

www.icpvt-14.org
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The 1st Student Innovation Competition
The 14th International Conference on Pressure Vessel Technology
September 23-26, 2015, Shanghai, China

To encourage young students to be involved in the innovation of technology relevant to pressure equipment and the utilization of pressure power in general, student competitions will be held during the conference. The competitions consist of two sessions, i.e. Student Paper Competition (SPC) and Student Technology Innovation Competition (STC) sessions. The competitions are aimed at meeting the following goals:

- § Provide an opportunity for students from a variety of technical backgrounds to participate in ICPVT-14 and demonstrate their design, research and problem solving skills in an international competition with their peers.
- § Provide ICPVT-14 attendees with refreshing perspectives on how students from different disciplines and different parts of the world approach problems.
- § Provide ICPVT-14 attendees with a chance to meet future professionals in our area, and provide competition participants with an opportunity to network with experienced professionals.

ICPVT-14: Student Paper Competition

Guidelines

1. The organizers of ICPVT-14 will sponsor the 1st Student Paper Competition (SPC) at the conference to be held in Shanghai, China. Technical papers, authored by graduate and undergraduate students, are invited in all areas relevant to the pressure vessel technology. The technical topics include, but are not limited to:
 - § Design and Analysis
 - § Materials and Fabrications
 - § Non-destructive Examination
 - § Operations-replacement
 - § Fitness for Service
 - § Risk Assessment and Management
 - § Engineering Failure Analysis
 - § Pressure Vessels for New Energy Challenges
 - § Pressure Vessels for Environmental Challenges
2. Students registered at an accredited college or university, either as graduate or undergraduate students, are eligible to submit papers. While co-authorship with other students and faculty advisors is permitted, a lead student author must be identified for communication and presenting the paper. Not more than one lead author and two co-authors (total of three authors, including faculty advisor(s)) are allowed. The lead student author of each paper must provide verification that he/she was a registered student at the time the paper was submitted.
3. Abstracts/papers should be submitted to the ICPVT-14 website at <http://www.icpvt-14.org>. The abstract/papers should be submitted directly to the Student Paper Competition session.
4. Only papers submitted directly to the Student Paper Competition session are eligible for the Competition. Papers submitted to non-student technical sessions WILL NOT be considered for the Competition.

Procedures

1. An abstract of no more than 500 words must be submitted by the Lead Author to the competition session.
2. Upon acceptance of the abstract, a draft paper must be submitted. The submitted full paper will be peer-reviewed. Comments from the reviewers will be forwarded to the lead author. Draft papers that meet the acceptance criteria will be invited for full paper submission. The final paper must be written in accordance with the ICPVT Publication Guidelines, and all reviewers' comments must be resolved. Only accepted final papers will be considered for participation to the 1st Student Paper Competition.

All submissions must be in English and include the student author's name, institutional affiliation, e-mail address, postal address, and paper title.
3. After the reviewing process, the competition committee will identify a total aggregate of 6 student papers selected as finalists for the Competition, and another total aggregate of 6 student papers selected as honorable mentions.
4. Accepted final papers from finalists and honorable mentions will be published in the Conference Proceedings, and will be invited for presentation at the Student Paper Competition session. Accepted final student papers not selected for the SPC session will be forwarded to, and may be presented at, the regular Conference sessions.
5. The 12 lead student authors (i.e., 6 finalists and 6 honorable mentions) will give an oral presentation on their papers to the panel of SPC Judges and ICPVT-14 attendees. Presentations will be limited to 20 minutes plus a subsequent 10 minutes to answer questions from the judges and audience. Finalist papers will be judged based on written technical content and presentation effectiveness. The SPC Judges will select, at their discretion, one

Outstanding Student Paper, one First Runner-Up Student Paper, and one Second Runner-Up Student Paper among the 6 finalists. The SPC Judges will select, at their discretion, one Best Presenting Author among the 6 honorable mentions.

Awards

1. The lead student author **MUST** present the paper in the Student Paper Competition session at the Conference to be eligible for the awards, competition prizes, or certificates. All student authors must make their own arrangements for travel and hotel accommodations.
2. Each lead student author of the finalist papers will receive an ICPVT Certificate of Recognition, or a Special Certificate for the winning papers. An allowance of \$1,000 will be awarded to the presenting authors of all finalist papers. In addition, \$1,500 will be awarded to the presenting author of the Outstanding Student Paper; \$1,200 will be awarded to the presenting author of the First Runner-Up Student Paper, and \$1,000 will be awarded to the presenting author of the Second Runner-Up Student Paper.
3. Each lead student author of the honorable mention papers will receive an ICPVT Certificate of Recognition. An allowance of \$600 will be awarded to the presenting authors of all honorable mention papers. In addition, \$1,000 will be awarded to the Best Presenting Author.
4. Student authors must register for the Conference and attend the Closing and Awards Ceremony where the winners will be announced and presented with their awards.

Competition Entry

Lead Authors can submit an Abstract to the ICPVT-14 Website at <http://www.icpvt-14.org> by choosing the Student Paper Competition session. Please tick the 'Student Paper Competition' option after you select a topic at Submission Center.

Deadlines

March 15, 2015	Submit via ICPVT Web Tool an Abstract of the Proposed Paper
April 15, 2015	Abstract Acceptance Notification
June 15, 2015	Full Paper Submission for Review
July 15, 2015	Paper Review Complete and/or Acceptance Notification
August 15, 2015	Submit via ICPVT Web Tool the Final Paper for Publication
August 22, 2015	Selection of the Finalists and Honorable Mentions
September 23-26, 2015	Present Paper at Student Paper Competition Session
September 26, 2015	Attend the Closing and Awards Ceremony

ICPVT-14: Student Technology Innovation Competition

Guidelines

1. The organizers of ICPVT-14 will sponsor the 1st Student Technology Innovation Competition (STC) at the conference to be held in Shanghai, China. Technology innovations, proposed by graduate and undergraduate students, are invited in all areas relevant to the utilization of pressure power and pressure equipment. The competition provides an opportunity for students to attend ICPVT-14 and present their latest inventions. The goal is to give students a forum to demonstrate their inventions and discuss them with worldwide experts, and to help them sharpen their creative and communication skills.
2. To enter the competition, student teams may present either an original concept (a clear, detailed design specification that can be taken to prototype), or a fully realized prototype (an invention or a patent, e.g.) relevant to the utilization of pressure power and development of pressure equipment. Either way, teams must clearly illustrate their design decisions and demonstrate the design processes that have been followed. The topics of work may include, but are not limited to, the conceive, design, fabrication, maintenance and operation of pressure equipment, components or structures. Some challenging topics are listed below as references:
 - § Novel Design of Pressurized Equipment, Components and Structures
 - § Design and Development of Safety Devices
 - § Advanced Fabrication Technology of Pressure Vessels
 - § Design and Development of Wall-climbing Robots for Pressure Vessels and Piping
 - § Advanced Non-destructive Examination Technology
 - § Design and Development of Energy Saving Equipment
 - § Design and Development of Propulsion and Power System
 - § Advanced Cleaning Technology
 - § Computer Aided Design of Pressure Vessels and Process Equipment
 - § All Areas Relevant to the Utilization of Pressure Power
3. Students registered at an accredited college or university, either as graduate or undergraduate students, are eligible to submit the work. While co-authorship with other students and faculty advisors is permitted, a lead student author must be identified for communication and presenting their work. Not more than one lead author and three co-authors (total of four authors, including faculty advisor(s)) are allowed. The lead student author of each innovation must provide verification that he/she was a registered student at the time the work was submitted.
4. Report Title/Technical Report/Supplementary Material/Posters should be submitted to the ICPVT-14 website at <http://www.icpvt-14.org>, and directly to the Student Technology Innovation Competition session.

Procedures

1. A report title of the proposed technology innovation must be submitted by the Lead Author to the competition session.
2. Upon acceptance of the report title, the lead author must submit a Technical Report, Poster and/or Supplementary Materials which will be peer-reviewed. This document, no larger than 10 Mb in size, should be submitted to the ICPVT submission system. Supplementary Materials (photos, videos, animations, etc.) may also be provided to illustrate the innovations, with size no larger than 100 Mb in total. All submissions must be in English and include the student author's name, institutional affiliation, e-mail address, and postal address; technical report title; and a technical report addressing the following:
 - § Problem and Motivation: Clearly state the problem being addressed and explain the reasons for seeking a

solution to this problem.

- § Background and Related Work: Describe the specialized (but pertinent) background necessary to appreciate the work, include references to the literature where appropriate, and briefly explain where your work departs from that done by others.
 - § Approach and Uniqueness: Describe your approach in attacking the problem and clearly state how your approach is novel.
 - § Results and Contributions: Clearly show how the results of your work contribute to the utilization of pressure power and development of pressure equipment and explain the significance of those results.
 - § The technical report must describe the student's research and development. If the work is collaborative with others and/or part of a larger group project, the technical report should make clear what the student's role was and should focus on that portion of the work.
3. The Technical Report and Poster must be written in accordance with the ICPVT Publication Guidelines. Specific guidelines for preparing posters are as follows:
 - § Each poster will have a display space approximately 2.5 m wide and 1.2 m high.
 - § The poster is expected to follow the International Standards Organization (ISO) poster size format (A0). The dimensions for A0 format are 84cm x 119cm, or approximately 33" x 47". Either landscape or portrait orientation is acceptable.
 4. Only submissions that meet the acceptance criteria will be invited for participation to the 1st Student Technology Innovation Competition. After the reviewing process, the competition committee will identify a total aggregate of 6 student innovations selected as finalists for the Competition, and another total aggregate of 6 student innovations selected as honorable mentions.
 5. A scheduled 90-minute poster presentation event will take place during the conference. All accepted student teams will be expected to host their posters and discuss their original concept, approach, design method and solutions with the STC Judges and ICPVT-14 attendees.
 6. The 12 lead student authors (i.e., 6 finalists and 6 honorable mentions) will give an oral presentation on their innovations to the panel of STC Judges and ICPVT-14 attendees. Presentations will be limited to 20 minutes plus a subsequent 10 minutes to answer questions from the judges and audience. Based on the originality, credibility, practicability and flexibility of the innovation, as well as the presentation effectiveness, the STC Judges will rank and identify, at their discretion, one Outstanding Student Innovation, one First Runner-Up Student Innovation, and one Second Runner-Up Student Innovation among the 6 finalists. The STC Judges will select, at their discretion, one Best Presenting Author among the 6 honorable mentions.

Awards

1. The lead student author **MUST** present the innovation in the Student Technology Innovation Competition session at the Conference to be eligible for the awards, competition prizes, or certificates. All student authors must make their own arrangements for travel and hotel accommodations.
2. Each lead student author of the finalist innovations will receive an ICPVT Certificate of Recognition, or a Special Certificate for the winning innovations. An allowance of \$1,000 will be awarded to the presenting authors of all finalist innovation. In addition, \$1,500 will be awarded to the presenting author of the Outstanding Student Innovation; \$1,200 will be awarded to the presenting author of the First Runner-Up Student Innovation, and \$1,000 will be awarded to the presenting author of the Second Runner-Up Student Innovation.
3. Each lead student author of the honorable mention innovations will receive an ICPVT Certificate of Recognition. An allowance of \$600 will be awarded to the presenting author of each honorable mention innovation. In addition, \$1,000 will be awarded to the best presenting author.
4. Student authors must register for the Conference and attend the Closing and Awards Ceremony where the

winners will be announced and presented with their awards.

Competition Entry

Lead Authors can submit a report title to the ICPVT-14 Website at <http://www.icpvt-14.org> by choosing the Student Technology Innovation Competition session.

Deadlines

April 1, 2015	Submit via ICPVT Web Tool a Report Title of the Proposed Innovation
August 1, 2015	Submit via ICPVT Web Tool Technical Report, Supplementary Material and Poster
August 22, 2015	Selection of the Finalists and Honorable Mentions
September 23-26, 2015	Give Poster and Oral Presentations at Student Innovation Competition Session
September 26, 2015	Attend the Closing and Awards Ceremony