

**Safety Engineering &
Risk Analysis Division**



OVERVIEW

SAFETY ENGINEERING & RISK ANALYSIS DIVISION [SERAD]

Part of "Engineering & Technology Management Group"



OVERVIEW of SERAD

- ▶ 50 Year Legacy of Service to ASME
 - Current SERAD created in 1991 by merging
 - ▶ Safety Division
 - ▶ Risk Analysis Task Force
- ▶ ~1,200 Primary Members
 - ~1,700 Secondary Members
- ▶ <http://divisions.asme.org/SERAD>



SERAD's MISSION

- ▶ The mission of SERAD is to promote, advance, implement and promulgate related sciences and technologies. SERAD accomplishes its mission through facilitating communication and education, exchanging technology, and promoting applications and standardization.
- ▶ Through the operation of its committees, promulgation of papers and reports, and organization of presentations, SERAD is ASME's primary vehicle for exchange and dissemination of safety, health and risk-related technologies.
- ▶ SERAD promotes the application of safety, health and risk-related technologies with other ASME Divisions and external entities. This includes development and consistent application of analytical methods, measurement, terminology and designation, and participation in standards development and regulatory processes.



GOALS & OBJECTIVES

- ▶ To educate ASME members and others about the importance of risk analysis, safety engineering, reliability engineering, and environmental and occupational health;
- ▶ To encourage members to provide their expertise in the standards-setting process;
- ▶ To promote codes and standards for new areas in risk analysis, safety engineering and environmental and occupational health;
- ▶ To provide closer interface with other ASME Technical Divisions through joint efforts;
- ▶ To enhance the quality of technical papers on safety and risk;
- ▶ To increase active participation by ASME members in SERAD affairs;
- ▶ To help members keep pace with the latest developments.



SERAD's SERVICES

- ▶ Technical Programming
 - IMECE (Every November)
 - ▶ Peer-Review Papers; 6-12 Sessions
 - ▶ Corporate Sponsored Annual Dinner
- ▶ Student Safety Design Contest
 - Founded 1984
 - Over the years, Industry Sponsors have included: NIOSH, FM Global, Packer Engineering, ARCCA, & United Technologies Company, to assist in awarding Honorariums
- ▶ Newsletter
- ▶ Recognition Awards



SERAD's TECHNICAL PROGRAM FOCUS - IMECE

- ▶ TOPICAL AREAS
 - 1) Safety Engineering
 - 2) Risk Analysis
 - 3) Reliability Methods and Applications
 - 4) Product or Process Safety
- ▶ Strong IMECE Program 6-12 Sessions per program; 30-80 papers per program

International cooperation, understanding and promotion of efforts and disciplines by presenting research results, new developments, and novel concepts in paper sessions, panel discussions, open forum, and posters.



SERAD's STUDENT SAFETY DESIGN CONTEST

Each year, SERAD's Honors and Awards Committee leads the SERAD Student Safety Design Contest. Each year, a topic(s) are chosen for the contest which have included basic safety through complete system safety analyses. Submissions have come from many universities across the United States and have included submissions from Europe, Asia, and Africa.

Examples of past winners include:

- 2010 winning submission: "Lifeboat Release System" from the United States Coast Guard Academy,
- 2010 second place submission: "Spike Setting Mechanism Project" from North Carolina State University,
- 2011 winning submission: "Nuclear Energy: Managing the risk from potential earthquakes" from Missouri Univ. of Science & Technology.



SERAD's HONORABLE RECOGNITION AWARDS

Annually, SERAD honors several of its members who have provided outstanding service to SERAD and ASME. These individuals are recognized and thanked for their support to SERAD and ASME at the SERAD Annual Meeting held during the IMECE each Fall.

The SERAD Honors Awards are led by the SERAD Chair and have honored:

- "Leadership" awards to past SERAD Chairs,
- "Service" awards for service as SERAD Technical Chair for IMECE and service on SERAD Committees,
- "SERAD Student Safety Design Contest" winners