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Geol Survey

Bibliography of Subsidence-Related Literature

by
B. A. Trent, R. A. Bauer, P. B. DuMontelle
Illinois State Geological Survey

Illinois Mine Subsidence Research Program

cooperating agencies

ILLINOIS STATE GEOLOGICAL SURVEY
Illinois Department of Energy and Natural Resources

BUREAU OF MINES
United States Department of the Interior

The **Illinois Mine Subsidence Research Program** (IMSRP) was established in 1985 to investigate methods and develop guidelines for underground mining operations that aim to maximize coal extraction yet preserve the productivity of prime farmland. The research program was initiated by the Illinois Coal Association and the Illinois Farm Bureau.

The Illinois State Geological Survey, a division of the Illinois Department of Energy and Natural Resources, is directing the IMSRP. Participating research institutions include Southern Illinois University at Carbondale, the University of Illinois at Urbana-Champaign, Northern Illinois University, and the Illinois State Geological Survey. A five-year Memorandum of Agreement, signed by the State of Illinois and the Bureau of Mines, U.S. Department of the Interior, ensures collaboration, cooperation, and financial support through 1991. Major funding is also provided by the Illinois Coal Development Board.

This publication is one in a series printed and distributed by the Illinois State Geological Survey as a service to the IMSRP. In the interest of making this information available to the public as quickly as possible, this bibliography has been reviewed for technical accuracy only.

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Illinois State Geological Survey

The Illinois Mine Subsidence Research Program (IMSRP) compiled this bibliography as an aid to mining company technical personnel, persons involved with agriculture in coal-resource areas in Illinois, and mine subsidence researchers. The references were entered onto a computer database management system at the Illinois State Geological Survey (ISGS). Entries were collected from journals, proceedings, bibliographies, public and private libraries, and other sources.

The 2200 references in this bibliography represent the output of the database as of January 1, 1988. This bibliography is not intended to be complete--it will be continually updated. The references are listed alphabetically by first author and year of publication. Short abstracts or descriptions of the works are included with many of the entries. Key subjects are included for each entry. The subject-author index that accompanies the reference list includes 100 selected key subjects.

This database is designed for computer access using more than one keyword. The keywords selected to produce the subject-author index show the advantage of making on-line searches. For example, more than two pages of authors are listed under the keyword "coal mining." During an on-line search, a second, third, or fourth keyword would be entered to narrow the search and better fit the researcher's interest. We have printed the bibliography so that those without access to computers or the ISGS facilities can use the material, and also so that authors may check their entries for errors and omissions.

Readers are invited to call or write the Earth Hazards and Engineering Geology Section of the ISGS with requests for specific searches. The books and articles listed are not necessarily available in libraries; many items may be out of print. We will be pleased to assist researchers in locating reference material if the material is available. Researchers are invited to submit additions to the bibliography. We prefer to receive copies of articles so that we can more easily select key words.

The basis for this bibliography is INMAGIC, a database management system developed for library use by Inmagic, Inc., Cambridge, MA. The original 741 references used for this database came from U.S. Bureau of Mines Information Circular 9007, "Subsidence Information for Underground Mines--Literature Assessment and Annotated Bibliography." We have followed the general format of IC 9007 for this bibliography. The IMSRP Technical Committee helped to select entries and keywords.

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modeling, vertical displacement, geologic features

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backfilling, mine waste

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surface structural damage, engineering, geotechnical, insurance, monitoring methods, survey methods, coal mining

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ground control, instrumentation

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economics, surface subsidence damage, historical, backfilling, law, literature search

KEY SUBJECTS

abandoned mines
active mines
agriculture
angle of draw
anthracite
architecture
backfilling
boundary element method
bumps
coal mining
computer
construction
continuum mechanics theories
descriptive theories
economics
elastic theory
engineering
environment
finite element method
floor stability
fluid extraction
foundations
geologic features
geophysical methods
geotechnical
government
ground control
high-extraction retreat
historical
horizontal displacement
hydrology
in situ testing
influence function
instrumentation
insurance
lab testing
land-use planning
land values
law
literature search
longwall
mathematical modeling
metal mining
mine design
mine fires
mine operation
mine safety
mine waste
mitigation
modeling
monitoring design
monitoring equipment
monitoring installation
monitoring methods
multiple-seam extraction
National Coal Board
non-metal mining
oil extraction
overburden
partial extraction
photography
pillar extraction
pillar strength
pipelines
prediction
prediction theories
profile function
railways
reclamation
remote sensing
roads
rock mechanics
roof bolting
roof stability
roof support
room-and-pillar
seismic
shortwall
soil mechanics
soils
stochastic model
subsidence research
subsurface structural damage
subsurface subsidence damage
subsurface water
surface structural damage
surface subsidence control
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vertical displacement
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