



## **Naveed Anwar, PhD**

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A Pakistani-born structural engineer and academician, currently working as Executive Director of AIT Solutions, and as an Affiliated Faculty in Structural Engineering at School of Engineering and Technology of Asian Institute of Technology, (AIT) in Thailand. He is also the Director of Asian Center for Engineering Computations and Software (ACECOMS), and heads the Habitech Building Technology Center at AIT.

In over 35 years of professional engagement, Dr. Anwar has the unique opportunity to work in a very broad spectrum of the Civil/Structural Engineering knowledge cycle, in teaching of graduate programs, post graduate research supervision, publications, development of tools and technologies for application, training and capacity building of professional engineers, and direct engagement in hundreds of international projects, all of which feeding back into the teaching, research and development. All of this is done in a truly international setting, spanning over twenty countries, under the umbrella of one the top international universities in the world.

Dr. Anwar has been invited as keynote speaker in numerous international conferences, has authored over one hundred publications including books, conferences papers, journal papers and magazine articles and reports. He has supervised/co-supervised more than 50 MS and PhD research thesis and taught four academic courses for MS program in structural engineering

He has been the key presenter/resource person in over 100 capacity building seminars, workshops, training programs conducted in more than 10 countries and attended by thousands of engineers, in collaboration with several academic and professional institutions.

During twenty-three years of work in AIT in various capacity, he has headed and participated in several important initiatives, including the establishment of ACECOMS, AIT Solution, iLab, managing collaboration between AIT and HEC Pakistan, capacity building projects in Afghanistan, task forces on professional programs, campus management, development of AIT Share platform for online and hybrid education.

He has been engaged as specialist by ADB, World Bank, UNESCAP, UNESCO and has been part of the team at California based Computers and Structures Inc.,

His expertise and interest include finite element modeling and applications, advanced concrete design, integration of emerging technologies into structural engineering, a leading position in performance-based design of tall buildings, design and evaluation of bridges, innovations in building technology, IoT, machine learning, mobile computing etc.

## **CURRENT POSITIONS**

### **Executive Director**

#### *AIT Solutions (2010- Present)*

AIT Solutions (AITS), formerly AIT Consulting, was established AIT with the aim to increase the application of science and technology for the socio-economic development in Asia and the global community.

#### *Achievements/Tasks:*

- Helped to conceive and set up the AIT Consulting, and later transform to AIT Solutions
- Managed to secure hundreds of projects related to structural modeling, analysis and design of buildings and bridges, construction project management, structural health assessment, and other related areas.
- Successfully conducted hundreds of professional trainings, workshops and seminars, attended by thousands of professionals in more than 20 countries
- Develop innovation lab (iLab) at AIT Solutions which is student-centric creativity hub, offering a platform to students, researchers, innovators, and entrepreneurs to nurture their promising ideas through collaborative approach, and develop sustainable and scalable solutions, processes, and products.

### **Affiliated Faculty**

#### *School of Engineering and Technology, Asian Institute of Technology, Bangkok, (2006- Present)*

#### *Achievements/Tasks:*

- Teach MS courses entitled as "Advance Concrete Structures", " Design of Tall Buildings" and "Design of Bridges and Bridge Components", offered in the field of structural engineering at, Asian Institute of Technology (AIT), Bangkok
- Supervised more than 40 postgraduate thesis, on various structural engineering domains such as Performance based design, structural modeling and analysis, Structural system selection, Seismic response of high rise structures, Seismic performance of structural components, Design of bridges and bridge components and New trends and technologies in structural engineering

### **Director**

#### *Asian Center for Engineering Computations and Software (ACECOMS) , (1995- Present)*

Established in 1995 as one of the first centers of excellence at AIT aims to provide an impetus to the research in engineering computations, computer software tools for engineering applications, and training on their effective use.

#### *Achievements/Tasks:*

- Helped to conceive and establish ACECOMS
- Development of software engineering applications
- Capacity building and training of thousands of engineers in the region

## **Supervising Director**

*Habitech Center, Asian Institute of Technology, Bangkok (2007- Present)*

Habitech Center is a research and development center for building components and building technology at AIT. Established in 1988, Habitech Center has conducted research and developed various building components that are environmentally friendly, energy-efficient and cost-effective. This system has been tested, demonstrated and disseminated through various housing projects in Thailand and in other countries throughout Asia and Pacific.

## **PREVIOUS POSITIONS**

- Chief Executive/Principal of Naveed Anwar & Associates, Lahore (1988 – 1994)
- Senior Structural Engineer, Pakistan Environmental and Architectural Consultants (PEPAC), Lahore, Pakistan (1984-1986)
- Senior Structural Engineer, Progressive Consultants, Lahore, Pakistan (1983-1984)

## **Key AREAS OF EXPERTISE**

- Finite Element Analysis, structural modeling and analysis.
- Advanced concrete mechanics, bridge engineering, steel structures
- Performance based design and design evaluation of tall buildings.
- Seismic hazard assessment, disaster risk reduction (DRR)
- Leadership, innovation and business development.
- Software development for engineering applications.
- Higher education and capacity development

## **ACADEMIC QUALIFICATIONS**

Doctor of Engineering	Asian Institute of Technology, Bangkok, Thailand
Master of Engineering:	Asian Institute of Technology, Bangkok, Thailand
Bachelor of Engineering	University of Engineering and Technology, Lahore, Pakistan

## **PROJECTS**

In over thirty-five years of extensive experience, has worked on more than 500 projects including conception, planning, analysis, design and detailing of multistory buildings, bridges, water retaining structures, industrial buildings and special structures.

- Planning, design and design review of many special problems including strength evaluation of existing buildings and bridges, design of transmission towers, large diameter deep piles, cold formed structures etc. Some of the key projects are:
- Design and design review of more than 200 tall buildings, with special focus on performance-based design, structural retrofitting, strength evaluation, in several countries.
- Planning, design and design review, failure investigations of numerous bridges and highway structures in several countries.

- Planning and design of several underground and elevated tanks, and reservoirs. Some of the key projects are:
- Planning and design of industrial buildings in concrete shells, steel trusses, steel frames, and special structural systems
- Development of national strategy for Safe Schools in Nepal, and buildings codes in Myanmar and Philippines,
- Evaluation of several civil engineering projects on behalf of ADB in Nepal, Sri Lanka, Thailand, Pakistan, Laos, Tajikistan, Philippines, Timor Leste etc.
- Managing capacity building programs for university faculty in Afghanistan for ADB and World bank funded programs

## **RESEARCH & PUBLICATIONS**

### **Post-graduation Research Supervision**

Supervised more than 50 postgraduate thesis, on various structural engineering domains such as Performance based design, Structural modeling and analysis, Structural system selection, Seismic response of high rise structures, Seismic performance of structural components, Design of bridges and bridge components and New trends and technologies in structural engineering.

### **Books**

Author of 4 books and editor of 8 books related to civil and structural engineering. The recent book entitled as “Structural Cross-Sections: Analysis & Design” was published in 2016 and is currently used as text book for the Course “Advance Concrete Design” offered in the field of structural engineering at AIT. The books are written for the use in practical design application by engineers working in the industry.

### **Journal Publications**

Author of several journal papers published in well reputed journals in the domain of civil and structural engineering. The research focus on the areas of structural modeling and analysis, software development for structural engineering applications, strut and tie modeling, structural damage assessment and cross-sectional analysis.

## **CONFERENCE, SEMINAR PRESENTATIONS**

Presented in over one hundred renowned international conferences, events, workshops and seminars.

- Invited as Key Note presenter or sole key resources person in several events
- Extensively presented research papers, project case studies
- Conducted seminars and workshops in more than 15 countries, attended by thousands of engineering professions, academia, public officials

## **SOFTWARE DEVELOPMENT**

Over twenty years of experience in the development of computer programs for engineering applications. Author of several programs which have been released for specific and general

use. Main author of several user manuals and technical documentation. Planning, implementation, coordination and supervision of software projects carried out by several programmers.

## **OTHERS**

### **INTERNATIONAL WORK EXPOSURE**

Worked on projects, capacity building, and related work in several countries including USA, Caribbean Islands, Pakistan, Afghanistan, Sri Lanka, Nepal, Bhutan, Bangladesh, Myanmar, Thailand, Laos, Cambodia, Vietnam, Philippines, Takistan, Timor Leste, Indonesia, Malaysia, Singapore,

### **HOBBIES & INTEREST**

- Proficiency in photography
- Sketching and writing
- Interest in philosophy, Science and Psychology

### **LANGUAGES**

English:	Read, Write, Speak
Urdu:	Read, Write, Speak
Punjabi:	Speak
Thai:	Speak
Arabic:	Read