flight was only for a few minutes but credible and safe. Though many criticized the endeavor as a waste of big money I felt tremendous joy to see the conquest of science and technology. I am no Isaac Asimov or Arthur Clarke, and I cannot foretell the future of space flights. But I have a feeling that the flight ushered a new era for space engineering.

A few days after Branson's flight Jeff Bezos took off for the skies in his company's *Blue Origin*, a pilotless spaceship. The vehicle was fully controlled by an Earth-based crew and computers. Blue Origin came back to the Earth after a few minutes at a precisely predetermined point. What a technology, whew! If you missed the live reporting of either of the two flights, they are available on many websites. Just search for them. Below please find some photographs that I saved from various television and newspaper reporting. The photos speak for themselves.

Virgin Galactic





Blue Origin





IEEE Societies

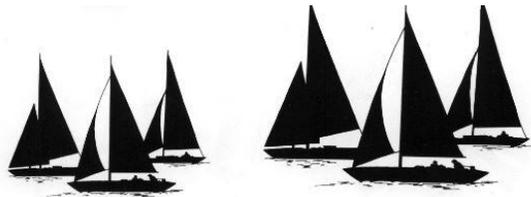
> Stay current, network, and invest in your career with IEEE Societies

The complex block features a light blue background. At the top, the text "IEEE Societies" is written in bold black font. Below this is a photograph of a hand holding a glowing green globe. The globe is surrounded by several circular icons representing different IEEE Societies, such as a sun, a wind turbine, a leaf, a gear, and a person. At the bottom of the block, there is a line of text: "> Stay current, network, and invest in your career with IEEE Societies".

Black Gold!!

It has been there at the bottom of the earthly oceans for many millions of years. But today it is of utmost important for the electrical and electronics engineers. For, the gold of our profession is electrical energy. This super-commodity is generated by fossil fuels, solar power, wind, or batteries of all sorts. We read and hear a lot about the first three and not too much on the fourth. But the fourth, that is, batteries need ingredients mined from the Earth for their construction. These ingredients (cobalt, for example) found on this planet are short in supply. As we march towards all-electric vehicles and other such devices, the demand for the batteries goes up. I am pretty sure that there are predictions as to how much of these earthly ingredients will last. However, before the doomsday arrives earthly entrepreneurs are already at work to discover new sources of the ingredients. Two companies, Metals Company founded by

the Australian entrepreneur Gerard Barron and Belgium-based Global Sea Mineral Resources (GSR) have already invested millions to look for the minerals buried at the bottom of oceans. These desired minerals are used in making batteries. I was not aware of these facts until I read, as my "101" on the topic, "DEEP", an article by Aryn Baker published in the TIME magazine of Sep 13/Sep 20, 2021. It is an excellent introduction to the study of black gold. The report opens with the sentence, "Scattered miles deep along the floor of the central Pacific are trillions of black, misshapen nuggets that may be the solution to the impending energy crisis." It goes on to describe some activities by the International Seabed Authority (ISA), the UN body tasked with managing seafloor resources. I do recommend reading these informative few pages to anyone interested in energy crisis.



PAPERS
www.ccece2021.ieee.ca

September 12-17, 2021

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EVENTS LINKS **Free Registration**

You are invited to attend the following open sessions for CCECE 2021 through the VTools link provided in the table

Event	Speaker	Date	Time	VTools Link
IEEE Awards Gala	See details on vTools	13-Sep	9:15-10:10	https://events.vtools.ieee.org/m/280077
Keynote	Kathy Land – U.S.A. Missile Defense Agency	13-Sep	10-15-11:15	https://events.vtools.ieee.org/m/280080
McNaughton Talk	Rajni Patel – University of Western Ontario	13-Sep	12:30-1:30	https://events.vtools.ieee.org/m/280078
Keynote	Vincent Chan – MIT	14-Sep	9:00-10:00	https://events.vtools.ieee.org/m/280082
Keynote	Moe Win – MIT	15-Sep	9:00-10:00	https://events.vtools.ieee.org/m/280083
Keynote	Chris Dick – NVIDIA	15-Sep	12:30-1:30	https://events.vtools.ieee.org/m/280085
Keynote	Mohsen Guzzani – University of Qatar	16-Sep	9:00-10:00	https://events.vtools.ieee.org/m/280086
IoT Keynote	Soumaya Cherkaoui – Univ. of Sherbrooke	17-Sep	9:00-10:00	https://events.vtools.ieee.org/m/280087

IEEE Canada

I believe that those involved in 5G technology would have been interested in attending this conference. I am sure most of the papers are still available on the IEEE web pages. Just look for them!

Newsroom



> Read the latest in the IEEE Newsroom

That's all for now.

Major nuclear fusion milestone reached as ‘ignition’ triggered in a lab

by [Hayley Dunning](#) 17 August 2021

A report from the newsletter of my alma mater. I thought that the readers would be interested to read this report. You are encouraged to submit this kind of news items to the NY Monitor. If they are found to be relevant to the interest of the members of IEEE, we'll post them with great pleasure. Please send them to ed.nymonitor@ieee.org

https://www.imperial.ac.uk/news/228373/major-nuclear-fusion-milestone-reached-ignition/?utm_source=alumni-bulletin&utm_medium=email&utm_campaign=alumni-bulletin#authorbox



A sculpture situated at the middle of Ibirapuera Park in São Paulo, Brazil. The city has about one thousand IEEE members and is the largest such center in South America

