



Colorado School of Mines  
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Web site: <http://www.mines.edu/Research/>

## ***Center for Welding, Joining, and Coatings Research (CWJCR)***

The Center for Welding Joining and Coatings Research (CWJCR) is an integral part of the Department of Metallurgical and Materials Engineering. The goal of CWJCR is to promote education and research, and to advance understanding of the metallurgical aspects of welding, joining and coating processes. The Center's current activities include: education, research, conferences, short courses, seminars, information source and transfer, and industrial consortia.

CWJCR assists the Metallurgical and Materials Engineering Department by providing numerous opportunities that directly contribute to the student's professional growth. Some of these opportunities include:

- Direct involvement in the projects which constitute CWJCR's research program
- Interaction with internationally recognized visiting scholars.
- Industrial collaborations that provide equipment, materials and services.
- Research experience at industrial plants or national laboratories.
- Professional experience and exposure before nationally recognized organizations through student presentations of university research.
- Direct involvement in national welding and materials professional societies.

### ***Background:***

- University-sponsored
- Founded in 1981
- Approximately \$1,000,000 annual funding
- Federal and industrial programs

### ***Areas of Expertise:***

- Metallurgical engineering
- Physical metallurgy of joining processes
- Engineered materials processing
- Welding, soldering, brazing and coating science
- Welding and joining consumables design

### ***Sponsoring Organizations:***

- National laboratories
- Industry
- Government

### ***Method of Technology Transfer:***

- Student research projects
- Presentation of papers
- Graduate theses
- Conferences, seminars and short courses
- *Web site: <http://www.mines.edu/research/cwjcr/>*

### ***Spin-offs / Contributions:***

- M.S. and Ph.D. graduates
- Improved quality of welds and joints
- New processes
- New technology
- Patents

***Contact CWJCR Director, Dr. Stephen Liu, Metallurgical and Materials Engineering Department,  
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