

- Sharing ideas and experience with fellow professionals
- · Assisting in career enhancement of members and affiliates
- Working for the advancement of engineering/architectural professions in Bangladesh Fulfilling obligations to the country

# Southern California Chapter



# INAUGURATION 2023



# **7850 BEACH BLVD, BUENA PARK, CA 90620**

luxorbanquethall@gmail.com (714) 610 -7756



# INAUGURATION 2023

# AABEA Southern California Chapter

Saturday, May 13, 2023

Luxor Banquet Hall 7850 Beach Blvd, Buena Park, CA. 90620



# **Chief Guest**

Dr. M. Rafiquzzaman

Professor, Electrical and Computer Engr. College of Engr., Cal Poly Pomona, CA. USA

# **Guest of Honor**

Dean Christopher S. Lynch

William R. Johnson Jr. Family Chair Professor of Mechanical Engineering

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# AABEA SCC Inauguration Ceremony, 13th May, 2023

# 2023-2024 AABEA-SC Executive Committee

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Mir Tanveer 714-396-5366 mirtanveerislam@outlook.com

#### **Student Coordinator**

Shanto Paul 951-426-7791 prethirajpaul7@gmail.com



#### Program Schedule 6:00 – 7:00 PM

#### Registration/Social Hour/Snacks 7:00 - 7:45PM

#### **Inauguration Session**

7:00 – 7:05 PM	National Anthems of Bangladesh and USA				
7:05 – 7:10 PM	Program Summary (by MC)				
7:10 – 7:15 PM	Speech of President of AABEA-CEC				
7:15 - 7:20 PM	Speech of out-going President of AABEA-SC				
7:20 - 7:30 PM	Introduction and Oath of Newly-elected Executive				
	(Administered by Chief Election Commissioner)				
7:30 - 7:35 PM	Inauguration Speech by, President, AABEA-SC				
	(Introduction by MC)				
7:35 - 7:40 PM	Speech of AABEA Research Award and				
	endowment fund with UCR				
7:40 - 7:45 PM	Check hand over of the endowment fund with				
	UCR				
7:45 - 7:50 PM	Speech by the Guest of Honor, Dean of				
	Engineering, UCR				

**7:50–8:00 PM** Break Time

8:00 - 8:30 PM

#### **Speeches**

8:30 – 8:40 PM	lechnical Presentation
8:40 - 8:45 PM	Speech by the Guest of Honor, Hon. Consul General of
	Bangladesh in Los Angeles
8:45 - 8:50 PM	Speech by the Chief Guest
8:50 - 9:00 PM	Plaque Presentation to Guests of Honor and Chief Guest

**Dinner** 

9:00 – 9:10 PM Dessert and Tea Break 9:10 – 11:30 PM Cultural Program

9:10 – 9:15 PM Introduction of Featured Artist-1: M. A. Shoeb 9:15 – 9:20PM Introduction of Featured Artist-2: Sadia Rahmatullah Israil 9:10 – 9:15 PM Songs Performance by Artists

> 11:30 PM Closing



#### **Message From AABEA Central Executive Committee**



Central Executive Committee (CEC) 2023-2024, Southern California, CA, USA

<u>President</u> Sheik Moinuddin, Ph.D., P.E.

<u>President Elect</u> Monir Zaman (Michigan Chapter), MS

Secretary AKM Tareque, MS, P.E.

<u>Treasurer</u> Azmal Khan, MS

Southern California Chapter Representative
MD Rohul Amin Bhuiyan (Shimul), MS

Michigan Chapter Representative Afroza Akhter, MS

New England Chapter Representative AHM Nazir Hossain, Ph.D.

New York Chapter Representative Dipti Barua, MBA

Silicon Valley Chapter Representative Muhammad Quamruzzaman, MS

Washington DC Chapter Representative Anis Rahman, Ph.D.

On behalf of the AABEA Central Executive Committee, I would like to begin my message by congratulating the newly elected AABEA Southern California Chapter team for the year 2023 - 2024. This is a team comprising of talented professionals from different specialties. Under the leadership of Mr. Mahibur Rais, it is our hope that this new team will continue the triumphs of the departing team, while pushing limits even further for the future of our organization. The AABEA Central Executive Committee will stand shoulder-to-shoulder with this team, helping them achieve just that. AABEA Central will be hosting the national convention sometimes in the later part of 2024 in Los Angeles, and we will be looking forward to a great partnership and collaboration with the Southern California Chapter for a successful convention.

Sheik Moinuddin, Ph.D., P.E.

President

AABEA Central Executive Committee



# **Message from Chief Guest**



DR. M. Rafiquzzaman

Professor, Electrical and Computer Engr. College of Engr., Cal Poly Pomona, CA. U.S.A.

I am delighted to be your chief guest at the AABEA 2023 Inauguration Ceremony on May 13<sup>th</sup>. I will share my interesting experiences with you as an engineer during my speech. The following is a short writeup on "How to Be a Successful Engineer."

The word "Engineer" is originated from the Latin word "Ingenium." The word Ingenium means someone who solves problems by applying mathematics and science. Scientists and inventors come up with innovations. Engineers apply these discoveries to the real world. Problem solving is an essential skill in just about every field of engineering. This skill can be continuously improved at each stage in their careers.

Engineers play an important role in supporting the growth and development of economy as well as providing a great quality of life to people globally. Simply put, without engineers there would be no bridges, highways, heat, A/C, computers, social media, Internet, and so on. In summary, a career in engineering gives us the opportunity to solve problems and design things that really make the world a better place to live.

Next, let me focus on the question "What makes engineers successful at their jobs?" Although there are no definite answers to this question, I can only identify a few of them.

Successful engineers should be up to date with the latest technological advancements that can improve their quality of work.

Based on real world experience, successful engineers should be able to pay attention to the smallest details. This is because a small error could potentially ruin an entire project, lose a lot of money, or even result in fatal consequences.

Finally, teamwork and communication are very important aspects. Successful engineers should have strong communication skills and are able to work well with others.

#### Bio:

1969, B.Sc, Electrical Engineering, BUET

1972, M.A.Sc, Electrical Engineering, University of Windsor, Canada

1974, Ph.D, Electrical Engineering, University of Windsor, Canada

1978 - Present, Professor, Electrical & Computer Engineering, Cal Poly University, Pomona

1982-1987, Adjunct Professor, Electrical Engineering, University of Southern California, Los Angeles

1989 - Present, President, Rafi Systems, Inc. (Manufacturer of Intraocular – Cataract implant lenses)

- Authored 18 books on computers published by major publishers including Wiley, Prentice-Hall, Harper & Row, and CRC.

1989 - 1990, Computer Advisor, President of Bangladesh

2004 - 2008, Advisor, U.S. House Policy Committee Technology Board

2004 - 2008, Member of Governor Arnold Schwarzenegger's Economic Recovery Team for California

- Member, Swimming, Diving, and Synchronized swimming, 1984 Los Angeles Olympic Organizing Committee
- Currently Chartered Member, Sixth Ring U.S. Olympic Committee
- Member, 1990 World Cup Soccer, Rome, Italy
- Over 40 years of industrial experience with Intel, Motorola, Rockwell, Parsons, Boeing, Lockheed, and others.
- -During the early 80's, involved in designing Space Shuttle project.
- Also, involved in designing microprocessor-based Remote Maintenance Monitoring System for FAA.
- Published over 40 technical papers on microprocessors and microcontrollers.

# Message from Guest of Honor



Dean Dr. Christopher S. Lynch

#### William R. Johnson Jr. Family Chair Professor of Mechanical Engineering

Since its founding in 1989 with the Department of Computer Science and Engineering, the Marlan and Rosemary Bourns College of Engineering at the University of California Riverside has grown to host five departments (Computer Science, Electrical Engineering, Mechanical Engineering, Chemical, and Environmental Engineering, and Bioengineering) and three multidisciplinary degree programs (computer engineering, data science, and robotics engineering). With 5,000 engineering students, we are roughly the same size as the engineering program at our sister campus, UCLA. Although admission to Bourns College has become highly competitive, with over 19,000 applicants for around 1,000 spots, we highly value and welcome our international students for the cultural diversity that they bring to our programs.

Thanks to the leadership of AABEA, the Bourns College was honored to host a distinguished guest speaker: AK Abdul Momen, Honorable Foreign Minister of Bangladesh, who discussed "Climate Change: Bangladesh Perspectives," and Ms. Samia Anjum, Consul General who talked to us about educational opportunities for students from Bangladesh and opportunities for the Bourns College of Engineering to collaborate with engineering colleges in Bangladesh.

Our regional representative for international recruitment in South Asia is spearheading our recruitment efforts in Bangladesh, encompassing visits to high schools and universities nationwide. As a result of these efforts, we have successfully admitted 10 Master's and Ph.D. students, as well as 15 undergraduates, for the Fall 2023 quarter at BCOE, UCR. In addition to these endeavors, we are also working in partnership with Education USA and local agencies in Bangladesh to promote our graduate programs and expand our reach throughout the region.

With an over \$1B recent investment in new classroom facilities, student housing, and dining, UCR offers a great living and learning environment. This year we enhanced the experiential learning opportunities with three engineering-focused maker spaces: mechanical engineering, bioengineering, and electrical engineering. These facilities add to existing research centers and institutes that allow students to work on cutting-edge research projects alongside faculty and industry partners and signal our commitment to research innovation.

# **Inauguration Speech**



By Mohammed Mahibur Rais

President, AABEA Southern California Chapter (2023-2024)

Honorable chief guest Dr. M. Rafiquzzaman, Guest of Honor Dr. Lynch of UCR, respected members of AABEA Southern CA chapter, friends and families Assalamu Walaikum and Good Evening.

First of all, I would like to sincerely thank you all for your continues support for AABEA, SCC and in my person, to hold the Presidency of AABEA, SC Chapter for next two years.

I like to thank the outgoing president, Mr. Shahid Alam and his committee for making the 2021-2022 term successful. Most important achievement of the previous term was to establish the endowment fund with UCR. AABEA was established in 1984 and AABEA SC chapter started in 1991, it has been a great opportunity for me to be part of this outstanding association since 2010 and served as EC member, SC chapter representative of CEC, and President elect for last three terms and I really enjoyed working with energetic and sincere members. One of our main goal is to bring more and more engineering student and young engineers a of Bangladeshi origin under our wings as associate members and then regular members. Social media will play a vital role to do this job. The endowment fund which already started with UC Riverside will continue and will try to expand to other University of California.

We have plan to arrange technical seminars and networking, STEM programs, science fair, Meet and Greet with students of UCR and teachers and AABEA scholarship award ceremony.

Of course, we will have some entertainment and fun as well like AABEA Family night and outdoor picnic. We can't achieve all these goal without your help, cooperation and active participation of all present here tonight.

Thanks for attending inauguration ceremony and enjoy rest of the evening.

#### **Message from the Former President (2021-2022)**



SHAHID ALAM, MSCE. P.E AABEA SC Inauguration Ceremony -May 13, 2023

First, I like to congratulate the AABEA new cabinet of 2023-2024. American Association of Bangladeshi Engineers & Architects (AABEA), a 39-year-old non-profit, non-political, and non-religious engineering & architectural professional organization focusing on educational, scientific, cultural, and charitable programs. All 12 chapters including Southern California Chapter's Cabinet members are volunteering to share ideas, advancements, job search assistance, seminars & educational programs, cooperating with other non-political, non-religious social organizations, collaborating with public bodies, and honoring/acknowledging outstanding contributors.

I, Shahid Alam, was the 13<sup>th</sup> President of the AABEA Southern California Chapter for the term 2021-2022. Since 1991, for the last three decades, my predecessor presidents worked with their cabinets to bring this prestigious professional organization at this high level to serve fellow professionals and large Bangladeshi community. I had the opportunity to serve this chapter as General Secretary, CEC Representative, and president elect, however since the inauguration of our term from January 1, 2021, we faced the Pandemic of COVID 19 that barred all in person events to move forward. Our team immediately took part for Charity collaborating with South Asian Network (SAN) for Bangladeshi communities In Los Angeles. We had raised money through Facebook to purchase emergency needs for families and distributed door to door. Since COVID continued for the majority part of 2021, we alternatively arranged virtual workshops for High School Students and Job search. I must feel proud that our team accomplished some millstone achievements including AABEA Research Award Endowment Fund with UCR, Job Search Engine to post and subscribe for jobs. With the assistance of PECG officials, we were successful in adding AABEA name on the Caltrans/PECG professional organizations lists. Our Hardworking team had found innovative way to serve AABEA and took it to a higher level to reach mainstream including Universities in USA and Bangladesh, neighborhood councils, collaboration with other organizations including Bangladesh Unity Federation of Los Angeles (BUFLA), other ethnic Engineer Associations in southern California.

However, as a former President, I would like to open talk that AABEA is going through some challenges even after 32 years. And that is ABBEA had been acting introvertly. Our team has been working extrovertly talking steps to reach mass community members, regardless. We are working with an attitude that "Not what AABEA can do for us", rather "What we can do for AABEA". With a long dream of helping fellow professional, our forefather had founded this high-profile organization in 1994. Now the torch is in our hands to light up Engineers' life and society by extending hands.

How can we recruit more members? How can we campaign specially in Bangladeshi Engineering universities before students coming to USA? Should we arrange yearly open house in BUET, KUET, CUET, RUET campus on behalf of AABEA to inform students who would be coming to USA for higher education? How can we make bridge between graduates directly from Bangladeshi Universities and USA graduate of Bangladeshi origin? How can we collect funds as a non-profit organization from the State & Federal government? Can AABEA offer training courses for members through AABEA University Virtually? How will Bangladesh government acknowledge AABEA? How AABEA can become a one-stop service center for engineering students, educators, job seekers, corporations, business owners, recruiters and for the community as a whole? As a former president those all I have been brainstorming.

I am wishing that the new team of 2023/2024 will be looking forward to those who might think alike or better different to strengthen AABEA to fulfill the mission, and vision being established almost 4 decades ago.

# **AABEA-SC Past Executive Committees**

Term	President	President-Elect	General Secretary	Treasurer	<b>Executive Members</b>	
1991-92 (Ad Hoc)	Sheik Moinuddin		Syed A. Huq	Syed Mujahid Hossain	Quazi Hashmi, Sayed Helal, Naushad Hossain, Masud Zahedi, Zakir Hossain, Saiful Islam	
1993-94	Mukhles Bhuiyan	Saiful Islam	Syed A. Huq	Sheik Moinuddin	Zainul Abedin, Zakir Hossain	
1995-96	Zahidul Rahman	Khaled Gazi	Mishaal Khalil	Mohammed K. Rahman	Geroge Mondol, Kaiser U. Ahmed	
1997-98	Jalil Khan	Asad Haque	Munshi M. Mohsin, Kazi Fattah (Acting)	Tahmina Badruzzaman	K. Imteaz Uddin, Amin A. Hoque, Rana Haque (Acting)	
1999-00	Asad Haque	Shirajul Karim	Mohammed Iqbal	Musa Mostafa	Abul Kalam, Saiful Huq	
2001-02	Akbar Siddiqui	Halim Bhuiyan	Masud Zahedi	Shafiq Rahman	Haris Mahmud, Sabrina Akhtar	
2003-04	Rafiqul Noorani	Mohammed Bakar	Nazmul Ula	Shafiq Rahman	H.K. Mohammed A. Chowdhury, Nasim U. Gani, Khwaja A. Rahman	
2005-06	Syed A. Huq	Nazmul Ula	H.K. Mohammed A. Chowdhury	Shafiq Rahman	Khan Md Akram Hossain, Mohammad Monirul Islam, Saleh Kibria	
2007-08	Nazmul Ula	Saleh M. Kibria	Mohammed Shamol	Shafiq Rahman	Shahdat Hossain (Pappu), Shah Reza	
2009-10	Saleh M. Kibria	Nasim U. Gani	AKM Tareque	Shafiq Rahman	Jamshed Hyder, Md. Shafiqul Alam	
2011-12	Nasim U. Gani	Mourshad Haider	Mainul Khan	Shafiq Rahman	Shafayat Dewan, MD Rohul Amin Bhuiyan (shimul), Bakhtiar Billah	
2013-14	Mourshad Haide	Jabed Masud	Ahammad Akbar khan	Mahmuda Akhter	Azmal Khan, Sadique Hossain	
2015-16	Jabed Masud	Saiful Huq	Shahid Alam	Mokbul Chowdhury	Enamul Haque (Pilu), Ashraful Alam	
2017-18	Saiful Huq	Jamshed Alam Hyder	Farhana Haque	Khondokar Karim	Sharmin Shahriar, Sohel Uddin Ahmed, Mohammed M ahibur Rais, Arif Iftekhar, Nabil Haque, Zafar Ahmed, MD Rohul Amin Bhuiyan (Shimul)	
2019-20	Jamshed Alam Hyder	Shahid Alam	Iqbal Rahman	Farzana Huda	Md Musa, Mohammed Sarwar Jahan, Mohammad Husain	
2021-22	Shahid Alam	Mohammed Mahibur Rais	Rana H Mahmud	Mikayeel khan	Abu Kazi Rubel, Hasibul Sharif, Zebunnesa Tareque, Dr. Zainul Abedin	

# AABEA-SCC Event Plan (2023-2024)

#### 1) 2023 Inauguration and Award/Recognition Ceremony:

Saturday, May 13, 2023

Location: Luxor Banquet Hall, 7850 Beach Blvd, Buena Park, CA. 90620

#### 2) 2023 K-12 Science and Technology Fair, and Technical Seminar (Los Angeles):

[Open to all Bangladeshi K-12 Grade Students]

Date and Time: TBD

Location: TBD

#### 3) 2023 Family Picnic and Technical Seminar:

Date and Time: TBD

Location: TBD

#### 4) 2023 Networking, Career Development Event, Workshop and Technical Seminars:

[Members only, Networking event]

Date and Time: TBD

Location: TBD

#### 5) 2024 Family Night and Technical Seminar:

Date and Time: TBD

Location: TBD

#### 6) 2024 K-12 Science and Technology Fair, and Technical Seminar (Los Angeles):

[Open to all Bangladeshi K-12 Grade Students]

Date and Time: TBD

Location: TBD

#### 7) 2024 Family Picnic and Technical Seminar:

Date and Time: TBD

Location: TBD

# 8) 2024 Networking, Career Development event, Workshop, Technical Seminars and General Meeting:

[Members only, Networking event]

Date and Time: TBD

Location: TBD

PLEASE VISIT OUR WEBSITE WWW.AABEASCC.ORG FOR UPDATED INFO FOR THE FUTURE EVENTS



# AABEA-SC New Executive Committee (2023-2024)

# Mohammed Mahibur Rais, President



Mohammed Mahibur Rais completed his Bachelor of Science in Civil Engineering in 1989 from BUET. He has been working as a Service Engineer in the Service Division of Thermo Fisher Scientific for last 22years. His fields of specializations are Ion Chromatography, High Performance Liquid Chromatography and Trace Elements analysis. He is happily married to his wife Dr. Umme Ruman Rais and lives in Castaic with their two sons. He loves traveling, cooking ,reading books, spending time with friends and family.

# Sadique Hossain, President Elect



Sadique Hossain is a licensed Profession Engineer (PE) in the State of California and a Project Management Professional (PMP). He has been working as a Senior Transportation Engineer in California Department of Transportation (Caltrans) since 2014. Before joining Caltrans, he worked for Stantec Consulting, the Keith Companies, and the Louis Berger Group. Sadique obtained his Bachelor's degree in Civil Engineering from Bangladesh University of Engineering and Technology and a Master's degree in Civil Engineering from Texas

Tech University. Sadique spends his free time traveling and watching sports. Sadique is married to Aysha Habib (Rupali) who is also a Senior Transportation Engineer in Caltrans. They are proud parents of two young boys.

# Kamrul Islam, General Secretary



I am Kamrul Islam, and I completed my BS in Civil Engineering from Dhaka University of Engineering and Technology (DUET). Currently, I am working for the California Department of Transportation (CALTRANS) as a Transportation Engineer (Civil), worked for Ali Saif Building Construction, UAE as a project engineer, Local government engineering department (LGED) as an assistant engineer, and owned JK Building Construction at Bangladesh. I have served as a Delegate of Professional Engineer in California Government (PECG) in the Los

Angeles section in 2021, as convenor of BPI, as an organizing secretary, and as a general secretary of the Bangladesh Student's League (DUET). I have been voluntarily assisting people to get a job in the different departments and positions in the Federal, State, Counties, and Cities. I have a very good family with my beautiful and multi-talented wife and around 3-years sweet old baby girl and like to spend time with them and my dad's combined family.

#### Lamisha Sultana, Treasurer



Lamisha Sultana completed her Bachelor's in Computer Engineering from California State University, Fullerton. She is a Hardware Engineer at Mercury Systems. Her areas of expertise include Digital Electronics, HDL coding and troubleshooting hardware systems. She has experience in providing technical & customer support. Her undergraduate research was in machine learning, and her senior project was on wireless communication systems.

# Md Rohul Amin Bhuiyan (Shimul), Representative, Central-SC Chapter



Md Rohul Amin Bhuiyan (Shimul) is presently working as a District area engineer (Civil) in California Department of Transportation, District-07 (Los Angeles). He received his BS degree in Civil Engineering in 2006 and his Masters in 2009 from the California State University - Fullerton (CSUF). He was an Executive Member of ASCE - Student Chapter (2004-2005) and served as the President of the Society of Asian American Engineers (SAAE) at CSUF (2008-2010). He also served as the President of Chaffey College Engineering Club (2001-2002), CA. He achieved the Asian Outstanding Student Graduate Award and the Outstanding Academic Achievements Award in Engineering & Computer Science from CSUF in May, 2006. MD Rohul Amin Bhuiyan also

received a Publication Award at the World Congress on Engineering – 2010, London UK, for his published paper on Development of a New Optimal Method for the Solution of Transportation Problems. Md Bhuiyan has served as the Executive Member in the AABEA - Southern California Chapter for the (2011-12) and (2017-2018) term and He has been serving as a Vice President in the Professional Engineers in California Government (PECG)- Los Angeles since 2017-2023. He is current members of the American Society of Civil Engineers (ASCE) and Institute of Transportation Engineers (ITE). He is married to Dr. Nasima F. Bhuiyan, who is also working as Transportation Engineer (Civil) in California DOT (Caltrans) - HQ and served as a Civil Engineering Lecturer in California State University Long Beach (CSULB). They are blessed with two Sons, Saafir & Shamel.

# Sunny Kabir, Member



Mr. Sunny Kabir, Holds a bachelor's degree in electrical engineering (Major) & Computer science (Minor) from California Polytechnic University, Pomona. Completed his Executive MBA from Chapman university emphasis on leadership and M&A. Started his career from southern California Edison as a generation engineer. Eventually moved to the private sector as an application engineer for a software company in Irvine California. Currently is a global director of ELIP at ABB, which is Switzerland based company. Responsible for a

team of 48 people from field application engineers, R&D developers, account managers, technical specialists. Happily married with 2 children reside in North Fontana. Wife currently works for JPL-NASA as a cyber security analyst. As a family, very passionate about travelling the world and trying different cuisines. Always have a huge tick for getting involved in volunteering work to help the less fortunate and make the world a better place to live.

# Md Abdul Gaffer, Member



My name is Md Abdul Gaffer and I am a Cyber Security Engineer (Information Technology Specialist) at California Department of Fish and Wildlife (CDFW). I am graduated from Dhaka University of Engineering & Technology (DUET) with a Bachelor of Science in Computer Science and Engineering also I have 4 years diploma degree in Computer Engineering. I also completed an intensive Cybersecurity certification program from California State University, Long Beach. I am a Cisco CCNA Routing & Switching, CCNA Security, LPI Linux essentials, Red Hat Certified System Administrator (RHCSA)

and CompTia Security+ certification certified. I am a well-seasoned IT engineer with over four years experience in the field from when I lived in Bangladesh. I have now been in the United States for 6 years. I find great enjoyment in fishing and hunting, as well as taking long drives to explore new areas and enjoy the scenery.

# Tanvir Chowdhury, Member



"Tanvir Chowdhury is a petroleum engineer with more than twenty years' experience in working for major oil and gas companies such as Chevron and Halliburton in the states of TX and CA. His main area of expertise includes reserves estimation, production forecasting, economic analysis, subsurface modeling, well optimizations and field development planning. He holds a Master of Science degree in Petroleum Engineering from Texas A&M University (College Station, TX) and a Bachelor of Science degree in Chemical Engineering from BUET (Dhaka, Bangladesh). He is currently working as a reservoir

engineering advisor for SPR, a California based oil producing company. He enjoys reading books, travelling, watching movies and spending time with his family and friends. He also enjoys being a volunteer judge in state or local speech competitions for the Central Valley high school students."

# Mir Tanveer, Member



Mir Tanveer Islam completed his Bachelor of Science in Electrical and Electronic Engineering in 2015 from North South University (NSU), Dhaka, Bangladesh. Currently He is pursuing his Master of Science in Electrical Engineering at California State University, Fullerton (CSUF). He specializes in semiconductor hardware design and has worked for Neural Semiconductor Limited, Dhaka in the past. He is happily married to his wife Tasnim Binte Baki and lives in Fullerton.

#### Shanto Paul, Student Coordinator



Hi my name is Prethiraj Paul but I go by Shanto. My hometown in Bangladesh is Ataikula, Pabna. My family moved to the United States in 2009, so I have had the fortunate opportunity of having all my primary and secondary education in the United States. I currently attend UC Riverside on a regents scholarship pursuing my Bachelors of Science in Mechanical Engineering. I am currently part of the Unmanned Aerial Systems Club's design team, helping design and model unmanned drones for flight. I am also currently conducting research on Lithium and Mxene batteries for professor Dr. Cengiz Ozkan alongside some other grad students. I am interested in working in the energy sector as I believe clean energy still has lots of ways to go for a better future and fighting

climate change. In my free time, I love hanging out with my huge family of uncles, aunts, and cousins.







Dr. Abu Syed Israil is an experienced civil/structural engineer with over 26 years of experience in managing, leading and designing various infrastructures, including bridges, tunnels, water/flood control structures, petrochemical facilities, ports, harbors and other coastal structures. His expertise includes structural design for seismic, wind, tornado, machine vibration and ocean wave loads. He graduated from BUET in 1982 majoring in Civil Engineering and obtained his M.S. and Ph.D. degrees in Civil/Structural Engineering from the State University of New York at Buffalo in 1986 and 1990, respectively.

#### Tsunamis – Causes, Impacts and Precautions Abu Syed Md. Israil, Ph.D., P.E.\*

When we hear the word 'tsunami', the first images that immediately flash through our minds are those of the destruction and tragedies caused by the 2004 Indonesian tsunami and 2011 Fukushima/Tohoku earthquake and tsunami. Tsunamis rank high on the scale of natural disasters. Yet there are no effective way to predict these events. Since 1850 alone, tsunamis have been responsible for the loss of over 420,000 lives and billions of dollars of damage to coastal structures and habitats.

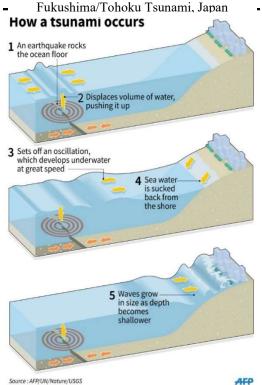
#### What is a tsunami?

Tsunami is a Japanese word, represented by two characters: tsu meaning "harbor" and nami meaning "wave". A tsunami consists of a series of ocean waves that sends surges of water, sometimes reaching heights of over 100 feet, onto land. Tsunamis are not regular ocean waves or tidal waves. Ocean waves are generated by winds, while tidal waves are caused by the gravitational pull due to the alignments of the sun and moon. Tsunamis are sea waves, generated primarily by earthquakes at the tectonic plate boundaries in the ocean floor. Other less common causes include underwater volcanic eruptions, submarine landslides, and very rarely, by large meteorite impacts in the ocean.

#### How is tsunami generated?

Undersea earthquakes are responsible for over 80% of the tsunamis. The earth's surface is comprised of a number of "tectonic plates" which are in constant motion relative to each other, at rates of up to 4 inches/year. Some plates slide horizontally past each other ("strike-slip") such as California's San Andreas Fault, while others move towards each other and one slides beneath the other ("subduction"). Most of the undersea plate boundaries are subduction type. As the plates rub/push against each other, tremendous amount of energy is locked along the plate boundary. When this locked-up energy exceeds a certain threshold, the fault ruptures. The energy is released and transferred to the body of ocean water above the rupture zone and creates waves on the ocean surface. At deep ocean, such waves may only be about 2-3 feet high and, may not be noticeable to the ships at sea. However, at such depths, they can travel at the speed of a commercial jet plane, over 500 miles per hour. As these waves reach the shallow coastal waters, their speed decreases and the wave height increases dramatically. A tsunami wave train may come as a series of surges that are five minutes to an hour apart and the first wave may not be the most dangerous. Waves as high as 120ft had been noticed in the past.

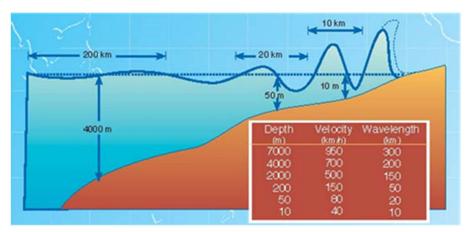






#### Historic Tsunami Occurrences

Japan has the longest recorded history of tsunamis, dating back to 864AD or even earlier. The Pacific "Ring of Fire" which surrounds the coastal regions around the Pacific Ocean, is frequently subjected to tsunami devastations. Below is a list of the deadliest tsunami events in recorded history:



Tsunami wave propagation

Table: Historical List of Deadly Tsunamis

Tsunami Name/Location	Wave height (ft)	Earthquake magnitude	Year	Deaths
Sumatra, Indonesia	100	9.3	2004	240,000
Nankai, Tōkai, and Kyushu,	27	8.4	1854	100,000
Japan				
Arica, Peru (now Chile)		8.5	1868	95,000
Nankai, Japan	33	8.4	1707	60,000
Lisbon, Portugal	49		1755	55,000
Nankai, Japan	>25	7.5	1498	40,000
Krakatoa, Indonesia	120		1883	36,000
Fukushima, Japan	33	9.0	2011	19,000

#### Which Regions Are at Risk?

All coastal areas with a history of offshore seismic activity are at risk of tsunamis. As noted in the historical list of deadly tsunamis (above), the Pacific "Ring of Fire" regions have seen the most tsunami occurrences. Over 80% of all tsunamis have occurred in this area. Other regions of tsunami risks are the Caribbean and Eastern Mediterranean.

#### **Tsunami Prediction**

Attempts at predicting tsunamis have not been very effective in the past. In the last 50 years or so, over 75% of tsunami predictions were found to be false alarms. In recent years, some advanced tsunami monitoring devices have been installed around the globe that provide real-time data to The Pacific Tsunami Warning Center (PTWC), located in Hawaii. These devices are called Deep-Ocean Assessment and Reporting of Tsunamis (DART) monitors. The live oceanic data received from these devices is processed by PTWC, and issues tsunami warning, watch or advisory, if warranted. Recently, after the devastating Indian Ocean Tsunami of 2004, warning centers have been established in the Indian Ocean region, North Atlantic/Eastern Mediterranean region



Tsunami Aftermath, Fukushima, Japan (2011)



Indian Ocean Tsunami, Sri Lanka (2004)

and the Caribbean region. UNESCO's Intergovernmental Oceanographic Commission (IOC) is tasked with coordination among the regional warning centers and other relevant national/regional agencies.

Tsunami WARNING: means a tsunami may have been generated and could be close to your area.

Tsunami **WATCH**: means a tsunami has not yet been verified but could exist and may be as little as an hour away.

Tsunami **ADVISORY**: means threat of a potential tsunami exists which may produce strong currents or waves dangerous to those in or near the water.

Some anecdotal signs that a tsunami is imminent:

- Ocean receding unusually rapidly from the coast
- Animals behaving strangely
- Noises from the ocean mimicking freight trains



Tsunami Devastation, Indonesia (2004)

#### **Precautions**

- If you are at or near a coast and feel a strong coastal earthquake, get to higher ground and as far inland as possible, ideally to a spot 100 feet above sea level or 2 miles away.
- Watching a tsunami from the beach or cliffs could put you in grave danger.
- If you can see the wave, you are too close to escape it.
- If you hear an official tsunami warning or detect signs of a tsunami, evacuate at once. A tsunami warning is issued when authorities are certain that a tsunami threat exists, and there may be little time to get out.
- Remember that a tsunami is a series of waves and that the first wave may not be the most dangerous.
- The danger from a tsunami can last for several hours after the arrival of the first wave.



Tsunami Hazard Signage in USA

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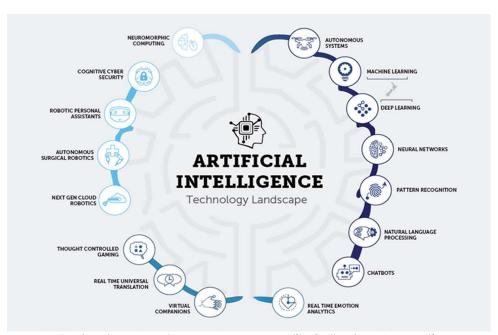
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# Artificial Intelligence: Prospect and Future

Shafayat M Dewan | Genesis Computer Systems, Inc.

Artificial Intelligence is the new buzz word in technology today and very soon it is going to touch every part of our lives. Hundreds of Startups, Academia and Open source are working to bring it into mainstream so that it will influence our lives in all parts of the world. Artificial Intelligence otherwise known as AI can be defined as a concept of a modern machine working in an intelligent way using advanced microprocessor with advanced software, exhibiting intelligence very close and similar to human intelligence. As humans when we express ourselves by saying something or when we perform a task or think about anything our brain goes through tons of calculations using its 80~90 billion nerve cells. AI is nothing but the same except that various calculations, thinking and actions all done in tandem and in a smooth fashion by a machine equipped with an electronic brain.

Al was first conceived at a conference in Dartmouth College in 1956; since then it went through different phases of development but did not get a concrete shape due to lack in machine based computing power. With the advent of small yet superfast Teraflop CPU (1 trillion computational operations/sec), ever-changing computing methods, new development in software algorithm, development in machine learning and advancement in neural networking, a new dawn in Al has emerged. Al utilizes all of these and in the last 5 years we have seen many Al based practical applications in our daily lives such as Apple's Siri, Microsoft's Cortana, Amazon's Alexa, Sony's QRIO, delivery drones, driver less vehicles etc. Even popular portals like Netflix and Spotify use Al.



Al Technology Landscape (Image credit: Callaghan Innovation)

A generalized Technology Outline of AI is shown in the previous diagram but the main branches of science that makes AI possible are:

Machine learning Neural Network Deep Learning
Computer Vision Cognitive Computing Natural Language Processing

Al is not targeted in one direction and is not one kind only, rather there are many types of Al based on its focus and development; it can be used or deployed in many areas of life; combining Al with GPS we can get automated driving or driver less cars. In broader terms it can be applied in:

Agriculture Transportation Medicine Surgery
Finance Sales Marketing Mass manufacturing
Investment Retail stores Office Home

The promise and potential is so great that many large corporations like Google, Amazon, Tesla, Apple, IBM are teaming up together and are marching ahead to achieve and deliver meaningful solutions to the general public. Of course the corporate profitability is the main driving force but it has the ability to make life easier and mitigate sufferings for general public even in poor countries. For the richer countries it will add to the convenience and luxury of life but for poorer nations it may help provide affordable high quality healthcare and better crop output to stop hunger.

Like any new and emerging technology AI has pros and cons. In general AI has a lot of good but if not done right or managed ethically it can create havoc. For example if we apply AI in our daily lives in limited fashion, life can be good: we can have a robot at home who will listen to commands and will do mundane works like laundry, folding clothes, fetch a drink or make a cup of coffee. We can have a driver less automated vehicle for easy transportation – especially helpful for elderly people living alone. Even we can catch a flight using an unmanned drone for travelling a reasonable distance and avoid wasting time in daily long commutes.

On the other hand if AI not done right or used for corporate greed serious unemployment can happen. For example, if all retail stores replace their store clerks & supply chain people, if all long distance trucks are replaced with driver-less trucks, we are talking about a serious dip in employment. If AI is applied in medical research good things can come out but if used unethically for gene editing serious problem can arise threatening the human race. Another fear about AI is whether it will get smarter than humans after many iterations; humans make mistakes but AI will not therefore it has the potential to supersede human efficiency and can go out of control. There are very dangerous aspects of AI including mass usage in weapons and warfare but the big corporations realize that and therefore companies like Microsoft, Google, Facebook, Intel IBM, Apple formed a union called 'Partnership on AI' which will police the AI R&D and thereby accept the good and reject the evil. At this stage of 21st century AI is unstoppable so let's accept and enjoy the good side of it and be vigilant and resist the bad side.

# Impact of Telework on Transportation System



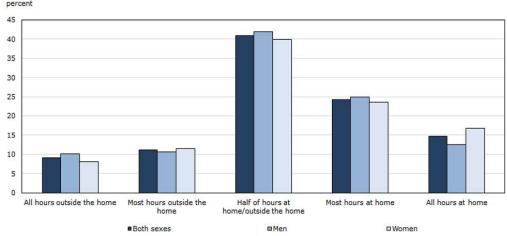
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Many individuals are performing work from home since last couple of years. They do not need to commute daily to the work as their job duties are tied to flexible workstations at home. This became a most common phenomenon since March 19, 2020, after Gov. Gavin Newsom issued an emergency statewide stay-at-home order to protect public health and slow the spread of COVID-19 in California. As a result, many California residents began working from home, leading to unprecedented changes to California's transportation system and traffic patterns.

Since this became a matter of research for different organizations and institutes to observe the impact of teleworking specifically in the field of transportation. The general finding is that with the reduced number of trip generations and trip demands the congestion mitigation is improved. But with time of normalcy with COVID-19, many agencies start the policy of partial telework as an order from permanent telework policy. This policy still includes partial commute to and from work per week and there is overall changes are observed in transportation system recently. Below in the graph, a general statistics is presented where preferences of teleworkers are exhibited based on gender differentials.

Chart 2
Preferences of new teleworkers for telework once the COVID-19 pandemic is over



Sources: Statistics Canada, Labour Force Survey and Labour Force Survey supplement, February, 2021.

#### Figure: Telework Preferences based on Gender Differences

Overall, by less vehicular movements on roadways, congestions can be reduced and air pollution can also be reduced from less traffic. Safety in transportation system is enhanced significantly as well. Governments should also take appropriate actions to sustain the benefits from telework into the future, by ensuring that businesses and their employees have the flexibility they need to drive economic and social recovery and achieve improved well-being. Relevant policies to achieve these goals pertain to three main areas: supporting complementary investments; helping surmount cultural and legal hurdles; and mitigating potential side effects.

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এখানে সব ধরণের টাটক<mark>া শাক–সজী, নাছ, হালাল নাংস, বাংলাদেশি, ভারতীয় ও পা</mark>কিস্তানি মসলা সুলভ মূল্যে পাওয়া যায়, আমরা ক্যাটারিং করে থাকি। 'দেশী'আবহুমান বাংলার ঐতিয্যে লালিত একটি বাং<mark>লাদেশি মালিকানাধীন প্র</mark>তিষ্ঠান



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