

## SCHOLARSHIP/RESEARCH/CREATIVE WORK

### 1. Brief Overview

I have achieved significant research experience in the broader field of Civil & Structural Engineering throughout my teaching and research career. From my research work, I have published a good number of quality articles in some recognized international journals and conference proceedings. Also, from the experience gained throughout the years, I have proven ability to attract external research funds to conduct the research activities.

#### **HIGHLIGHTS:**

- Fifty (50) over publications in recognized journals and conference proceedings
- Four (04) articles **presented/published since joining TRU** and few others will be published soon (one journal article has been revised and submitted to the journal office)
- Served four (04) professional journals as reviewer
- Affiliated with four (04) Professional Associations
- Three (03) research funds awarded
- Experienced in undergraduate & post-graduate thesis supervision
- Worked as external examiner for undergraduate & Post-graduate thesis
- Four (04) Technical research Reports

### 2. Research Interests

- Innovative Composite structures, Light-Weight and Thin walled structures
- Repair and strengthening of Reinforced and Prestressed Concrete structures with FRP (Fibre Reinforced Polymer) materials.
- Seismic retrofitting of isolated bridge, Seismic design and construction, Numerical modelling of structural problems.
- Full-scale theoretical & experimental investigation of structures.

- Use of industrial waste materials in concrete, smart material and sustainable development.
- Innovative teaching & learning methods.

### 3. Research Grants

Some of the grants that I received earlier are as follows:

- **Research Grant, as Principle Investigator:** A Study on the long-term deflection and debonding behaviour of reinforced concrete beams strengthened with FRP sheets, Fundamental Research Grant Scheme from **Ministry of Higher Education Malaysia**, 2008-2010, **RM 91,200**
- **Research Grant, as Co-researcher,** Finite Difference Analysis for Micro-electro Mechanical System (MEMS) Structure, Dana Penyelidikan Khas UNIMAS' grant, 2010-2011, **RM 6685**
- **Research Grant, as Principle Investigator,** Experimental and Numerical study on Long-term and Debonding behaviour of FRP sheet strengthened beam, **Curtin University of Technology Research Fund, 2007, RM 10,000**
- I have contributed significantly in preparing two proposals for NSERC- Engage grants for host professor at University of Sherbrooke, Canada.

### 4. Research Student Supervision

- Supervised many undergraduate students in research and independent study projects (final year projects) in four (04) different universities.

- Supervised Masters and PhD students. In my appointment at University Malaysia Sarawak, one Master's student has successfully completed his Master degree under my supervision and I have worked as co-supervisor for one PhD student.

#### 4.1 Thompson Rivers University, Kamloops, BC, Canada 2015-2019

In my four (04) years of service as lecturer at TRU, I have supervised the following students for their final year project/ research report.

##### *Academic Year 2015-16*

No.	Student Name	Type	Project Title	Supervision
1	Gabor Ohm	Undergraduate Research Projects	Autoclaved Aerated Concrete Wall system	100%
2	Brandon Deol	Undergraduate Research Projects	Net zero Housing: A study on Energy saving	100%
3	Brian Robinson	Undergraduate Research Projects	Sound system enhancement of a theatre building	100%
4	Azia Mears	Undergraduate Research Projects	Wood frame construction Versus concrete construction: A critical review	100%

##### *Academic Year 2016-17*

No.	Student Name	Type	Project Title	Supervision
1	Cody Bird	Undergraduate Research Projects	Sustainable Design and Development of Country-Land Park area, Kamloops	100%
2	Devin Smithies	Undergraduate Research Projects	Cost Effective Recycled Material Exterior Wall Construction	100%
3	Jacqueline Costanzo	Undergraduate Research Projects	Design of co-housing concepts with medical clinic and other amenities	100%
4	Sierra Siwek	Undergraduate Research Projects	Self-Healing Concrete	100%
5	Helmut Schoenfeld	Undergraduate Research Projects	Energy Modeling of Profiled Steel sheet Dry Board system	100%
6	Cody Dennhardt	Undergraduate Research Projects	Development of Computer Program for use in Fluid Mechanics Course	With Comp. Sci. 65%

##### *Academic Year 2017-18*

No.	Student Name	Type	Project Title	Supervision
1	Evan Chorlton	Undergraduate Research	Modular Construction of Building wall system	100%
2	Keith Leung	Undergraduate Research	Road Intersection Redesign with Roundabout	100%

3	Saylor Gray	Undergraduate Research	Air placed concrete as an alternative of traditional concrete construction	100%
4	Nathan Masi	Undergraduate Research	Earthquake resistance of TRU Conference & Residence Building	100%
5	Evan Martin	Undergraduate Research	Smart Home technology	100%
6	Anna Young	Undergraduate Research	Optimizing Heat Transfer through Window in Building System	100%

### *Academic Year 2018-19*

No.	Student Name	Type	Project Title	Supervision
1	Noah Foufoulas	Undergraduate Research	<b>Self-healing concrete</b>	100%
2	Braeden Stanyer	Undergraduate Research	<b>Site plan Development of Westsyde Elementary</b>	100%
3	Angus Tsang	Undergraduate Research	<b>Feasibility of Green Roof in mitigating Urban heat Island: A case study</b>	100%
4	Daniel Costanzo	Undergraduate Research	<b>Design of a homeless shelter at Abbotsford, BC</b>	100%

## **4.2 At University Sarawak Malaysia (2007-2011) and at other universities**

### **4.2.1 At Undergraduate Level:**

I have supervised **more than fifty (50) Undergraduate theses (final year projects)** during the time period 1990-1994 and 2000-2007 at Chittagong University of Engineering & Technology and Curtin University of Technology Malaysia.

During my last academic appointment as Associate Professor at University Malaysia Sarawak, I have supervised the following undergraduate final year projects:

### *Academic Year 2010-2011*

No.	Student Name	Type	Project Title	Supervision
1	Liew Yu Voon	Undergraduate Thesis	Long-term deflection and cracking performances of palm shell aggregate concrete beam subjected to transverse loading	100%

2	Khairul Anwar	Undergraduate Thesis	Creep and shrinkage deformation of FRP sheet strengthened reinforced concrete beam	100%
3	Ghazali bin Ahmad	Undergraduate Thesis	Flexural and vibration performances of Profiled steel sheet dry board panel.	100%
4	Tey Yong Soon	Undergraduate Thesis	Influence of slag waste fine aggregates on fresh and hardened characteristic of mortar	100%

#### *Academic Year 2009-2010*

No.	Student Name	Type	Project Title	Supervision
1	Muhamad Irwan Affendi Bin Zualkafli	Undergraduate Thesis	Flexural and Long-term Behavior of Reinforced Concrete Beam	100%
2	James Bong Hin Lee	Undergraduate Thesis	Study the Structural Behavior of Ferrocement Beam	100%
3	Ngoh Fei Phing	Undergraduate Thesis	Behavior of Profiled steel sheet Dry Board Wall Panel	100%
4		Undergraduate Thesis	Out-of plane behavior of Profiled Steel sheet Dry Board square Panel	100%
5		Undergraduate Thesis	Flexural and Time dependent behavior of Palm shell aggregate concrete beam	100%

#### *Academic Year 2008-2009:*

No.	Student Name	Type	Project Title	Supervision
1	Terence Leong Shuh Onn	Undergraduate Thesis	A study on the Profiled steel sheet Dry board Panel system	100%
2	Teoh Chee Hui	Undergraduate Thesis	Study on the Short and Long-term Performances of Reinforced Concrete Beams Strengthened with Externally bonded FRP Sheets	100%

#### **4.2.2 At Post-Graduate Level:**

No.	Student Name	Type	Project Title	Supervision
1	Habibur Rahman Sobuz	<b>Masters in Civil Engineering</b>	Flexural and Time-dependent performance of CFRF strengthened reinforced concrete beam.	100% (2011)

2	Md. Nurul Haque	<b>PhD Thesis</b>	Performance of lightweight composite floor system subjected to human induced vibration	60% (acted as Co-supervisor)
---	-----------------	-------------------	--	------------------------------

In my appointment as Research Professional at **University of Sherbrooke, Canada**, I assisted the project leader in supervising one (1) PhD and two (2) Master students and few international interns.

#### 4.2.3 Participation in Thesis and Oral Examination Committees

Level and Number of Examinations in last 10 years

- PhD Students: 02
- Master Students: 04

#### **5. Presented papers since joining TRU (2015-2019)**

- I.** Impact of software usage on Fundamental Engineering courses. WCCCE 2016-The 21st Western Canadian Conference on Computing Education: Kamloops, **May 6-7, 2016**
- II.** Web based problem solving system for the learner motivation of Engineering students; (**Oral Presentation**), SFU Harbour Centre, Vancouver; **BCNET Conference, April 25-27, 2017.**
- III.** Dynamic Analysis of Profiled Steel Sheet Dry Board Composite Floor Panel Subjected to Human-induced Forces. CSCE 2018 Annual Conference, Fredericton, June 13-16, 2018.

#### **5.1 Submitted Article to the Journal (2019)**

G. M. Sadiqul Isla, Ehsan Ahmed, Md. Sabbir Hossain, S. M. Sharif Uddin. Bond Strength of Fusion Bonded Epoxy-Coated Reinforcement in Concrete. ***Journal of the Civil Engineering Forum***. University Gadjadara, Vol.5 No. 3 (September 2019)

## 6. Seminars, Workshops or Professional meetings (2015-2019)

No.	Seminar/workshop	Role	Date and place	Attended Sessions	Remarks/Outcomes
1	Wood Design & Construction Solutions Conference	Participant	Vancouver Convention Centre, Vancouver, (Feb.28-Mar.01, 2017)	a) Design Adventures with Glue and Nail laminated Panels. b) Design Inspiration: A showcase of Wood Design Award Winners from 2015. c) Multi-Functional Panels. d) Humane Modernism: The Arch. of Bohlin Cywinski Jackson.	Earned Continuing Education hours: One (1) learning hour per session.  Please see Certificate in 'G_Other documents' folder
2	FPSE AGM at Victoria	Participant as steward	Victoria, BC 15-18 May, 2017	All events of AGM	Learned about the University faculty unions. Got better understanding how TRUFA is working and maintaining liaison with its parent bargaining organization
3	Wood Design Luncheon Conference	Participant	Kelowna, BC Nov. 22, 2017	a) Carbon 12: A CLT case study in Design and Construction b) Timber Pre-Fabrication of the Brock Commons Building c) Ronald McDonald House: A case study on Hybrid Tilt-Up Construction.	Interacted with researchers, shared and exchanged research ideas; attended the exhibitions. Identified few future potential research areas based on local available facilities. Please see the Certificates (Folder G)
4	2018 Wood Design Luncheon Conference	Participant	Kelowna ,BC November 20 <sup>th</sup> , 2018	a) British Columbia Building Code 2018; b) Tall Building s through the site –specific Regulation (SSR) Process c) Platforms for life, Generative Housing system Technology.	Building Code Revisions, Prefabrication and Modular Construction Certificate Received
5	2019 National Workshop on Wood Education	Participant & Contributor	Westin Hotel, Ottawa February 8 <sup>th</sup> and 9 <sup>th</sup> , 2019	a) State of wood education, engineering focus b) Labour market studies c) BIM trends in wood construction d) Student Wood Design Competition(s)	Advance wood education workshop; Review of New Wood Design Manual
6	Lancaster's 2019 Human Rights and Accommodation conference and workshops	Participant	Sheraton Centre Hotel, Toronto April 3-4, 2019	Keynote: Corporate Immunity for Human Rights Abuses Abroad-What can be done about it? Attended all the panel discussions	Learned about various policy and procedures related to Human rights and accommodation cases

## 7. In-House Seminars/Workshops/Conferences (2015-2019)

NO.	Seminar/workshop	Role	Date and place	Attended Sessions	Remarks/Outcomes
1	15th Annual Teaching Practices Colloquium	Registered Participants	TRU Feb. 19, 2019	All Sessions of "Adventures in Teaching"	Professional Development, Interaction with colleagues, Learned various Teaching & Learning methods, and research outcomes.
2	Teaching Portfolio workshop		TRU June 02, 2017	All sessions	Learned how to prepare and organize the Teaching Portfolio for tenured and promotion.
3	In service day Program	Participant	Feb. 22, 2017	Full Day Program	Learned how sustainable thinking can directly improve the life and work
4	Information Security Awareness Essentials I	Participant	TRU July 2016	Online session	Certificate of Attendance
5	'Timed Talks' - Wednesday,	Participant	February 13, 2019, 3:30pm - 5:00pm	<b>Date</b> : Wednesday, February 13, 2019 <b>Time</b> : 3:30pm - 5:00pm <b>Location:</b> OL 340, Kamloops Campus	This workshop is intended for anyone who has to speak in front of a group in a limited amount of time. This workshop offered tips and strategies for planning your talk and for managing yourself as you present.

## 8. Other Professional Knowledge: (Training courses and workshops attended)

- Participated in “Unimas online learning system, Morpheus Basic and Advanced Workshops. Organised by Center for applied learning and multimedia. 23 May 2008 FCSIT computer Laboratory, UNIMAS
- Workshop On “*Research Grant Proposal and Postgraduate Supervision*”, Curtin University of Technology, 29-30 August 2006, Miri, Sarawak
- Participated Workshop on “*Research Writing*”, Curtin University of Technology, 18-22 July, 2005, Miri, Sarawak.
- Participated in Training Course on “*Technical Report Writing*”, Engineering Staff College, 25-27 February 2003, Dhaka, Bangladesh.
- Participated in Workshop on “*Environment Protection and Pollution Prevention Issues and initiatives*” Organized by Bangladesh University of Engineering and Technology (BUET) and North Carolina A&T State University (NCATSU) 12-14 March 2002, BUET, Dhaka, Bangladesh.
- Participated in “*Orientation Workshop on Participatory Approaches for Community Development*” International Training Network (ITN), Bangladesh- : Centre for water Supply and waste Management, 12-13 May 2001, Bangladesh.
- **Post-graduate training on ‘Aseismic design and construction’ Institute of Earthquake Engineering & Engineering Seismology, University of St. Cyril and Methodius, 21 Sept.- 11 Dec. 2001, Skopje, Macedonia.**
- **Training on ‘Simulation Models in Engineering and Technology’, Indian Institute of Technology (IIT), 12-23 March, 2001, Madras, India.**
- Participated in “*Orientation Workshop on Gender*” International Training Network: Centre for water Supply and waste Management, 07-08 October 2000, BUET Dhaka.
- Training on ‘*Low Cost Housing Technology*’. Building Research Institute, 4-9, December; 1993, Dhaka, Bangladesh.



## 9. Articles Reviewed for Journals:

Recently, I have reviewed the following articles for these journals:-

1. Title: Effect of Synthetic Structural Fibers on Behaviour of Precast Prestressed Hollow core Slabs.  
Article Type: Research Paper  
Journal Name: **Construction and Building Material; Elsevier Science**  
Submitted Dec. 17, 2015
  
2. Title: Time dependent deflection of various types of concrete slabs.  
Article Type: Research Paper  
Journal Name: **ACI Structural and Materials Journal**  
Submitted May 23, 2017
  
3. Title: Experimental Investigation on Structural Behavior of High Strength Light Weight Concrete Filled Steel Tube (LWCFST) Column.  
Article Type: Research Paper  
Journal Name: **International Journal of Engineering (IJE), IRAN**  
Submitted Sept. 23. 2017
  
4. Flexural Capacity Assessment of Brick Aggregated Pre-cracked RC Beam Strengthened with Carbon Fiber Polymer.  
Article Type: Research Paper  
Journal Name: **Malaysian Journal of Civil Engineering, Malaysia.**  
Submitted Sept. 12. 2018