EACE Journal

Vol-11 No. 1
September 2020

የኢትዮጵያ ሲቪል መሐንዲሶች ማኅበር

ETHIOPIAN ASSOCIATION OF CIVIL ENGINEERS

Executive Committee

Eng. Yonas Ayalew	President
Eng. Brook Anteneh	Accountant
Dr. Argaw Asha	Secretary
Eng. Brook Legesse	Accountant
Eng. Shiferaw Alemu	Treasurer
Eng. Tihtina Laeke	Member
Eng. Eyob Demse	Member
Eng. Amanuel Mekonnen	

Editorial and Publication Committee

1. Dr.- Ing. Henok Fikre	(Chairperson)
2. Eng. Fitsum Workneh	(Secretary)
3. Dr. Denamo Addissie	(Member)
4. Dr. Kassahun Admasu	(Member)

Content

3 Message from the President

4 Message from the Editorial and Publication Committee

5 Acknowledgement

7 Occurrence and Impact of Construction Risks in Bahir Dar City, Ethiopia

12 (EACE) Mechanical Property Assessment and Evaluation of Locally Manufactured and Imported Re-bars In Light of the Ethiopian Standard

19 Assessment of “Piled-Raft” Foundation Design Practice in Addis Ababa

32 SITUATION ANALYSIS AND PERFORMANCE EVALUATION OF CONDOMINIUM HOUSE CONSTRUCTION PROJECTS IN AKAKI KALITI SUB CITY, ADDIS ABABA

Those of you who are interested to submit papers for our Journal Please forward

your papers until 30th -August - 2021

African Avenue | Bole Road Peacock next to Yeshi |Building House No.990/07

P.O.Box 20930 Code 1000 | Phone : +251-11-5 52 12 48

Email : eacecivil@gmail.com | eaceresearch@gmail.com | Web site: www.eacecivil.org

Facebook page: Ethiopian Association of Civil Engineers-EACE

Addis Ababa,Ethiopia

Message from the President

Greetings to all EACE members and distinguished readers!

May I extend my heartfelt gratitude and appreciation to those who unreservedly contributed their invaluable time, energy and finance for the success of the Ethiopian Civil Engineers Association (EACE) outreaches and continued efforts in adding values to the civil engineering profession?! On behalf the Executive Committee (EC) and myself, I would also like to thank the EACE members of sub-committees and all our stakeholders for helping our association to conduct its General Assembly during this difficult time.

The EC had and still has difficulties to organize enough number of trainings and workshops as it was originally planned due to the COVID-19 restrictions. The EC regular meetings are also being conducted via Zoom online meeting platforms with all their limitations.

Under the prevailing circumstances, the EC and some EACE sub-committees have conducted the below mentioned main activities during the past one and half years' period:

- Participation in the National COVID-19 response team with emphasis on the effect of it on the construction sector;
- Conduct an International Conference on "COVID-19 Impact on the Construction Industry: Chal lenges and Opportunities";
- Participation in a series of consultative meetings on the development of the 10 years plan for the Ministry of Urban Development and Construction (MUDC);
- Revitalization of the EACE's Business Wing was realized and the first ever training service, for 135 trainees, was conducted. EACE also expressed its interest to handle " Measurement of Pro ductivity in the Construction Industry" through ECMPI's contract;
- In order to widen the membership to the EACE and address the prevailing rampant unemployment problem in the field of Civil Engineering Profession, the EC has encouraged the registration of fresh civil engineers. The EC is also in the process of securing practical internship opportunities for a significant number of the new applicants.

The main theme of the upcoming 23rd General Assembly is "Ethically-tuned professional service for the large public and our country's prosperity". Ethically-tuned culture starts from a family level where children acquire the basics of it. The neighborhood and the schools also contribute their significant parts in shaping our children to build up affirmative actions on ethical practices. As the social fabric towards ethically tuning our society has been loosen through time, professional associations should share a significant portion of the burden in changing this ugly picture.

In parallel to the above, the EC would like to emphasis on the importance of assuring quality of all construction related works by involving the rightly trained manpower. We all need to synergize our efforts in bringing about a well versed system and culture whereby the right people are placed at their right places so that our country Ethiopia enjoys a dynamic and sustained growth. We need to do our parts by facilitating conducive and enabling environments in challenging the status-que. It is a heart-breaking phenomenon to see the exorbitant number of unemployed graduate civil engineers on one hand and the quality of civil infrastructure facilities being abused due to lack of properly trained manpower on the other. The current registration and certification processes of the construction industry should look into this obdurate practice, in good faith, and come up with a mandatory implementation of proper employment processes.

Message from the Editorial and Publication Committee

It is with great enthusiasm that the Editorial and Publication Committee of the Association presents this publication to our respected readers.

2020 was a challenging year that has changed our world substantially. The Editorial and Publication Committee has proven its determination to achieve its planned activities for the year in the difficult time of pandemic and unrest. Accordingly the first volume of the year has been finalized with some deviations from the originally planned schedule, mainly due to the influence of the COVID19 pandemic. The time lag has resulted not only from the lateness of Authors, but also some Reviewers; in spite of which members of the Committee have dedicated themselves to achieve the goals.

In response to our call for papers, 24 abstracts were submitted, of which 16 were accepted for full paper submission after double blind peer review procedure. From accepted 16 abstracts only 12 full papers were submitted back and based on the review results,6 of which were accepted to be part of this issue. Since one of these Authors hasn't sent back the final edited version of the paper, five papers are incorporated in this volume. We thank all those who submitted their abstracts and congratulate all authors of published papers in this round. We commend their patience and understanding as the review process was painstaking and rigorous. We thank them for their commitment to scientific research, professional development, and the hard work put into the research and writing of the papers.

On that note, wewould like to cordially thank our peer reviewers for their efforts, contributions and essential services as gatekeepers for the scientific integrity of published research papers. The Committee would also like to use this opportunity to express its heartfelt gratitude to organizations and individuals who sponsored publications of the Association.

It is our strong hope that this publication has its own humble contribution to the advancement of our profession at a national and global context. Hereby, we highly encourage members of the association to use this outlet to publish your papers in the upcoming publications.

The Editorial and Publication Committee

P.O.Box 20930 Code 1000

Addis Ababa

Acknowledgement

The Editorial and Publication Committee of the Association would like to acknowledge the contribution of those individuals who spared their precious time in reviewing the abstracts and papers submitted to this year's Journal and Bulletin of the Association. The Committee would like to cordially thank the following individuals for their professional contribution in reviewing submitted abstracts and papers.

1. Dr. Abraham Gebre
2. Dr. Alemgena A. Araya
3. Dr. Asregedew Kassa
4. Dr.Asnake Adamu
5. Dr. Bahiru Bewket
6. Dr. Belachew Asteraye
7. Dr. Denamo Addissie
8. Dr. Getu Segni
9. Dr. Henok Fikre
10. Dr. KassahunAdmassu
11. Mr. John Tuxworth
12. Dr. Mitiku Damtie
13. Dr. Solomon Sertse
14. Dr. Tezera Firew
15. Dr. Wubshet Jekale
16. Dr. Wubshet Taffese
17. Dr. Yoseph Birru

Declaration

All papers in this publication have passed through a rigorous review process involving initial screening and review ofabstracts by at least two reviewers, review of full papers by at least two reviewers, reporting of comments to authors, and revision of papers by authors.

The Committeedoes not authorize infringement of copyrights / intellectual property rights by authors. If youbelieve that any material in any paper published in this publication has beeninappropriately used, please contact the Editorial and Publication Committee of the Association. Authors are responsible for ensuring good academic practice when conducting andreporting scientific research. It is the responsibility of authors to be abided by the norms ofacademic ethics and integrity. EACE accepts no liability for copyrightinfringements or inappropriate use of material in any paper published.

All the views and opinions reflected in the articles herein are those of the authors and the Editorial and Publication Committee neither endorses nor opposes any particular outlook or idea that appears in this publication.

Editorial and Publication Committee (EACE)