

Research Grants

for Academic Year 2021-2022

RESEARCH GRANTS

Full-time faculty of engineering or engineering technology programs of Canadian universities and colleges are invited to apply for research grants offered by the Canadian Institute of Steel Construction. Grants are awarded for research during the 2021-2022 academic year on subjects judged to be of value in advancing the use of steel in construction. Grants to a total value of up to \$100,000 will be announced by June 1, 2021. Each grant is awarded for a one year period. Grants are awarded at the discretion of the CISC Research Committee on the merits of the applications received. In addition, the principal researcher of the highest ranked proposal will receive the H. A. Krentz Research Award and a gift of \$5,000. The recipient will be invited as a guest of the CISC to accept the H.A. Krentz Research Award at the CISC Canadian Steel Conference which will be held in a virtual setting in September 2021.

Applications shall be received no later than Wednesday April 1, 2021 and should be submitted electronically in PDF format to:

Research Submissions
Canadian Institute of Steel Construction
research@cisc-icca.ca

Late submissions and submissions exceeding the maximum page limit will not be accepted.

Descriptions of some suggested research topics and conditions pertaining to the award of grants are given herewith. Note: Researchers may apply for a Research Grant for a topic that does not appear in the Brochure.

All applications will be given equal consideration and no advantage is given to topics from the list.

Applicants shall review the terms and conditions outlined in CISC Grant Fund Agreement (attached).

Successful Applicants will be required to sign the Agreement upon award.

SOME SUGGESTED TOPICS (NOT PRIORITIZED)

More than one research proposal may be suggested by some of the listed topics.

- 1) CONNECTIONS SUBJECT TO COMBINED LOADING Design guidelines, verified by experimental testing, are needed in CSA S16 for determining the resistance of various connections subject to combined loading. This work would consolidate and build on experimental results from past Canadian and US research programs.
- 2) CONNECTIONS FOR CONVENTIONAL CONSTRUCTION IN MODERATE AND HIGH SEISMICITY APPLICATIONS Research is required to establish minimum ductility design criteria for connections in low rise buildings in Conventional Construction category of seismic force resisting systems in moderate and high seismic applications.
- 3) ASSEMBLIES THROUGH THERMAL BREAKS Research is required to determine the structural performance of steel assemblies involving thermal breaks. This work would extend and build on the recent US research programs.
- 4) ECONOMICAL INNOVATIVE LOW-STOREY HEIGHT SOLUTIONS Research is required to develop innovative steel floor solutions to minimize storey height. Consideration should be given to constructability and fabrication requirements.
- 5) SFRS FOR REGIONS OF LOW AND MODERATE SEISMICITY There is an ongoing need for innovative Seismic Force Resisting Systems that will keep steel competitive with all other framing materials in regions of low and moderate seismicity. Consideration should be given to simplified design rules, fabrication requirements, handling and erection.
- 6) MODULAR STEEL CONSTRUCTION There is a need for research on innovative, generic modular structural steel systems that will keep steel competitive. Consideration should be given to constructability, fabrication requirements, handling and erection.
- 7) GALVANIZED STEEL IN SEISMIC APPLICATIONS Research is required to determine the effects of galvanizing on structural steel material properties and their impact on ductility for seismic applications.

SUBMISSION REQUIREMENTS (Revised January 2021)

The following information shall be included in the application (**maximum 4 pages**, not including References and Curriculum Vitae, strictly enforced):

1. Name of Applicant (Project Director).
2. Name of university/college and relevant faculty, department, etc.
3. Position of applicant.
4. Title, Scope and Objectives of proposed research project.
5. Description of how the proposed research advances the use of steel in construction and the potential benefits to the steel industry.
6. Brief description of general procedure to be followed, including personnel, equipment, specimens, etc., likely to be required.
7. Proposed time schedule.
8. Funds to be provided by other sponsors, if any. In particular, applicants are encouraged to indicate how the CISC Research Grant and possible in-kind contributions provided by others in the steel industry might be used to partner additional funding from federal or provincial granting agencies.
9. Amount of money requested, with a brief statement of anticipated disbursements.
10. A statement signifying that the conditions pertaining to award of CISC research grants (as attached) are acceptable to the applicant.
11. Curriculum Vitae of applicant, as an Appendix to the application. (NSERC-format CV is acceptable).