

Dr. Syed Salman Mobeen

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EDUCATIONAL QUALIFICATIONS

2021	Ph.D in Structural Engineering, University of Alberta, Canada.
2002	M.Sc. in Structural Engineering, University of Alberta, Canada.
1993	B.E. in Civil Engineering, N.E.D.U.E.T Karachi.

PUBLICATIONS

- ❖ **“Double-Headed Studs in Shear Walls”**. *Concrete International*. March 2005 issue.
- ❖ **“Fatigue performance of cope steel beams, repaired with carbon fibre reinforced polymers”**. *3rd International Structural Speciality Conference, Canadian Society of Civil Engineers (CSCE) 2012*, Edmonton, Canada.
- ❖ **“Patch delamination effect on Stress Intensity factor in cracked steel plates repaired with carbon fibre reinforced polymers”**. *3rd Speciality Conference on Material Engineering and Applied Mechanics, Canadian Society of Civil Engineers (CSCE) 2013*, Montreal, Canada.
- ❖ **“Impact of laminate properties on interface stresses and Stress Intensity factor in cracked steel plates repaired with carbon fibre reinforced polymers”**. *4th International Structural Speciality Conference, Canadian Society of Civil Engineers (CSCE) 2014*, Halifax, Canada.
- ❖ **“Experimental study of fatigue behavior of cracked steel plates repaired with high and low modulus carbon fibre reinforced polymers”**. *4th Speciality Conference on Material Engineering and Applied Mechanics, Canadian Society of Civil Engineers (CSCE) 2015*, Regina, Canada.

EXPERIENCE

Aug. 2017 till date

Assistant Professor, Department of Civil Engineering, NEDUET, Karachi.

➤ Specific Jobs

Primary Assignments include teaching courses related to structural engineering at both undergraduate and graduate level. Courses mainly include:

- Design of Steel Structures
- Design of Reinforced Concrete Structures
- Prestressed Concrete Design
- Structural Analysis
- Advance Structural Analysis
- Repair , Maintenance and Reterofitting of Civil Structures
- Research Methodologies

Apart from teaching assignments, research and government assigned projects have also been carried out, involving inspection and condition assessment of different buildings / structures.

Condition Assessment of Multiple School Buildings Constructed Using LGS Technology (2024)

The scope of work included the following:

- 1- preliminary desktop study of the Architectural and Structural drawings of the selected 34 schools spread all over in Sindh province.
- 2- Physical visits to all the schools to observe & record the nature of structural problems in the school building using “Visual Rapid Screening” with the aid of measurement of dimensions / thicknesses of structural elements as well as the nature and exact dimensions of the localized and spread problems.
- 3- Analysis of the nature and impact of structural and service problems detected and observed during the site visits.
- 4- Proposing Remedial Measures to mitigate the structural / service problems as well as strengthening strategies wherever required.

The school buildings were constructed using LGS technology and not the conventional RCC. Some snaps of the highlighted problems are shown below, including but not limited to corrosion, floor settlements, LGS waterproofing at roof and through the LGS walls and wall skin boards problems, etc.

2009 to Aug. 2021

Pursuing PhD. in structural engineering in the department of Civil & Environmental Engineering, University of Alberta, Edmonton, Canada.

➤ Specific Jobs

- Performed experimental and numerical work as part of the Ph.D. research
- Worked as Teaching assistant (T.A) in the department of Civil & Environmental Engineering, University of Alberta, Edmonton, Canada.

2005 to 2009

Assistant Professor, Department of Civil Engineering, NEDUET, Karachi.

2002 to 2005

Senior Structural Engineer Engineering Associates

Consulting Engineers and Project Planners, Karachi, Pakistan.

➤ Specific Jobs

❖ Lyari Expressway, Karachi, Pakistan

The project mainly comprised of 12 bridges as part of the highway that ran across the city, along the Lyari river. Following were the specific design tasks.

- Design of sub structures of bridges proposed at “Tinhatti” and “Sir Shah Suleman” interchanges, with structural spans ranged from 25 to 46 meters, using “AASHTO LRFD” and “West Pakistan Highway Code”. Structural analysis was performed using finite element software “STAAD III”
- Super structure of proposed “Tinhatti over-pass”, comprised of PSC box girders with structural span of 46 meters, using “AASHTO LRFD” code. Grillage and line beam analysis were performed using finite element software “STAAD III”.

❖ **Crescent Steel Workshop, Nooriabad**

Included the structural design of facility for testing large diameter structural steel pipes. The design standard and software used were “AISC” and “STAAD III” respectively. Following were the specific tasks.

- Design of steel frames under gravity and lateral loads.
- Design of gantry crane girders and its supporting system.

❖ **Jumairah Beach Residence, Dubai, United Arab Emirates**

The project included structural design of seven high rise R.C.C. residential towers along Jumairah Beach, Dubai, United Arab Emirates. The towers height ranged from 17 to 52 stories and were mainly designated for residential and commercial use. Following were the specific tasks

- Preliminary sizing and structural framing of structural elements of the high rise towers.
- Detailed analysis and design of gravity and lateral load resisting systems of the towers by developing their three dimensional finite element models using finite element software “ETABS – 8”
- Analysis and design of floor plates of the towers using finite element software “SAFE – 7”
- Analysis & design of R.C.C. pile-raft foundations of the towers using “SAFE 7”.
- Design standards used were “UBC-97” and “BS-8110-97”

1999 to 2002

Completed Master of Science (M.Sc.) in Structural Engineering From University of Alberta, Edmonton, Canada.

- Experimental work involving casting and testing of RCC shear walls, as part of M.Sc. research requirements.
- Worked as Teaching assistant (T.A) in the department of Civil & Environmental Engineering, University of Alberta, Edmonton, Canada.

1994 to 1998

Structural Design Engineer **Loya Associates** Consulting Engineers & Project Planners, Karachi.

➤ Specific Jobs

❖ Bridge Design

Mostly involved in the design of sub-structures of different bridges in Pakistan, using “AASHTO” and “West Pakistan Highway Code” with the aid of finite element analysis softwares. Following is a brief description of the Bridges designed.

- Sub-structure of Bridge over the River Indus at Shorkot, with structural spans of 44 meters.
- Sub-structure of Bridge over the River Indus at Sehwan, with structural spans of 44 meters.
- Sub-structure of Bridge at Tariqabad railway crossing, Faisalabad, with structural spans of 16 to 30 meters.
- Sub-structure and deck slab for 17 bridges in Makran Coastal Road Project, with structural spans of 16 to 30 meters.
- Sub-structure and deck slab for Bridge over Thado-Naloh, Sindh.
- RCC Bridge and Culverts in Manshra-Chilas Road Project with maximum span of 12 meter.
- Rehabilitation of Bridge on Brewery road over Lora Nallah, Quetta.

❖ Industrial and Miscellaneous Projects

- Preliminary tender working, detailed design and site supervision of 15 MW Diesel Power Plant at Nooriabad, Sindh, for Dadabhoy Energy Supply Co. Ltd.
- Planning and preliminary tender working for 115 MW Diesel Power Plant at Raiwind, for Southern Electric Power Company Limited (SEPCOL), Canada.
- Rehabilitation of the supporting system of 80 tones sugar tanks in Mirza Suger Mills, Badin.
- Design of 15 Steel canopies for Shell Pakistan.
- Analysis and design of raft foundation and flat slabs for ground+12 storied residential apartments “Syma Heights” at Clifton, Karachi.

1993 to 1994

Junior Structural Engineer

Vazir Ali Associates

Consulting Engineers, Karachi, Pakistan.

KNOWLEDGE OF ENGINEERING SOFTWARES

ABAQUS Standard

ETABS 2016

SAP 2000

SAFE 7

STAAD III

S-FRAME

KNOWLEDGE OF APPLICATION SOFTWARES

MS OFFICE

AUTOCAD 2000