

SECOND ANNOUNCEMENT AND CALL FOR PAPERS

10th INTERNATIONAL SYMPOSIUM ON STEEL BRIDGES
For A Green Planet



STEEL
BRIDGES
ISTANBUL 2022

21-22 September 2022 (Symposium)

Organised by

Turkish Constructional Steelwork Association (TUCSA)
in coordination with European Convention for Constructional Steelwork (ECCS)

Dear colleagues,

It is our great pleasure to invite you to the 10th International Symposium on Steel Bridges *For A Green Planet* to be held on 21-22 September 2022 in Istanbul, which has been organised by ECCS members under the umbrella of European Convention for Constructional Steelwork since 25 February 1988.

Turkish Constructional Steelwork Association (TUCSA) organized the “8th International Symposium on Steel Bridges: Innovation and New Challenges” during the 2015 annual meetings of The European Convention for Constructional Steelwork (ECCS) held in Turkey. Now at 2022, once more Turkey is proud to announce and host the 10th International Symposium STEEL BRIDGES with the motto “*For A Green Planet*” to encourage innovations and new approaches on the field. In parallel with the symposium the below listed activities will also be performed;

- | | |
|----------------------|--|
| 20 September 2022 | Technical tour to the 1915 Çanakkale Bridge (Optional) |
| 21 September 2022 | European Steel Bridges Awards Ceremony |
| 21 September 2022 | Gala Dinner and 30 th Anniversary of TUCSA |
| 22-23 September 2022 | ECCS Annual General Meetings (For members only) |

As stated at the Background and Scope section below, Istanbul is one of the best places to organise the bridge symposium which is a natural bridge between Europe and Asia in addition to having five long span suspended steel bridges over the Bosphorous, Izmit Bay and the Dardanelles, including the 1915 Çanakkale Bridge with the largest midspan of 2023 meters in the world. This symposium gave us the opportunity and mission to organize and announce the 10th international symposium for architects, structural engineers, designers, steel fabricators and builders as well as environmental psychologists, urban planners and environmentalists to discuss new horizons on steel bridges.

We sincerely hope you will join us on 20-22 September 2022 in Istanbul.

Prof. Dr. Nesrin YARDIMCI
Scientific Committee Chair
Head of Civil Engineering Department
Yeditepe University

H. Yener GÜR'EŞ
Organising Committee Chair
President of TUCSA and
Vice President of ECCS

BACKGROUND AND SCOPE

Bridges...are all about interlinking and connectivity

From the very beginning structural art has always been of prime importance to the cultures of societies. Besides the historical marvels as ziggurats of Mesopotamia, pyramids of ancient Egypt, acropolises and theatres of ancient Aegean civilizations, bridges, aqueducts of Romans, cathedrals of medieval Christianity, great mosques of Islamic culture, yurds of nomads and thatching techniques of the primitive cultures as well as wooden structures of far eastern cultures should equally and easily be mentioned under this context.

In the course of time there has always been urges for mankind, communities to connect themselves with other places and people and attempt to overcome difficulties exposed by the natural and/or manmade environment, spanning and traversing over certain obstacles such as rivers, valleys, constructional objects and others. The simple solution was "Bridge". Gradually the distances that seemed impossible to encompass began to get achieved by the development of diverse Technologies on design, construction and material production fields.

Bridges have fascinated mankind over time. They have been symbols of art and science, good architecture, engineering and trade skill. They have also symbolized links between people, communities, and nations. Strategic and tactical bridges have been of importance for exercising power. Bridge building has therefore been a high-ranked profession. First bridges were stone and wooden bridges, including natural bridges, single stone plates, rope bridges and wooden beams crossing a brook. Up to the eighteenth century, the building of bridges was a typical skilled trade, based on experience of generations. The people involved had developed an admirable understanding of the forces of nature. On the basis of this they had developed empirical rules of construction to lean on.

About the middle of the 18th century bridge construction began to assume a more scientific aspect than before. Production of iron and steel in commercial scale gave new possibilities. The first iron bridge Coalbrookdale Bridge was built in 1779. This bridge was a turning point in engineering history because it changed the course of the Industrial Revolution by introducing iron as a structural material and it is still used.

Although the first record of western use of iron in bridges was about 1779, the rise of iron to a dominant position as a structural material was in the period of 1830 to 1880. Iron trusses replaced the wooden bridges. Cast iron was first used in arch bridges. A combination of cast iron for compression members and wrought iron for tension members was first used in truss structures, but from 1840 onwards, especially for railroad bridges, wrought iron was used solely.

Bridge building activity increased rapidly with the introduction of the railway all over the world and progressive metallurgical advancements. Consequently, steel became an unrivalled structural material in the 20th Century throughout the world. Seemingly the most recent century will be the age of structures considering steel of prime importance.

Main motive of the Symposium is that there is still much to do to develop and promote steel in construction industry by considering developments in technology, effects of global warming and climate changes. It seems that mankind's abilities are becoming ready to bring them and the like into reality. Therefore, design is important. Designing visions, structures, construction means and materials to create new and yet healthy and sound environment is also important. And steel is the futuristic material to continue shaping and "connecting" our common urban or metropolitan lives under ever growing human population challenges.

TOPICS AND KEY DATES

The Symposium will cover innovations and new challenges in the field within the themes as given below:

1. Aesthetics & architecture
2. Assessment and evaluation
3. Bridge computer technology & analysis

4. Bridge monitoring
5. Bridge maintenance
6. Safety and serviceability
7. Codes
8. Corrosion effects and protections
9. Design for durability
10. Seismic behaviour
11. Economic steel bridges
12. Environmental impact
13. Fabrication & construction
14. Field testing
15. Health monitoring
16. High performance materials
17. Highway bridges
18. Railway bridges
19. Pedestrian bridges
20. Historical bridges
21. Restoration
22. Strengthening and rehabilitation
23. Replacement
24. Case studies
25. New technical and material concepts
26. Service life prediction
27. Sustainability and decarbonisation

KEY DATES

8 July 2022	Deadline for Submission of Abstracts
22 July 2022	Notification of Acceptance to Authors
15 August 2022	Deadline for Submission of Full Papers
29 August 2022	Final Acceptance

SUPPORTERS AND COMMITTEES

Co-Organisers

European Convention for Constructional Steelwork (ECCS)
Yeditepe University (YU)

Supporters

ECCS Members

ASCEM – Asociación para la Construcción de Estructuras Metalicas, Spain

CAOK - Czech Constructional Steelwork Association, Czech Republic

DSI – Dansk Stalinstitut, Denmark

FCSA – Finnish Constructional Steelwork Association, Finland

NSA – Norsk Stalforbund, Norway

SBI – Stålbyggnadsinstitutet (Swedish Institute of Steel Construction), Sweden

SNS – Samenwerkende Nederlandse Staalbouw, Netherlands

Organisation Committee

Chair

H. Yener GÜR'EŞ
President of TUCSA &
Vice President of ECCS

Co-Chair

Prof. Dr. Nesrin YARDIMCI
Yeditepe University, Türkiye
Department of Civil Engineering

Co-Chair

Prof. Dr. Nurdan M. APAYDIN
İstanbul University, Türkiye
Transportation Technologies

Co-Chair

Dr. Dennis RADEMACHER
ECCS Bridge Committee Chair
ArcelorMittal, Germany

Members

ECCS Bridge Committee Members

Eray AYDEMİR
Editorial Director, Türkiye
TUCSA Steel Structures Magazine

Prof. Dr. Hüsnü GERENGİ
Duzce University, Türkiye
Corrosion Research Laboratory &
University of Bergamo, Italy
Department of Engineering and Applied Sciences

Yeşim GÜR'EŞ
Director of Turkish Constructional Steelwork
Association, Türkiye

Ömer GÜZEL
Yapı Merkezi Inc., Türkiye
Member of Management Board of
Çanakale Bridge Construction Consortium

Dr. Taner HERGÜNER
Yeditepe University Türkiye
Department of Civil Engineering

Dr. Selçuk İZ
Yeditepe University Türkiye
Department of Civil Engineering

Özgür KÖYLÜOĞLU
Yeditepe University Türkiye
Department of Civil Engineering

Aydın KULAKSIZ
Director of Constructional Steelwork
Training and Research Centre, Türkiye

Şükrü Efe ÖLGÜN
Yeditepe University Türkiye
Department of Civil Engineering

Dr. Özden SAYGILI
Yeditepe University Türkiye
Department of Civil Engineering

Scientific Committee

Chair:

Nesrin YARDIMCI
Yeditepe University, Türkiye
Department of Civil Engineering

Co-Chairs:

Nurdan M. APAYDIN
İstanbul University, Türkiye
Department of Transportation Technologies

Dr. Özgür KÖYLÜOĞLU
Yeditepe University, Türkiye
Department of Civil Engineering

Scientific Committee Secretaries:

Yeşim GÜR'EŞ
Director of Turkish Constructional
Steelwork Association, Türkiye

Ş. Efe ÖLGÜN
Yeditepe University, Türkiye
Department of Civil Engineering

Members :

Prof. Dr. Bülent AKBAŞ
Gebze Technical University, Türkiye
Department of Civil Engineering

Prof. Dr. Gülay ALTAY
Özyeğin University, Türkiye
Department of Civil Engineering

Daniel BİTAR
Centre Technique Industriel de la
Construction (CTICM), France

Prof. Dr. Ece CEYLAN BABA
Yeditepe University, Türkiye
Department of Architecture

Prof. Dr. Paulo Jorge Sousa CRUZ
University of Minho, Guimarães, Portugal
School of Architecture, Art and Design

Prof. Dr. Ayşe DALOĞLU,
Karadeniz Technical University, Türkiye
Department of Construction Technologies

Assoc. Prof. Dr. Mario D'ANIELLO
University of Naples Federico II, Italy
Department of Structural Engineering

Prof. Dr. Luigino DEZI
Polytechnic University of Marche, Italy
Department of Civil Engineering, Construction and
Architecture

Prof. Dr. Dan DUBINA
Politehnica University of Timisoara, Romania
Department of Civil Engineering

Prof. Dr. Markus FELDMANN
RWTH Aachen University, Germany
Steel Construction Institute

Prof. Dr. Dan M. FRANGOPOL
Lehigh University, USA
Department of Civil Engineering,

Prof. Dr. Hüsnü GERENGİ
Duzce University, Türkiye
Corrosion Research Laboratory &
Construction and Architecture
University of Bergamo, Italy
Department of Engineering and Applied Sciences

Dr. Taner HERGÜNER
Yeditepe University, Türkiye
Department of Civil Engineering

Dr. Selçuk İZ
Yeditepe University, Türkiye
Department of Civil Engineering

Altok KURŞUN
Gülsan Group, Türkiye
Technical Coordinator

Prof. Dr. Raffaele LANDOLFO
University of Naples Federico II, Italy
Department of Structures for Engineering
and Architecture

Prof. Dr. Kaan ÖZBAY
New York University, USA
Department of Civil and Urban Engineering
& Center for Urban Science & Progress
(CUSP) (Affiliated) Tandon School of Engineering

Dr. Cenan ÖZKAYA
Pontem Architecture, Engineering &
Consultancy, Türkiye

Prof. Dr. Nuran Kara PİLEHVARİAN
Yildiz Technical University, Türkiye
Faculty of Architecture

Prof. Dr. Filiz PİROĞLU
Istanbul Technical University, Türkiye
Department of Civil Engineering

Dr. Dennis RADEMACHER
ArcelorMittal Europe-Long Products
Production & Quality, SFI/WE, Luxembourg

Claire ROCHER
Centre Technique Industriel de la Construction
(CTICM), France

Assoc. Prof. Dr. Pavel RYJACEK
Czech Technical University, Czech Republic
Department of Civil Engineering

Assoc. Prof. Dr. Serdar SELAMET
Boğaziçi University, Türkiye
Department of Civil Engineering

Prof. Dr. Cem TOPKAYA
Middle East Technical University, Türkiye

Prof. Dr. Viorel UNGUREANU
Politehnica University of Timisoara, Romania

Department of Civil Engineering

Department of Civil Engineering

Prof. Dr. Viorel UNGUREANU
Politehnica University of Timisoara, Romania
Department of Civil Engineering

Dr. Almıla UZEL
Yeditepe University, Türkiye
Department of Civil Engineering

Assoc. Prof. Dr. Cüneyt VATANSEVER
Istanbul Technical University, Türkiye
Department of Civil Engineering

Prof. Dr. Milan VELJKOVIC, Sweden
Delft University of Technology, The Netherlands
Faculty of Civil Engineering and Geosciences

Prof. Dr. Cavidan YORGUN
Istanbul Technical University, Türkiye
Department of Civil Engineering

REGISTRATION FEES AND OPTIONALS

(See <https://sbis.tucsaevents.org/registration.html>)