

# IEEE North Jersey Section

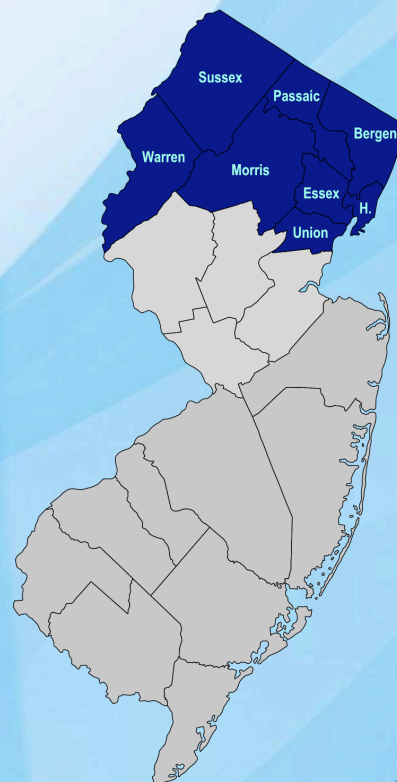
## IEEE North Jersey Section Newsletter

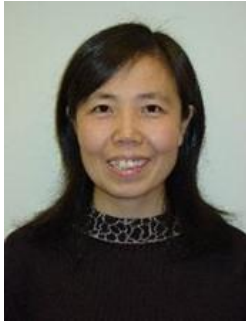
**VOL. 70, NO. 01      Issue: January 2024**

Prior registration is highly encouraged to attend any event.

**IEEE North Jersey Section Website**

**IEEE North Jersey Section - Roster**





## Chair's Note - A Message from the IEEE North Jersey Section Chair Prof. Hong Zhao

Happy New Year! As we step into 2024, I would like to extend my warmest wishes to every one of you. May this year be filled with success, growth, and exciting opportunities.

Looking back on the past year, we have achieved remarkable milestones together. Our North Jersey Section has organized numerous events including symposiums, seminars, workshops, mini-show, short courses, summer picnic, and award reception, which foster collaboration and knowledge exchange. The dedication and passion of our members have been instrumental in creating a vibrant and dynamic IEEE section.

I want to express my heartfelt gratitude to all ExCom members who contributed their time and expertise to make these events successful. Your commitment to advancing technology and innovation within our community is truly commendable.

As we embark on a new year, let us carry forward the momentum and enthusiasm from the past. We have an exciting lineup of events planned for the coming months. These gatherings provide an invaluable platform for us to stay at the forefront of the latest developments in our respective fields.

Our focus remains on serving the local IEEE members and creating an environment that nurtures professional growth and collaboration. Whether you are a seasoned professional or a student just starting your journey, there is something for everyone in our IEEE community. I encourage you to actively participate in our upcoming events, share your knowledge, and engage with fellow members. Your contributions play a vital role in shaping the success of our IEEE North Jersey Section.

As we navigate the challenges and opportunities that 2024 brings, let us work together to make it a year of innovation, progress, and achievement. May your endeavors be met with success and may the bonds we forge within the IEEE community continue to strengthen.

Thank you for being a part of our dynamic and vibrant community. Here's to a successful and fulfilling year ahead!

**Best wishes,**

***Hong Zhao, IEEE North Jersey Section Chair***



## IEEE – IMPORTANT EVENTS, ARTICLES, ANNOUNCEMENTS AND REMINDERS:

- [This Month's Communications Society News from Around the World](#)
- **The Usefulness of AI** - An article by Harry Roman
- IEEE North Jersey Section: Annual End-of-the year Dinner Meeting
- IEEE North Jersey and Pune Section - Intersection Activities
  
- **The Usefulness of AI** :- *An article by Harry Roman*

Do you see AI (artificial intelligence) as the bogeyman as so many news agencies like to portray it? I suspect not. You probably use some form of it in your daily engineering pursuits. I have used it while at my job and here is what I remember as some of its salient and hoped for applications, dating back from the 1990s. Today I am sure there are many more attributes of this machine learning paradigm.

Here are a few I remember from my electric utility days.

- Predictive maintenance of equipment
- Diagnostic problem analysis
- Pattern recognition in large data sets
- Troubleshooting of complex systems
- Determination of root causes of hardware failure
- Prediction analytics; for potential future failures in subsystems and equipment
- Utility system operation and control
- Detection of poor performing feeder circuits
- Smart utility architecture
- Weather forecasting
- Early detection of large station transformer internal problems
- Analysis of causes of poor waveform composition/noise/harmonics
- Forecasting of load and utility system peaks.

Some additional applications of AI:

The Internet of Things, enhanced with deep learning capability, could seamlessly link sensors, data, information and knowledge together to greatly improve the operating efficiencies of utility services, communication networks, traffic control, airline monitoring and scheduling...etc.

Intelligent systems could be applied to making financial decisions either on a personal or fund level—learning and observing from many years of data and trends, making recommendations and perhaps even executing trades.

AI systems could be used to learn the buying habits of customers/groups of customers that could be used to stimulate the development of new/improved products and services or provide personalized recommendations for internet shoppers.

Smart systems could help doctors better diagnose unusual medical conditions, avoid medicine conflicts, and warn of potential future complications.

Artificial intelligence can become a workhorse for our world, not the “big bad wolf” lurking at our door. Respect it and learn what it can do. Help others to understand the versatility of this technology.

Talk to you again soon...

Harry

Harry T. Roman, Life Senior Member, Author & Advisor, Edison Innovation Foundation (Retired-PSE&G Co.), [htroman49@aol.com](mailto:htroman49@aol.com)

### • IEEE North Jersey Section: Annual End-of-the year Dinner Meeting

The [2023 Annual End-of-the-year dinner meeting](#) of the IEEE North Jersey Section took place on December 04th, at the Hanover Manor. The meeting is a time for the appreciation of the volunteer work of its members, where spouses, family members are welcome to attend. Many students also attended the event, as usual.

The Section chair organized gift items as a token of appreciation for all the chapter officers and section volunteers. Some photographs taken during the event are seen below:





### ● IEEE North Jersey and Pune Section - Intersection, Intersociety Events Highlights

In November-December 2023, IEEE North Jersey Section's Junior Past Chair, Dr. Ajay Poddar, Vice-Chair-2 Dr. Anisha Apte, AP/MTT joint chapter Vice-Chair Prof. Edip Niver, along with many other IEEE delegates from India and other IEEE Regions, participated in several joint events and activities conducted by the IEEE Pune Section, as per the MoU signed between the two sections during the chairmanship of Dr. Ajay Poddar, North Jersey Section and Girish Khilari, Pune Section, in the year 2022. A few highlights are shared below.

The following photographs shows a glimpse of these events.



**NOV 24-27, 2023 -Inter-Section activities, meetings and discussions, @Pune, India**

Many IEEE Pune Section officers including Prof. G.S. Mani, Dr. K.P. Ray, Prashant Joshi, Neha Sharma, Dr. Rajeshri Jain, Prof. Mandar Bhawalkar, Abhijit Khurape and many more joined these events along with Dr. Jawad Siddiqui, AP-S President Prof. Stefano Maci and North Jersey representatives Dr. Ajay Poddar, Dr. Anisha Apte and Prof. Edip Niver and other local members












**SCTR's Pune Institute of Computer Technology, Pune**  
**Electronics and Telecommunication Engineering Department**  
**IEEE Antennas and Propagation Society Student Branch Chapter**  
**Inauguration**

It is a pleasure to announce that the IEEE Antennas and Propagation Society Student Branch Chapter at the SCTR's Pune Institute of Computer Technology (PICT) has been formed. The chapter will be inaugurated by the hands of eminent IEEE AP-S expert delegates on 9th December 2023 at PICT, Pune. Keynote sessions by the eminent speakers in the field of electromagnetics are organized as part of inauguration. All the IEEE members, faculty, and students are invited to attend the Inaugural session.

**INAUGURAL KEYNOTE SESSION - 1**  
**Prof. Stefano Maci, AP-S President**  
 Department of Information Engineering and Mathematical Science  
 University of Siena, Siena, Italy



He is the President of the IEEE Antennas and Propagation Society 2023. His research interests include high-frequency and beam representation, computational electromagnetics, large phased arrays, planar antennas, reflector antennas and feeds, metamaterials, and meta surfaces. His research activity is documented in 200 papers published in international journals, among which 100 on IEEE journals, 14 book chapters, and about 600 papers in proceedings of international conferences.

**INAUGURAL KEYNOTE SESSION - 2**  
**DR GOUTAM CHATTOPADHYAY**  
 Senior Scientist, NASA-JPL/IEEE Fellow/MTT-S MGA



He is currently a Senior Research Scientist with the NASA's Jet Propulsion Laboratory, California Institute of Technology, and a Visiting Associate with the Division of Physics, Mathematics, and Astronomy, Caltech. He has authored and coauthored more than 250 publications in international journals and conferences and holds more than 20 patents. His research interests include microwave, millimeter-wave, terahertz receiver systems and radars, and development of space instruments.

**Invited Guests**



**Dr. Ajay Poddar**  
 Chief Scientist, Space  
 Mission, ISRO, Bengaluru



**Prof. G.S. Mani**  
 Chair, IEEE JCAME, Pune

**Patrons**



**Dr. P.T. Kulкар**  
 Director, PICT



**Dr. S.T. Gandhi**  
 Principal, PICT

Venue: PICT Auditorium  
 Date: 09/12/2023  
 Day: Saturday  
 Time: 10:00AM

Dr. Mousami V Munot  
 Head of the Department, E&TE  
 Dr. Y Ravinder  
 Faculty Advisor

CONTACT US  
 Mr. Dhaval Chande, 982222551  
 chandedhaval16@gmail.com





**DEC 04, 2023 - DIAT – Defense Institute of Advanced Technology, Pune, India**



**Dec 07, 2023, IEEE AP-S COPE Co-Sponsored Project in Collaboration with BNP (Bhagini Nivedita Pratishthan) Pune, India**





**Dec 08, 2023, IEEE AP-S COPE Co-Sponsored Project Eu-Reka 2024 Felicitation Event –  
Keynote Speaker: Dr. Ajay Poddar, Chief Guest: IEEE AP-S President Prof. Stefano Maci**





## Dec 08, 2023 – PICT (Pune Institute of Computer Technology) AP-S Student Branch Chapter Inauguration and visit to the Lab









## 2023, Dec 09 – Visit to MIT-ADT (Maharashtra Institute of Technology – Art Design Technology) Pune, India





**2023 DEC 11-15 MAPCON –  
Ahmedabad, India**

**IEEE North Jersey MTT-S  
Outstanding Chapter  
Award - 2023**



**IEEE Pune Section - Prof. G.S.Mani, Recipient of the 2023 IEEE Ulrich L Rhode Humanitarian Technical Field Project Award** - Apart from the citation, the award carries \$10,000 for IEEE Pune Section. The award was received by Prof Mani along with Prashant Joshi, Dr Neha Sharma, Abhijit Khurape and Dr Mandar Bhawalkar.





# Calendar of Events

## Upcoming Events: January 2024 Onwards

Title	Date	Hosts	Location
AP-S EPICS Projects: Antenna and Wireless Humanitarian Technology : North Jersey Section Jt Chapter, AP03/MTT17	01 Jan 2024 06:00 PM	CH01092 - North Jersey Section Jt Chapter, AP03/MTT17	Virtual
IEEE North Jersey Section EXCOM - Meeting 6:30 PM : North Jersey Section	10 Jan 2024 06:30 PM	R10327 - North Jersey Section	Teaneck, New Jersey,  Virtual
Antennas for IoT (Internet of Things) : North Jersey Section Jt Chapter, AP03/MTT17	12 Jan 2024 06:00 PM	CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, WE10327 - North Jersey Section Affinity Group, WIE, CH01177 - North Jersey Section Chapter, C16, CH01178 - North Jersey Section Chapter, PHO36, SIGHT177 - North Jersey Section SIGHT	Teaneck, New Jersey,  Hybrid



Title	Date	Hosts	Location
IEEE North Jersey and Pune Section - Inter Section activities : North Jersey Section	12 Jan 2024 07:00 PM	R10327 - North Jersey Section, WE10327 - North Jersey Section Affinity Group, WIE, CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01177 - North Jersey Section Chapter, C16	Teaneck, New Jersey,  Hybrid
Understanding Phase Noise: Measurement Techniques : North Jersey Section Jt Chapter, AP03/MTT17	18 Jan 2024 02:00 PM	CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36, CH01184 - North Jersey Section Jt Chapter, CAS04/ED15	Virtual
Power Saving Techniques for User Equipment in 5G : North Jersey Section Jt Chapter, AP03/MTT17	24 Jan 2024 01:00 PM	CH01092 - North Jersey Section Jt Chapter, AP03/MTT17, CH01178 - North Jersey Section Chapter, PHO36, CH01184 - North Jersey Section Jt Chapter, CAS04/ED15	Virtual

Title	Date	Hosts	Location
Oscilloscopes: Why fast update rate matters : North Jersey Section Jt Chapter,AP03/MTT17	24 Jan 2024 02:00 PM	CH01092 - North Jersey Section Jt Chapter,AP03/MTT17, CH01178 - North Jersey Section Chapter,PHO36, CH01184 - North Jersey Section Jt Chapter,CAS04/ED15	Virtual
Gas Insulated Switchgear (Free Seminar) : North Jersey Section Chapter,PE31	25 Jan 2024 09:00 AM	CH01097 - North Jersey Section Chapter,PE31, CH01092 - North Jersey Section Jt Chapter,AP03/MTT17	South Plainfield, New Jersey
Driving 224G System Design with Next-Gen TDR Solutions : North Jersey Section Chapter, IM09	25 Jan 2024 11:00 AM	CH01232 - North Jersey Section Chapter,IM09	Virtual
Positioning Systems for EMC (EMI / EMS) Measurements : North Jersey Section Chapter,EMC27/PSE43	31 Jan 2024 11:00 AM	CH01265 - North Jersey Section Chapter,EMC27/PSE43	Virtual
Health Aspects of Millimeter-Wave Radiation in 5G and Beyond : North Jersey Section Jt Chapter,AP03/MTT17	13 Feb 2024 12:00 PM	CH01092 - North Jersey Section Jt Chapter,AP03/MTT17, CH01184 - North Jersey Section Jt Chapter,CAS04/ED15,	Virtual

Title	Date	Hosts	Location
		CH01178 - North Jersey Section Chapter,PHO36	
EDS/CASS Distinguished Lecture: Semiconductor Innovation for Transformative Impact : North Jersey Section Jt Chapter,CAS04/ED15	03 Apr 2024 02:15 PM	CH01184 - North Jersey Section Jt Chapter,CAS04/ED15, CH01092 - North Jersey Section Jt Chapter,AP03/MTT17	Newark, New Jersey

**For Past Month's Events - December 2023 - [Click Here](#)**

## 2024 IEEE North Jersey Section Volunteers

### *Executive Committee*

**Chair** – Hong Zhao zhao@fdu.edu

**First Vice-Chair** – Emad Farag

enfarag@ieee.org

**Second Vice-Chair** – Anisha Apte

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**Secretary** - Adriaan J. van

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**Treasurer** – Avimanyou Vatsa

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**Member-at-Large**

Naresh Chand -

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Har Dayal –

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Alfredo Tan – tan@fdu.edu

**Junior Past Chair** – Ajay K.

Poddar akpoddar@ieee.org

**Senior Past Chair** – Yu-Dong Yao

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### *Society Chapters*

#### *Aerospace Electronic Systems*

**Chair** – Cherif Chibane

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**Vice-Chair** – Kirit Dixit -

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#### *Antennas and Propagation /*

#### *Microwave Theory and Techniques*

**Co-Chairs**

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**Vice-Chair** – Anisha Apte

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#### *Circuits and Systems/Electron*

##### *Devices*

**Chair** – Durga Misra

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**Vice Chair** - Shaahin Angizi

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##### *Communications*

**Chair** – Amit Patel -

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##### *Computer*

**Chair** – Hong Zhao -

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**Vice Chair** -Tao Han -

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##### *Computational Intelligence Society*

**Chair:** Prasenjit Bhadra -

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**Vice-Chair:** Ratna Raj -

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##### *Control Systems*

**Chair** – Marcos Netto

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##### *Electromagnetic*

##### *Compatibility/Product Safety*

##### *Engineering*

**Chair** – Russell C. Pepe -

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##### *Engineering in Medicine and*

##### *Biology*

**Chair** – Yu-Dong Yao -

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##### *Industrial Applications*

**Chair** – Ken Oexle -

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#### *Information Theory*

**Chair** – Adriaan J. van

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#### *Instrumentation & Measurement*

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##### *Photonics*

**Chair** – Naresh Chand

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##### *Power & Energy*

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##### *Robotics & Automation*

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**Vice Chair** - Shilpi Chakraborty

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##### *Signal Processing*

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##### *Social Implications of Technology*

**Chair** – Kirit Dixit -

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##### *Systems, Man, and Cybernetics*

**Chair** – Weitian Wang

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##### *Technology & Engineering*

##### *Management*

**Chair** – Kirit Dixit -

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##### *Vehicular Technology*

**Chair** – Ionel Bajescu

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## ***Affinity Groups and Councils***

### ***Consultants Network***

#### **Co-Chairs**

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### ***Young Professionals***

**Chair** – Larry Yang –  
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**Vice Chair** -Patrick Beesley  
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### ***Women in Engineering***

#### **Co-Chairs**

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Ratna Raj ([ratna.raj@njit.edu](mailto:ratna.raj@njit.edu))

### ***LIFE Members***

#### **Co-Chairs**

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### ***Nanotechnology Council***

**Chair** - Eui-Hyeok Yang -  
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### ***North Jersey SIGHT Group***

#### **Co-Chairs**

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Dushyant Deshmukh  
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## ***Committees***

### ***Audit Committee***

#### **Co-Chairs**

Ajay Poddar - [akpoddar@ieee.org](mailto:akpoddar@ieee.org)  
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Mani Iyer - [mani.iyer@ieee.org](mailto:mani.iyer@ieee.org)

### ***Awards & Recognitions***

#### **Co-Chairs**

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### ***Educational Activities***

#### **Co-Chairs**

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Amit Patel – [a.j.patel@ieee.org](mailto:a.j.patel@ieee.org)

### ***Employment Network***

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### ***Government and Industrial***

#### ***Liaisons***

#### **Co-Chairs**

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Russell C. Pepe [rcpepe@ieee.org](mailto:rcpepe@ieee.org)

### ***Group coordinator / History***

**Chair** – Howard Leach -  
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### ***Legal Activities***

#### **Chair – Vacant**

### ***Membership Development***

**Chair** – Michael Newell  
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### ***MTT/AP Trade Show and Symposium***

#### **Chair** – Kirit Dixit -

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#### **Vice-Chair** – Har Dayal

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#### **TPC Co-Chair** – Ajay Poddar

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### ***Newsletter***

#### **Chair** – Anisha Apte

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### ***Nominations and Appointments***

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### ***PACE***

#### **Chair** – Russell C. Pepe -

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#### **Co-Chair** – Paul E. Ward -

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### ***Pre-University Activities***

**Co-Chair** – Chitra Venkatraman  
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### ***Program Review Committee***

Kirit Dixit - [kdixit@ieee.org](mailto:kdixit@ieee.org)  
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Emad Farag - [enfarag@ieee.org](mailto:enfarag@ieee.org)

### ***Student Activities***

#### **Chair** - Melvin Lewis

([mlewis@fdu.edu](mailto:mlewis@fdu.edu))

### ***Student Representative Committee***

**Chair** - Kalyan Mondal  
[mondal@fdu.edu](mailto:mondal@fdu.edu)

### ***Webmaster***

#### **Co-Chairs**

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