

Proposal of ACECC New Technical Committee

Application Form (draft)

1: Date of Proposal:

July 21, 2016.

2: Society/Institution(s) which propose(s) the new TC:

The Institution of Engineers Pakistan

3: Name of New Technical Committee:

TC22: Retrofitting and Strengthening of Existing structures / Infrastructures

4: Activity Period (minimum 3 years, in principle)

Three years starting from January 2017.

5: Name of Chair Person:

Prof. Sarosh Hashmat Lodi

Organization: The Institution of Engineers Pakistan

Contact address: Dean, Faculty of Civil & Architecture

NED University of Engineering & Technology

University Road, Karachi – 75300, Pakistan

E-mail address: sarosh.lodi@neduet.edu.pk, saroshlodi@yahoo.com

6: Name of Secretary of the New TC: To be nominated by IEB

Organization: **The Institution of Engineers Bangladesh (IEB)**

Contact address: **To be given by IEB**

E-mail address: **To be given by IEB**

7: Objectives of new TC:

A huge proportion of housing stock in developing countries consists of vernacular rural housing, which is extremely vulnerable to different disasters such as floods, earthquakes, etc. The factors that contribute to the vulnerability of these buildings include poor construction quality, lack of disaster resistant features, lack of implementation of the design codes and absence of engineering input in the

construction of these buildings. Improvement in the built environment and quality of life in developing countries is essential for sustainable development and growth. The following are the objectives of the committee

- 1) To strengthen the capacities of developing member countries of ACECC to mitigate the damages experienced by these countries in the face of earthquakes, flood and other natural calamities through providing knowledge and training in retrofitting & strengthening of existing/damaged structures.
- 2) To contribute to achieve the Sustainable Development Goals 9 and 11 of the UN General Assembly which are entitled as build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation and make cities and human settlements inclusive, safe, resilient and sustainable, respectively
- 3) To provide better living conditions for the poor by increasing safety of built environment
- 4) To minimize loss and recovery cost

8: Terms of Reference:

- 1) Develop naturalized solution
- 2) Built capacities
- 3) Develop improved assessment tools
- 4) Liaise with the governments and donor agencies.
- 5) Developed Training Manuals
- 6) Arranging Workshops for Training

9: Expected Outcome of TC activities

In order to achieve the aforementioned objectives, the following outcomes are expected from the activities of the committee

- 1) Enhanced capacities of ACECC members to handle damages due earthquakes, floods and other natural calamities through training in retrofitting & strengthening of existing/damaged structures.
- 2) Development of national level manuals for the guidance of professionals and craft persons.
- 3) Development of sustainable human resources through trainings and workshops.
- 4) Development of curriculum for graduate engineers.

10: Financial background for TC activities

- 1) ACECC
- 2) IEP
- 3) IEB
- 4) JSCE
- 5) KSCE
- 6) NEA (Nepal Engineers Association)

11: List of TC members (at the time of proposal)

1) IEP

(i) **Engr. Sohail Bashir**

Vice-Chairman (Civil)

The Institution of Engineers Pakistan, Karachi Center

4th Floor, IEP Building, 177/2, Liaquat Barracks, Opp. Hotel Regent Plaza

Shahrah-e-Faisal, Karachi-75530, Pakistan

E-mail: sohailbs@yahoo.com

(ii) **Prof. Muhammad Masood Rafi**

Chairman, Department of Earthquake Engineering

NED University of Engineering & Technology

University Road, Karachi – 75300, Pakistan

E-mail: rafi-m@neduet.edu.pk

2) IEB (To be given by IEB)

3) JSCE (To be given by JSCE)

4) KSCE (To be given by KSCE)

5) NEA (To be given by NEA)

(Name, Organization, E-mail address should be shown in the list)

SAROSH HASHMAT LODI

Professor and Dean Faculty of Civil Engineering and Architecture
NED University of Engineering and Technology, Karachi - Pakistan

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E-mail: sarosh.lodi@neduet.edu.pk, saroshlodi@yahoo.com

Qualifications:

- 2005 National Management Course (82nd NMC), Pakistan Administrative Staff College, Lahore.
- 1998 PhD, Heriot-Watt University, UK
- 1988 MS (Structures), Oregon State University, USA
- 1985 BE (Civil), NED University of Engineering and Technology, Karachi, Pakistan

Work Experience:

- 2010 – to-date Dean Faculty of Civil Engineering and Architecture, NED University of Engineering and Technology, Karachi.
- 2003 – to-2010 Chairman, Department of Civil Engineering, NED University of Engineering and Technology, Karachi.
- 2000 – to-date Professor, Department of Civil Engineering, NED University of Engineering and Technology, Karachi.
- 1998 – 2000 Associate Professor, Department of Civil Engineering, NED University of Engineering and Technology, Karachi
- 1991 – 1998 Assistant Professor, Department of Civil Engineering, NED University of Engineering and Technology, Karachi
- 1988 – 1991 Lecturer, Department of Civil Engineering, NED University of Engineering and Technology, Karachi
- 1985 – 1986 Structural Design Engineer, Mehran Engineers and Consultants, Karachi.

Other Experiences:

- 2012 – 14 Member, Board of Governors, COMMECS Institute of Business and Emerging Sciences.
- 2012 – 14 Elected Member, Executive Council Pakistan Engineering Council
- 2011 Member, Syndicate, Balochistan University of Engineering and Technology, Khuzdar
- 2011 – 12 Member, Syndicate, University of Sindh, Jamshoro.
- 2010 – to date Member, Syndicate, Mehran University of Engineering and Technology, Jamshoro.
- 2010 Member, Task Force for Implementation of Energy Building Code of Pakistan, Pakistan Engineering Council, Islamabad
- 2009 UNDP Consultant on Site Selection for Evacuation Shelter for Tsunami at Markan Coast, Balochistan
- 2009 – to date UNDP Consultant on National Capacity Building for Disaster Risk Management
- 2008 – to date Expert Member on Seismic Hazard Assessment of Pakistan, UNDP – NDMA
- 2008 – to date Team Member, Design of Seismic Retrofit for Stone Masonry School Building at Abbottabad, CWS – P/A
- 2009 Represented Pakistan at 16th Plenary Meeting of International Standardization Organization Committee TC 71 at Cairo, Egypt

2009 – to date	Convenor, National Building Code – Seismic Provisions Implementation Committee, Pakistan Engineering Council, Islamabad
2008	Represented Pakistan at 14 th Plenary Meeting of International Standardization Organization Committee TC 71 at Salvador, Brazil
2006 – 2009	Member, National Highway Board, Ministry of Communication, Government of Pakistan
2007 – 2008	Member, Pakistan Building Code – Seismic Provisions Committee, Pakistan Engineering Council, Islamabad
2005 – to date	Member, Traffic Management Board, CDGK, Karachi
2005 – 2006	Registrar, NED University of Engineering and Technology, Karachi
2001 – to date	Resource Person, Cowsjee Earthquake Study Centre, Karachi.
1998 – 2005	Management Representative for ISO 9000, NED University for Engineering and Technology, Karachi
1998 – to date	Member, Board of Studies, Board of Faculties, Academic Council, Syndicate and Senate, NED University of Engineering and Technology, Karachi
1998 – to date	Local Coordinator, Ferrocement International Network (Pakistan)
1989- 1994	Local Coordinator, Ferrocement International Network (Pakistan)

Development of Academic Programmes

As Chairman, Department of Civil Engineering and Dean, Faculty of Civil Engineering and Architecture initiated and developed following academic programmes:

2011	Bachelor programme in Construction Engineering
2001	Bachelor programme in Urban Engineering
2012	Master programme in Earthquake Engineering
2010	Master programme in Water Recourse Management
2004	Master programme in Coastal and Harbour Engineering
2003	Master programme in Construction Management
2005	Post Graduate Diploma in Land Surveying

Development of Laboratories and Research Infrastructure

2008 – 2011	Designed and developed Pakistan's first state of the art Advanced Material Testing Laboratory with 5500 ft ² reaction floor and reaction wall. Commissioned Rs. 120.000 million worth of 5 actuators through Higher Education Funding.
2007 – 09	First Seismic Simulation Laboratory through Rs. 40.000 million funding from higher Education Commission.
1998	Designed and developed first Engineering Mechanics Laboratory.

Research Refereeship

Served as referee for the following international research journals.

American Concrete Institute Materials Journal
 American Concrete Institute Structure Journal
 NED University Journal of Research
 Research Journal of UET Lahore

Advisory and Editorial Board of Research Journals

Presently serving on the boards of the following research journals.

NED University Journal of Research

Research Journal of UET Taxila

Research Projects

Principal Investigator, “Constitutive Modelling of Ferrocement Elements”, funded by NED University of Engineering and Technology. Project completed in April 2002.

Principal Investigator, “Development of Response Spectra for Southern Coastal Region of Sindh”, funded by NED University of Engineering and Technology. Project completed in February 2006.

Principal Investigator “Development of a Geodetic Control Point at NED University”. Project completed in February 2006.

Co – Principal Investigator, PhD project “Static and Dynamic Stiffness of Pile Foundation”, funded by NED University of Engineering and Technology, currently in progress.

Principal Investigator, “Development of a Strategic Model for Improvement of Construction Project Management Education, Research, and Practice in Pakistan”. Research project funded jointly by Higher Education Commission, Pakistan and USAID. Research completed in December 2009.

Co – Principal Investigator, “Development of Diagnostic Tool for Assessing Seismic Vulnerability of Buildings”, funded by NED University of Engineering and Technology. Project completed in June 2011.

Principal Investigator, “Development of Fragility Curves for Lifelines”. Project completed in 2011.

Co – Principal Investigator, “Building Pakistan’s Capacity for Instruction, Research, and Practice in Earthquake Engineering and Seismic Retrofit”. Research project funded jointly by Higher Education Commission and USAID, completed in April 2012.

Collaborator, "GPS Study of the Kinematics of the India-Eurasia Convergence Zone across the Pamir and Adjacent Terrain". Research project funded by the National Science Foundation, USA in collaboration with the University of Montana and University of Colorado, currently under progress.

Co – Principal Investigator, “Earthquake Model of the Middle East Region (EMME), WP-4”, Research Project funded by Japan Tobacco International, completed in year 2011.

Co – Principal Investigator, “Earthquake Model of the Middle East Region (EMME), WP-5”, Research Project funded by Japan Tobacco International, currently in progress

Principal Investigator, “Earthquake Hazard and Risk in Karachi” under Pak-3004 Pak – Norway Institutional Cooperation Framework, currently in progress.

Principal Investigator, “Development of Probabilistic Flood and Seismic Risk Assessment of Karachi”, funded by the World Bank, currently in progress.

Principal Investigator, “Development of Probabilistic Flood and Seismic Risk Assessment of Quetta”, funded by the World Bank, currently in progress.

Principal Investigator, “Development of Probabilistic Flood and Seismic Risk Assessment of Islamabad”, funded by the World Bank, currently in progress.

Research and Publications:

Books Edited:

Proceedings of the Third International Conference on Construction in Developing Countries “Advancing Civil, Architectural and Construction Engineering & Management”, ICCIDC-III, 2012, Jointly organized by East Carolina University, USA, NED University of Engineering and Technology, Karachi, Auburn University, USA, Florida International University (FIU), USA and RMIT University Melbourne, Australia. Bangkok, Thailand, July 4-6, 2012.

Proceedings of the First International Conference on Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-I 2008, Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA. Karachi, Pakistan, 4 and 5 August 2008.

Proceedings of the Second International Conference on Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA. Cairo, Egypt, August 3-5, 2010.

Proceedings of the Second International Symposium on Infrastructural Engineering in Developing Countries, IEDC 2004, 4 September 2004, NED University of Engineering and Technology.

Proceedings of the First International Symposium on Infrastructural Engineering in Developing Countries, IEDC 2001, 22 September 2001, NED University of Engineering and Technology.

International Journal Contributions:

"Predictive Relationship for Estimation of Vs30 using Shallow Borelogs for Karachi, Sarosh Lodi, Mukesh Kumar, Maria Samad, Aisha Wasim, Geotechnical and Geological Engineering, Geotechnical and Geological Engineering, January 2015

Observed damages in Pakistan due to 16 April 2013 Iran earthquake, Muhammad Masood Rafi, Sarosh H. Lodi, Muhammad Ahmed, Naveed Alam, Bulletin of Earthquake Engineering, February 2015, Volume 13, Issue 2, pp 703-724.

“Mechanical Properties of Steel Rebars Manufactured in Pakistan and Design Implications”, MM Rafi, **Sarosh H Lodi** and Amir Nizam, Journal of Materials in Civil Engineering, American Society of Civil Engineers. Accepted for publication March 2013.

"Interseismic Strain Accumulation along the Western Boundary of the Indian Subcontinent", Walter Szeliga, Roger Bilham, Din Muhammad Kakar and **Sarosh Lodi**, Journal of Geophysical Research - Solid Earth, American Geophysical Union, ISSN: 0148-0227, Vol. 117, 14pp, B08404, doi:10.1029/2011JB008822, Aug. 2012. IF: 3.465

"Corruption in Public Infrastructure Service and Delivery: The Karachi Case Study", Rafi MM, **Lodi SH**, Hasan NM, Public Works Management & Policy, USA, 17 (4), 370-387, ISSN: 1087724X, DOI: 10.1177/1087724X12450642, July 2012

"Preliminary Evaluation of Attenuation Characteristics of Coastal Belt of Sindh (CBS) with the Aid of Updated Attenuation Models for Eastern Northern America", Mukesh Kumar, **Sarosh H Lodi** and SFA Rafeeqi, NED University Journal of Research, Vol. VIII, No. 1, June 2011.

"Ferrocement Constitutive Model and Experimental Validation", **SH Lodi**, SFA Rafeeqi, GA Jokhio, NED University Journal of Research, Vol. VII, No. 2, December 2010.

"The Door-Knockers of Mansurah – Strong Shaking in a Region of Low Perceived Seismic Risk, Sindh, Pakistan", Roger Bilham and **Sarosh Lodi**, IGCP567 Geological Society of America Special Paper 471 "Ancient Earthquakes", Geological Society of America, p 29 –37, November 2010. ISSN: 0016-7606, doi:10.1130/2010.2

"An Adaptive Monitoring Model for the Ageing Assessment of Concrete Containment Vessel", SFA Rafeeqi, **Sarosh H Lodi**, Rashid A Khan, N Sahar Zafar, NED University Journal of Research, Pakistan, Vol. VII, No. 1, May 2010.

"Ranking Construction Superintendent Competencies and Attributes Required for Success in Pakistani Construction Industry", Rizwan U. Farooqui, Sumera Rizwan, Muhammad Saqib and, **Sarosh H Lodi**, Journal of Civil Engineering and Architecture, ISSN 1934-7359, USA. Volume 4, No.1 (Serial No. 26), January 2010.

"Partitioning of India – Eurasia Convergence in the Pamir – Hindu Kush from GPS measurements", S Mohadjer, R Bendick, A Ischuk, S Kuzikov, A Kostuk, U Saydullaev, **S Lodi**, DM Kakar, A Wasy, M A Khan, P Molnar, R Bilham, and AV Zubovich, Geophysical Research Letters, ISSN:0094-8276, Vol, 37, L04305, doi: 10.1029/ 2009 GL041737, 2010. IF: 3.505

"Fold and Thrust Portioning in a Contracting Fold Belt: Evidence from the 1931 Mach Earthquake in Baluchistan", Walter Szeliga, Roger Bilham, Daniel Schelling, Din Mohamed Kakar, and **Sarosh Lodi**, TECTONICS, VOL.28, TC5019, 13 PP., 2009 doi:10.1029/2008TC002265 2009, ISSN: 0278 –7404, jointly published American Geophysical Union and European Geosciences Union, October 2009.

"Assessing the Project Management Culture in Construction Client Organizations in Pakistan – A Preliminary to Industry Performance Improvement", Rizwan U Farooqui, Syed M Ahmed and **Sarosh H Lodi**, Inaugural issue of the International Journal of Engineering and Management– IJEM, ISSN: 0975-4490, Vol. 1, 2009.

"Preliminary geodetic constraints on plate boundary deformation on the western edge of the Indian plate from TriGGnet (Tri-University GPS Geodesy Network)", M Asif Khan, Rebecca Bendick, M. Ismail Bhat, Roger Bilham, Din M. Kakar, S Faisal Khan, **Sarosh H Lodi**, M Sufyan Qazi, Bikram Singh, Walter Szeliga and Abdul Wahab, Journal of Himalayan Earth Sciences, ISSN: 1994-3237, 41 (2008), 71-87.

"Models for Tension Stiffening in RC Slabs and Panels", **Sarosh H Lodi**, NED University Journal of Research, ISSN: 1023-3873, Vol. V, No. 2, December 2008.

“Assessment of Pakistani Construction Industry – Current Performance and the Way Forward”, Rizwan U Farooqui, Syed M Ahmed and **Sarosh H Lodi**, International Journal for the Advancement of Performance Information and Value, ISSN:1941-191X, Volume 1, Issue 1, pages 51 – 72, June 2008.

“Assessing Impacts of Low Bid Procurement on Performance of Public Work Construction Projects: A Case Study of Pakistan”, Rizwan U Farooqui, Syed M Ahmed and **Sarosh H Lodi**, Journal of Construction Procurement ISSN:1358-9180 13(2), 2007.

“Seismic Hazard in Karachi, Pakistan: Uncertain Past, Uncertain Future”, Bilham, R, **Lodi, SH**, Hough, S, Bukhary, S, Khan, AM, and Rafeeqi, SFA, Vol. 78, Number 6, pp 601-613, November/ December 2007, Seismological Research Letter, USA. ISSN: 0895-0695, IF: 2.77.

“Deficiencies of the Normal Moment Yield Criterion for RC slabs”, IM May and **SH Lodi**, Structures and Building, Artical No. 13614, Vol. 158, Issue 6, Institution of Civil Engineers, UK, December 2005. pp. 371–380, DOI: 10.1680/stbu.2005.158.6.371. (Awarded Howard Medal by the Institution of Civil Engineers, UK), ISSN:0965-0911, IF: 0.215.

“Behaviour of Reinforced Concrete Beams Strengthened in Shear”, Rafeeqi, SFA, **Lodi, SH**, and Wadalawala, ZR, Volume 35, Number 1, pp. 479-489, January 2005, Journal of Ferrocement, ISSN: 0125-1759, IFIC, Thailand.

“The Behaviour of Reinforced Concrete Elements Subjected to Bending and Twisting Moments”, IM May, P Montague, AAA Samad; **SH Lodi**, AS Fraser, Structures and Building, Vol. SB 146, Issue 02, pp. 161-171, DOI: 10.1680/stbu.2001.146.2.161, Institution of Civil Engineers, UK, May 2001, IF: 0.215.

“Shear Behaviour of Ferrocement Thin Webbed Sections”, SFA Rafeeqi, **SH Lodi** and J Qureshi, Cement and Concrete Research, USA, Vol. 25, No. 5, July 1995. ISSN: 0008-8846, IF: 2.553.

“Comparative Evaluation of Reinforcing Bars Produced in Pakistan”, Abulkhair Masroor and **Sarosh H Lodi**, NED University Journal of Research Vol. 1, No. 2, 35-47, July 1994.

“Factors Affecting Success of Construction Projects In Pakistan”, Rizwan U Farooqui , Muhammad Saqib, **Sarosh H Lodi**, and Syed M Ahmed, published in Malaysian Construction Research Journal.

International Conference Contributions:

Inundation Limits For Major Cities Along The Makran Coast (21/01/15)
Hira Ashfaq Lodhi, Haider Hasan, Sarosh H Lodi, Reducing Tsunami Risk in the Western Indian Ocean A Regional Conference in Muscat, Oman Jointly organised by the Intergovernmental Oceanographic Commission of UNESCO and Oman's Directorate General of Meteorology, Public Authority for Civil Aviation 22-23 March 2015.

Seismic Risk Assessment of Built Environment in Pakistan,
Muhammad AHMED, **Sarosh Hashmat LODI**, Muhammad Masood RAFI, Syed Shahid ALI and Naveed ALAM, SECED2015 Conference, Cambridge, UK, July 2015.

“Assessment of Infill Framed Building Constructed after 2005 Earthquake in Muzzafrabad” Aslam Faqeer Mohammad, **Sarosh H Lodi**, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Assessment of Seismic Performance of Adobe Structures in Pakistan and Portugal”, M. M. Rafi, **Sarosh H Lodi**, Humberto Varum, N. Alam, M. Ahmed, D. Silveira, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Estimation of Losses for Adobe Buildings in Pakistan” M. M. Rafi, **Sarosh H Lodi**, Humberto Varum, N. Alam, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012.

“EU-NICE, Eurasian University Network for International Cooperation in Earthquakes” M. Faggella, G. Monti, F. Braga, R. Gigliotti, M. Capelli, Enrico Spacone, M. Laterza, Thanasis Triantafyllou, Humberto Varum, M. Dost Safi, J. Subedi, Amod Mani Dixit, **Sarosh H Lodi**, Z. Rahman, S. Limkatanyu, Y. Xiao, L. Yingmin, H. Kumar, Walter Salvatore, A. Cecchini, Panitan Lukkunaprasit, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Nonlinear Static Analysis of an Infill Framed Reinforced Concrete Building” **Sarosh H Lodi**, Aslam Faqeer Mohammad, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Seismic Risk Assessment in the Middle East EMME (Earthquake Model of Middle East) Project” Mustafa Erdik, Karin Sesetyan, Mine B. Demircioglu, Cuneyt Tuzun, Domenico Giardini, Babak Mansouri, **Sarosh H Lodi**, Hanan Al-Nimry, Nino Tseretelli, Gohar Hovhannisyanyan, Christis Z. Chrysostomou, Ramy El-Khoury, R. Helou, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Transforming Census Data in Pakistan into Spatial Database for Earthquake Loss Estimation Models” M. Ahmed, **Sarosh H Lodi**, M. M. Rafi, N. Alam, 15th World Conference on Earthquake Engineering, Lisbon-Portugal Sept. 24-28, 2012

“Performance of Ferrocement as Flexural Strengthening in Rural Areas” SFA Rafeeqi, SU Khan and **Sarosh H Lodi**, proceedings of the 10th International Symposium on Ferrocement and Thin Reinforced Cement Composites (FERRO 10), La Havana, Cuba, October 15 to 17, 2012

“Factors Affecting Construction Cost in the Pakistani Construction Industry” Rizwan U. Farooqui, Etikaf Hussain, Muhammad Umer and **Sarosh H. Lodi**, Third International Conference on Construction in Developing Countries (ICCIDC–III) “Advancing Civil, Architectural and Construction Engineering & Management”, Bangkok, Thailand, July 4-6, 2012.

“Dispute Resolution in the Pakistani Construction Industry-An Assessment of Current Methods” Rizwan U. Farooqui, Muhammad Umer and **Sarosh H Lodi**, Third International Conference on Construction in Developing Countries (ICCIDC–III) “Advancing Civil, Architectural and Construction Engineering & Management”, Bangkok, Thailand, July 4-6, 2012.

“Power Potential Assessment and Sensitivity Analysis of a Wind Farm”, Anjum Khalid, **Sarosh Hashmat Lodi**, Muzaffar Mahmood, The Second International Conference on Renewal Energy Generation and Applications ICREGA’12. U.A.E University Al-Ain, U.A.E., March 4-7, 2012.

“Roadmap for Earthquake Mitigation at National Level in Pakistan” **Sarosh H. Lodi**, Muhammad Masood Rafi, International Conference on Earthquake Engineering and Seismology (ICEES 2011), National University of Sciences and Technology, Islamabad, Pakistan, April 25-26, 2011.

“Desirable Attributes and Skills for Graduating Construction Management Students”, Rizwan U Farooqui, **Sarosh H Lodi** and Syed M Ahmed, 6th International Conference on Construction in the 21st Century (CITC-VI) Construction Challenges in New Decade. Kuala Lumpur, Malaysia, July 5-7, 2011.

“Quantifying Measurement of Successful Construction Project Performance- A Project Manager’s Perspective”, Rizwan U Farooqui, Muhammad Saqib and **Sarosh H Lodi**, 6th International Conference on Construction in the 21st Century (CITC-VI) “Construction Challenges in the New Decade”, Kuala Lumpur, Malaysia, July 5-7, 2011.

“An Indigenous Model of Seismic Retrofit of Stone Masonry Structures”, MM Rafi, **S H Lodi** and SFA Rafeeqi, International Conference – Urban Habitat Construction Under Catastrophic Events – COST ACTION – C26, University of Naples, Italy, 16 – 18 September 2010.

“Accuracy of Cost Estimates of Construction Projects in Pakistan”, Farrukh Arif, **Sarosh H Lodi** and Rizwan U Farooqui, Second International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, 3 – 5 August 2010, Cairo, Egypt. Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Empirical Study of Financial Accounting and Cash Flow Management Practices of Construction Contractors in Pakistan”, Rizwan U. Farooqui, Muhammad Saqib, Syed M. Ahmed and **Sarosh H. Lodi**, Second International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, 3 – 5 August 2010, Cairo, Egypt. Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Bid Procurement Practices in Pakistani Construction Industry – An Assessment of Bidding Requirements, Bidder Qualification & Evaluation Criteria, and Client Satisfaction Index on Traditional Design-Bid-Build Projects”, Rizwan U. Farooqui, Muhammad Saqib, **Sarosh H. Lodi** and Syed M. Ahmed, Second International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, 3 – 5 August 2010, Cairo, Egypt. Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Risks in Construction – An Empirical Study of the Responsibility Allocation of Risks and Risk Control Measures in the Pakistani Construction Industry”, Rizwan U. Farooqui, Farrukh Arif, Muhammad Saqib and **Sarosh H. Lodi**, Second International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, 3 – 5 August 2010, Cairo, Egypt. Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Developing Safety Culture in Pakistani Construction Industry-Site Safety Implementation and Safety Performance Improvement”, Rizwan U. Farooqui, Muhammad Saqib, **Sarosh H. Lodi** and Syed M. Ahmed, Second International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education, Research and Practice”, ICCIDC-II 2010, 3 – 5 August 2010, Cairo,

Egypt. Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Earthquake Performance of RC Structures - Lessons To Be Learnt”, MM Rafi, SFA Rafeeqi, **SH Lodi** and SH Siddiqui, Proceedings of Third International Symposium on Infrastructure Engineering in Developing Countries (IEDC-2010), 1 – 3 July 2010, Karachi, Pakistan.

“Contribution of NED University in Earthquake Disaster Management and Related Capacity Building”, SFA Rafeeqi and **Sarosh H Lodi**, Proceedings of Third International Symposium on Infrastructure Engineering in Developing Countries (IEDC-2010), 1-3 July 2010, Karachi, Pakistan.

“Creep on the Ornach-Nal Fault, India’s Western Boundary with Asia”, Bilham, R; Szeling, W; **Lodi, SH**, Proceedings of the Annual meeting of Seismological Society of America, 21 – 23 April 2010, Portland, USA.

“Factors Affecting Success of Construction Projects In Pakistan”, Rizwan U Farooqui , Muhammad Saqib, **Sarosh H Lodi**, and Syed M Ahmed, published in 2nd Construction Industry Research Achievement International Conference (CIRAIC2009), Kuala Lumpur, Malaysia, November 3 – 5, 2009.

“A Stakeholder Perspective on the Desirable Skills of Project Managers in the Pakistani Construction Industry”, Rizwan U Farooqui, **Sarosh H Lodi**, and Syed M Ahmed, Inaugural Conference Construction in the Muslim World, Kuala Lumpur, Malaysia, Oct. 21-22, 2009.

“Adaptive Conceptual Framework for seismic Vulnerability Assessment of Reinforced Buildings in Pakistan”, M Haroon, SFA Rafeeqi and **SH Lodi**, COMPDYN 2009, 2nd International Conference on Computational Methods in Structural Dynamics & Earthquake Engineering, 22-24 June 2009, National Technical University of Athens, Greece.

“Performance of Park Structures Made by Ferrocement”, AM Khan, SFA Rafeeqi and **SH Lodi**, Ninth International Symposium on Ferrocement and Thin Reinforced Cement Composites: Green Technology for Housing and Infrastructure Construction, May 2009, Bali, Indonesia.

“Quality Culture Auditing for Construction Contractors in Pakistan”, M Saqib, RU Farooqui, **SH Lodi** and SFA Rafeeqi, Fifth International Conference on Construction in the 21st Century (CITC-V), Collaboration and Integration in Engineering, Management and Technology, May 2009, Istanbul, Turkey.

“Quantifying the Criteria for Performance Appraisal of Project Managers in Pakistani Construction Industry”, M Saqib, RU Farooqui, **SH Lodi** and SFA Rafeeqi, Fifth International Conference on Construction in the 21st Century (CITC-V), Collaboration and Integration in Engineering, Management and Technology, May 2009, Istanbul, Turkey.

“Detailed Estimating Practices of Construction Firms in Pakistan”, Rizwan U Farooqui, Farrukh Arif, Syed M Ahmed, **Sarosh H. Lodi** Fifth International Conference on Construction in the 21st Century (CITC-V), Collaboration and Integration in Engineering, Management and Technology, May 2009, Istanbul, Turkey.

“An Assessment of General Trends Adopted for Bidding and Procurement in the Construction Industry of Pakistan”, Rizwan U Farooqui, Muhammad Saqib, Farrukh Arif, **Sarosh H Lodi**, First International Conference Construction in Developing Countries, “Advancing and Integrating Construction Education,

Research and Practice”, ICCIDC 2008, 4 and 5 August 2008, Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“Assessment of Critical Success Factors for Construction Projects in Pakistan”, Muhammad Saqib, Rizwan U Farooqui, **Sarosh. H. Lodi**, First International Conference Construction in Developing Countries, Advancing and Integrating Construction Education, Research and Practice, ICCIDC 2008, 4 and 5 August 2008, Jointly organised by NED University of Engineering and Technology, Pakistan and Florida International University, USA.

“An Assessment of Contractor Perceptions on Critical Causes of Risks – A Case Study of Pakistani Construction Industry”, Rizwan U Farooqui, Syed M Ahmed and **Sarosh H Lodi**, PM-04 – 4th SCPM and 1st IPMA/MedNet Conference Project Management Advances, Training and Certification in the Mediterranean, 29-31 May 2008, Chios Island, Greece.

“Assessing the PM Culture in Construction Client Organizations in Pakistan – A Preliminary to Industry Performance Improvement”, Rizwan U Farooqui, Syed M Ahmed and **Sarosh H Lodi**, PM-04 - 4th SCPM & 1st IPMA/MedNet Conference Project Management Advances, Training & Certification in the Mediterranean, 29-31 May 2008, Chios Island, Greece.

“Preliminary geodetic results from a sparse Central Asian geodetic network”, Mohadjer, S, Ischuk, A, Schelochkov, G, Wasy, A, Kakar, D, **Lodi, S**, Bendick, R, Bilham, R, Joint Assembly of the American Geophysical Union, Fort Lauderdale, 27–30 May, 2008, Florida, USA.

“A Structured Approach to Develop an Effective Emergency Preparedness and Disaster Response Plan for Contractors”, Rizwan U Farooqui and **Sarosh H Lodi**, 4th i-Rec International Conference on Post Disaster Reconstruction, Christchurch, New Zealand, 30th April – 2nd May 2008.

“Implementation of Quality Standards in Educational Institutions”, M Tufail and **Sarosh H Lodi**, International Seminar on Higher Education in the Muslim World: Challenges and Prospects, March 24 – 25, 2008, International Islamic University of Malaysia, Kuala Lumpur, Malaysia.

“Pakistan Construction Industry – Total Quality Management?”, Rizwan U Farooqui, **Sarosh H Lodi** and Khaliq – ur – Rashid Kayani, International Workshop on Cement Based Materials and Civil Infrastructure, December 10 – 11, 2007, Karachi, Pakistan.

“Assessing the Quality Culture in Client Organizations in Pakistan Construction Industry – A Way Forward to TQM Implementation in Pakistan”, Farooqui, RUH, **Lodi, SH**, Rafeeqi, SFA, and Panthi, K, Fourth International Conference on Construction in the 21st Century Accelerating Innovation in Engineering, Management and Technology, July 11-13, 2007, Gold Coast, Australia.

“Risk Management Perceptions and Trends among Contractors in Pakistan Construction Industry”, Rizwan U Farooqui, **Sarosh H Lodi** and Farhan Saleem, Fourth International Conference on Construction in the 21st Century Accelerating Innovation in Engineering, Management and Technology, July 11-13, 2007, Gold Coast, Australia.

“Engineering Design for Dwellings and Small Housing in Seismically Active Regions of Pakistan: Towards a more holistic approach”, Boshier, LS, Sohail, M, **Lodi, SH**, and Rafeeqi, SFA, New Silk Route – Design, Education and Research, February 10 – 11, 2007, Karachi, Pakistan.

“ISO 9001 Certification for Higher Educational Institutions in Pakistan”, M Tufail and **Sarosh H Lodi**, 1st International Conference on Assessing Quality in Higher Education ICAQHE, 11th – 13th December 2006, Lahore.

“Development of GIS Model for SCRS using Conventional and Advanced Earthquake Hazard Estimation Methodologies”, **Sarosh H Lodi** and Mukesh Kumar, Seventh International Congress on Advances in Civil Engineering, October 11-13, 2006, Yildiz Technical University, Istanbul, Turkey.

“Comparison of Results of Constitutive Model for Ferrocement Elements with Results Obtained Through Conventional Approach”, FEERO-8, **SH Lodi**, SFA Rafeeqi, GA Jakhio and AJ Sangi, Eighth International Symposium and Workshop on Ferrocement and Thin Reinforced Cement Composites, Bangkok, Thailand, February 6-8, 2006.

“Policy Framework for Management of Physical Infrastructure in Pakistan”, **Lodi, SH**, Iqbal, K, Farooqui, RUH, and Rafeeqi, SFA, Third International Conference on Construction in the Twenty First Century (CITC-III), September 15-17, 2005, Athens. Organised by National Technical University of Athens, Athens, and Florida International University, USA.

“Prediction of Response Spectral Parameters for Bhuj Earthquake (26th January 2001), Using Component Attenuation Modelling Technique”, **SH Lodi** and Mukesh Kumar Fifth Earthquake Resistant Engineering Structures (ERES 2005) Conference, Skiathos, Greece, May 30 - June 01, 2005.

“Parametric Study of Ductility in Reinforced Concrete Cross-section”, **SH Lodi** and A Jabbar Sangi, Second International Conference on Concrete and Development, April 30- May 02, 2005, Tehran. Organised by Building and Housing Research Centre, Ministry of Housing and Urban Development, Iran.

“Metamorphosis of Civil Engineering into Urban Engineering”, SFA Rafeeqi and **Sarosh H Lodi**, Second International Symposium on Infrastructural Engineering in Developing Countries, IEDC 2004, September 2004, NED University of Engineering and Technology.

“Bridge Database Management System”, SFA Rafeeqi, **SH Lodi** and R.A. Khan, Second International Conference on Construction in the Twenty First Century: Sustainability and Innovations in Management and Technology (CITC-II), December 2003, Hong Kong. Organised by Hong Kong Polytechnic University, Hong Kong and Florida International University, USA.

“Earthquake Consequences and Response”, **SH Lodi** and SFA Rafeeqi, International Seminar on Natural Hazards Monitoring, January, 2002 Karachi, Pakistan. Jointly Organized by ISNET/ COMSTECH/ IDB and SUPARCO.

“Behaviour of Reinforced Concrete Beams Strengthened in Shear”, SFA Rafeeqi, **SH Lodi** and ZR Wadalawala, FEERO-7, Seventh International Symposium on Ferrocement and Thin Reinforced Cement Composites National University of Singapore, June 27-29, 2001.

“Non-Linear Analysis of Ferrocement Cross-Sections”, **SH Lodi**, SFA Rafeeqi and GA Jakhio, FEERO-7, Seventh International Symposium on Ferrocement and Thin Reinforced Cement Composites National University of Singapore, June 27-29, 2001.

“Some observations on the accuracy of the normal moment yield criterion for reinforced concrete slabs”, IM May and **SH Lodi**, Concrete Communication Conference, Southampton, UK, July 1998.

“The analysis of reinforced concrete slab elements subjected to bending and twisting”, **SH Lodi** and IM May, Structural Engineering and Computational Technology Seminar, Heriot-Watt University, 1- 2 May 1995.

“Use of recycled concrete aggregate as coarse aggregate in concrete”, SFA Rafeeqi, **SH Lodi**, H Iqbal, Eighth International Conference on Solid Waste Management and Secondary Materials, Philadelphia, Pennsylvania, USA, 15-18 Nov. 1992.

National Conference Contributions:

“Advances in Earthquake Engineering”, **Sarosh H Lodi**, Earth Sciences Pakistan 2010: New Developments, September 20-22, 2010, Baragali Summer Campus, Department and National Centre of Excellence in Geology, University of Peshawar.

“Earthquake Hazard Assessment Scenario of Metropolitan City of Karachi”, **Sarosh H Lodi** and M Kumar, 30th International Nathiagali Summer College on Physics and Contemporary Needs, July 2005, Nathiagali, Pakistan. Organised by Pakistan Atomic Energy Commission.

“Integrated System for Bridge Management System”, SFA Rafeeqi, **SH Lodi** and RA Khan, Seminar on New Innovations in Bridge Engineering, September 2003, Islamabad. Organised by National Highway Authority.

“A Culture of Academic Excellence: Implementing the Quality Principles in Higher Education”, **Sarosh H Lodi**, Pakistan’s Second National Conference on Quality Assurance in Education 2003, September 2003, Karachi. Organised by Pakistan Institute of Quality Control.

“Evaluation of Ferrocement as lining material for canals”, SFA Rafeeqi, **SH Lodi** and MM Rafi, National workshop on Water Problems in Pakistan, January 2003, Lahore. Organized by Water and Power Development Authority.

“Constitutive Modelling of Ferrocement Elements”, **Sarosh H Lodi**, First International Civil Engineering Congress, Institution of Engineers, Karachi, 1-2 February 2000.

“Model for post cracking response of reinforced concrete”, **Sarosh H Lodi**, First Workshop on Mathematical Modelling: Its Application and Use, Islamabad, 20 – 21, July 1998.

AWARDS/ HONOURS:

Awarded Howard Medal by the Institution of Civil Engineers, UK, January 2005.

Best Teacher Award by Higher Education Commission, Pakistan for the year 2002-03.

Overseas Research Students Award for years 1995-96 and 1996-97 by Committee of Vice Chancellors and Principals, UK.

Central Overseas Training Scholarship from Ministry of Education, Pakistan, 1994-98.

Merit scholarship to study in USA 1986-88 from Quaid – e – Azam Aligarh Scholarship Trust, Karachi, Pakistan.

Awarded pride of performance in academic year 1980-81, NED University of Engineering and Technology.

Merit scholarship for years 1977 to 79 from Directorate of College Education, Karachi, Pakistan.

Countries Visited

Bangladesh, Brazil, Dubai, Egypt, Ireland, Japan, Jordan, Nepal, New Zealand, Russia, Saudi Arabia, Singapore, Thailand, Turkey, UK, USA.