



National Science Foundation  
WHERE DISCOVERIES BEGIN

SEARCH

[RESEARCH AREAS](#)[FUNDING](#)[AWARDS](#)[DOCUMENT LIBRARY](#)[NEWS](#)[ABOUT NSF](#)

## Awards

[Search Awards](#)[Recent Awards](#)[Presidential and Honorary Awards](#)[About Awards](#)

### How to Manage Your Award

[Grant Policy Manual](#)[Grant General Conditions](#)[Cooperative Agreement Conditions](#)[Special Conditions](#)[Federal Demonstration Partnership](#)[Policy Office Website](#)

### Award Abstract #8622236

## Engineering Research Center for Optoelectronic Computing Systems

**NSF Org:** [EEC](#)  
[Div Of Engineering Education and Centers](#)

**Initial Amendment Date:** July 17, 1987

**Latest Amendment Date:** September 26, 1989

**Award Number:** 8622236

**Award Instrument:** Cooperative Agreement

**Program Manager:** Fred Betz  
EEC Div Of Engineering Education and Centers  
ENG Directorate For Engineering

**Start Date:** May 1, 1987

**End Date:** April 30, 1992 (Estimated)

**Awarded Amount to Date:** \$6,618,664.00

**Investigator(s):** W. Thomas Cathey [cathey@colorado.edu](mailto:cathey@colorado.edu) (Principal Investigator)  
Jacques Pankove (Co-Principal Investigator)  
Harry Jordan (Co-Principal Investigator)  
Louis Scharf (Co-Principal Investigator)  
Kristina Johnson (Co-Principal Investigator)

**Sponsor:** University of Colorado at Boulder  
3100 Marine Street, Room 481  
Boulder, CO 80303-1058 (303)492-6221

**NSF Program(s):** ENGINEERING RESEARCH CENTERS,  
SPECIAL PROGRAMS-RESERVE

**Program Reference Code(s):** 9251, 9284

**Program Element Code(s):** 1480, 9145

### ABSTRACT

The University of Colorado and Colorado State University will establish an Engineering Research Center with the goal of creating optoelectronic devices and systems for computing signal processing and artificial intelligence. Multidisciplinary research thrusts will include: (1) the design and fabrication of a bit-serial optical computer as a test-bed for determining device reliability and functional complexity; (2) fabrication of novel devices using new materials and processes; (3) the development of a general methodology for identifying optoelectronic signal processing systems; and (4) the design of symbolic computers and associative memories for optical artificial intelligence.

Please report errors in award information by writing to: [awardsearch@nsf.gov](mailto:awardsearch@nsf.gov).



[↑ Top](#)

[RESEARCH AREAS](#)

[FUNDING](#)

[AWARDS](#)

[DOCUMENT LIBRARY](#)

[NEWS](#)

[ABOUT NSF](#)

[Website Policies](#) | [Budget and Performance](#) | [Inspector General](#) | [Privacy](#) | [FOIA](#) | [No FEAR Act](#) | [USA.gov](#)  
[Accessibility](#) | [Plain Language](#) | [Contact](#)



**National Science Foundation, 2415 Eisenhower Avenue, Alexandria, Virginia 22314, USA**  
Tel: (703) 292-5111, FIRS: (800) 877-8339 | TDD: (800) 281-8749

 [Text Only Version](#)