

GEOREF

Subject Coverage	- Alloys - Archaeology - Crystallography - Earth Science - Energy - Engineering - Environmental Science - Extraterrestrial Geology - Fuels - Geosciences - Glass - Hydrology - Maps - Materials Science - Mineralogy - Oceanography - Paleontology - Petroleum - Petrology - Polar Research - Pollution Control - Seismology - Stratigraphy - Volcanology			
File Type	Bibliographic			
Features	Thesaurus	Controlled Term (/CT)		
	Alerts (SDIs)	Weekly		
	CAS Registry Number® Identifiers	☐	SLART	☒
	Keep & Share	☒	Structures	☐
Record Content	- Bibliographic Information - Abstracts (38 % of the records) - Indexing Terms - Geographic map coordinates are also available for about 70 % of records			
File Size	More than 4.4 million citations (08/2023)			
Coverage	1669-present (North America) 1933-present (Worldwide)			
Updates	Weekly with new and revised records			
Language	English			
Database Producer	American Geosciences Institute 4220 King Street Alexandria, VA 22302-1502 USA Phone: (703) 379-2480, Ext. 230 Email: ml@agiweb.org Copyright Holder			

Sources

- Over 5000 Journals
- Conference Proceedings
- Dissertations
- Maps
- Government Documents
- Monographs
- Books

User Aids

- GeoRef Thesaurus (available from the producer and online)
- Online Helps (HELP DIRECTORY lists all help messages available)
- STNGUIDE

Cluster

- ALLBIB
 - AUTHORS
 - CONSTRUCTION
 - CORPSOURCE
 - ENGINEERING
 - ENVIRONMENT
 - FUELS
 - GEOSCIENCE
 - PETROLEUM
 - PHYSICS
- [STN Database Cluster information](#)
-

General Search Fields

Fields that allow simultaneous left and right left truncation are indicated by an asterisk (*).

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index* (contains single words from the title (TI), abstract (AB), controlled term (CT), classification code (CC), and research program (PRO) fields)	None (or /BI)	S CALIFORNIA S MARINE SEDIMENT# S CRYSTAL (L) FRAMEWORK S AQUEOUS (S) SUSPENSIONS S ?MARINE?	AB, CC, CT, PRO, TI
Abstract*	/AB	S ?SYNCHRONOUS/AB	AB
Accession Number	/AN	S 1998:654/AN	AN
Author	/AU	S MACAR P?/AU S SMITH, DAVID E/AU	AU
Availability	/AV	S LIBRARY OF CONGRESS/AV	AV
Bibliographic Level (code and text)	/BL	S ANALYTIC/BL S SE/BL	BL
Classification Code (1) (code and text)	/CC	S SEISMOLOGY/CC S 13/CC	CC
Controlled Term (2)	/CT	S METEOR CRATERS/CT S SYENITES/CT S PRECAMBRIAN+RT/CT	CT
Controlled Word	/CW	S METEOR/CW	CT
Corporate Source (1)	/CS	S WASH? LEE/CS	CS
Country of Publication (ISO code and text)	/CY	S US/CY;S DOMINICAN REPUBLIC/CY	CY
Document Number (GeoRef Accession Number)	/DN	S 1979-00125/DN	DN
Document Type (code and text)	/DT (or /TC)	S BOOK/DT S MA/DT S L1 NOT AB/DT	DT
Entry Date (3)	/ED	S ED>=SEP 2011	ED
E-mail Address (1)	/EML	S UNI TUEBINGEN/EML	CS, EML
Field Availability	/FA	S MAPC/FA	FA
Digital Object Identifier	/FTDOI	S 10/1016.J.ICARUS.2010.02.026/FTDOI	FTDOI, SO
International Standard (Document) Number (contains ISBN, ISSN, and CODEN)	/ISN	S 0022-1503/ISN S JOEEDU/ISN S 90-5410-659-X/ISN	ISN, SO
Journal Title	/JT	S GEODYNAMICS SERIES/JT	JT, SO
Language (ISO code and text)	/LA	S EN/LA AND SEA ICE/CT	LA
Meeting Date (3)	/MD	S 19920100<MD<19920300 S MAY 1-31, 1997/MD	MD, SO
Meeting Location (1)	/ML	S HAWAII/ML	ML, SO
Meeting Title (1)	/MT	S INTERNAT? VOLCANO?/MT	MT, SO
Meeting Year (3)	/MY	S 1997/MY AND WATER/MT	MY, SO
Note	/NTE	S PROJECT/NTE	NTE
Number of Report	/NR	S BIA-80/NR	NR, SO
Publication Date (3)	/PD	S 19980200-19980300/PD	PD, SO
Publication Year (3)	/PY	S 1997/PY	PD, PY, SO
Publisher (1)	/PB	S SPRINGER NEW YORK/PB	PB, SO
Research Program (1)	/PRO	S GEOL? SURVEY/PRO S IGCP/PRO	PRO
Reference Count (3)	/REC (/RE.CNT)	S REC>15	REC, SO

General Search Fields (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Source (contains journal title, collation information (volume, issue, pagination), publisher, publication date, meeting information, monographic and collective information, holding library, URL, DOI, CODEN, ISSN, and ISBN) Title* Uniform Resource Locator (1) Update Date (3) Word Count, Title (3)	/SO /TI /URL /UP /WC.T	S PET ENG?/SO S (JOURNAL OF ANATOMY AND 142)/SO S CAMBRIDGE UNIV? PRESS/SO S GAAPBC/SO S A08/SO S ANZGG ORG/SO S GEOPRESSURE/TI S HTTP://WWW.SCIENCEMAG?/URL S L1 AND UP>19990600 S WC.T<10	SO TI SO, URL ED WC.T

(1) Implied (S) proximity is available in this field.

(2) A thesaurus is available in this field.

(3) Numeric search field that may be searched using numeric operators or ranges.

Map Coordinate Fields ⁽¹⁾

Search Field Name	Search Code	Search Examples	Display Codes
Bottom Boundary (2) East Longitude (2) Left Boundary (2) North Latitude (2) Right Boundary (2) South Latitude (2) Top Boundary (2) West Longitude (2)	/BB /ELON /LB /NLAT /RB /SLAT /TB /WLON	S 400000/BB S 980000-1100000/ELON S LB=160000 S 100000=NLAT S RB=1800000 S 300000<SLAT<900000 S 630000-690000/TB S 1040200-1080000/WLON	MAPC MAPC MAPC MAPC MAPC MAPC MAPC MAPC

(1) Use the (P) operator to insure all values searched are in the same set of coordinates.

(2) Numeric search field that may be searched using numeric operators or ranges.

Controlled Term (/CT) Thesaurus

There is a thesaurus of geographic place names, systematic terms for rocks, fossils, minerals, etc., and non-systematic terms for geologic features, processes, properties, and materials available in the Controlled Term (/CT) field. Relationship Codes can be used with either the SEARCH or EXPAND command unless specified otherwise.

Code	Content	Examples
ALL	All associated terms (BT, SELF, NOTE, INDX, MAPC, UF, USE, NT, RT)	E APOLLO PROGRAM+ALL/CT
AUTO (1)	Automatic relationship (SELF, NT)	S U S VIRGIN ISLANDS+AUTO/CT
BT	Broader Terms (BT, SELF)	E ANDRADITE+BT/CT
HIE	Broader and Narrower Terms (BT, SELF, NT)	E CENTRAL AFRICA+HIE/CT
INDX (2)	Indexer Note (SELF, INDX)	E GEOCHRONOLOGY+INDX/CT
KT	Keyword Terms (multiword phrases containing the specified Keyword Term) (SELF, KT)	S EROSION+KT/CT
MAPC (2)	Map Coordinates associated with term (SELF, MAPC)	E LOWER SAXONY GERMANY+MAPC/CT
NOTE (2)	Notes associated with terms (SELF, NOTE, INDX)	E MASTODON+NOTE/CT

Controlled Term (/CT) Thesaurus (cont'd)

Code	Content	Examples
NT PFT	Narrower Terms (SELF, NT) Preferred or Forbidden Terms (SELF, NOTE, USE, UF)	S MARS+NT/CT S SUBMARINE CONE+PFT/CT
RT STD	Related Terms (see also terms) (SELF, RT) Broader, Narrower, and Related Terms (BT, SELF, NT, RT)	S QUARTZ+RT/CT E UPPER SILURIAN+STD/CT
UF USE	Used For Terms (Preferred Terms) (SELF, UF) Use Terms (Forbidden Terms) (SELF, USE)	S GEYSERS+UF/CT S WATER CYCLE+USE/CT

(1) Automatic relationship code (ARC) is SET OFF by default. When SET REL is ON, the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

(2) This Relationship Code can only be used with EXPAND.

DISPLAY and PRINT Formats

Any combination of formats can be used to display or print answers. Multiple codes must be separated by spaces or commas, e.g., D L1 1-5 TI AU. The fields are displayed in the order requested.

Hit-term highlighting is available in all fields except MAPC. Highlighting must be ON during SEARCH to use the HIT, KWIC, and OCC formats.

Format	Content	Examples
AB	Abstract	D AB L4 1-5
AN	Accession Number	D L2 AN 3
AU	Author	D 1-3 AU L8
AV	Availability	D AV
BL	Bibliographic Level	D BL
CC	Classification Code	D CC 1-5
CS	Corporate Source	D CS 3,7
CT	Controlled Term	D TI CT NTE 8
CY	Country of Publication	D CY
DN	Document Number (GeoRef Accession Number)	D DN
DT (TC)	Document Type	D 1-10 DT
ED (UP)	Entry Date	D ED
EML (1)	E-mail Address	D EML
FTDOI (1)	Digital Object Identifier	D FTDOI
ISN (1)	International Standard (Document) Number	D 1 5 ISN
JT (1)	Journal Title	D JT
LA	Language	D 2-8 11 LA
MAPC	Map Coordinates	D MAPC 3-6
MD (1)	Meeting Date	D MT MD
ML (1)	Meeting Location	D ML
MT (1)	Meeting Title	D MT ML
MY (1)	Meeting Year	D MY
NR	Number of Report	D NR
NTE	Note	D NTE 1 3-4
PB (1)	Publisher	D PB
PD (1)	Publication Date	D PD
PRO	Research Program	D PRO
PY (1)	Publication Year	D PY
REC (RE.CNT) (1)	Reference Count	D REC
SL	Summary Language	DIS SL L4 6
SO	Source (includes NR)	D SO CS 1-3
TI	Title	D TI AU 1-3
URL (1)	Uniform Resource Locator	D URL
WC.T (1)	Word Count, Title	D WC.T

DISPLAY and PRINT Formats (cont'd)

Format	Content	Examples
ABS ALL BIB DALL IALL IBIB IIND IND SCAN TRIAL (TRI, SAM, SAMPLE, FREE)	AB AN, DN, TI, AU, CS, NR, SO, NTE, CY, DT, BL, LA, AV, ED, SL, AB, PRO, CC, CT, MAPC AN, DN, TI, AU, CS, NR, SO, NTE, CY, DT, BL, LA, AV, ED, SL (BIB is the default) ALL, delimited for post-processing ALL, indented with text labels BIB, indented with text labels IND, indented with text labels PRO, CC, CT, MAPC CT, TI (random access without accession number) AN, TI, CC, CT, MAPC	D 1-15 ABS D ALL D L2 3 BIB;D D DALL D IALL D IBIB D IIND DIS IND 4 7 D SCAN D 1- TRIAL
HIT KWIC OCC	Fields containing hit terms Hit terms with 20 words on either side (KeyWord-In-Context) Number of occurrences of hit terms and fields in which they occur	D HIT BIB 9 D KWIC D OCC

(1) Custom display only.

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abstract	AB	Y	Y
Accession Number	AN	Y	Y
Author	AU	Y	Y
Availability	AV	Y	Y
Bibliographic Level	BL	Y	Y
Citation	CIT	Y (2,3)	N
Classification Code	CC	Y	Y
CODEN	CODEN	N	Y
Controlled Term	CT	Y	Y
Corporate Source	CS	Y	Y
Country of Publication	CY	Y	Y
Document Number (GeoRef Accession Number)	DN	Y	Y
Document Type	DT (TC)	Y	Y
E-mail Address	EML	Y	Y
Entry Date	ED	Y	Y
Field Availability	FA	Y	Y
Digital Object Identifier	FTDOI	N	Y
International Standard Book Number	ISBN	N	Y
International Standard (Document) Number	ISN	Y (4)	Y
International Standard Serial Number	ISSN	N	Y
Journal Title	JT	Y	Y
Language	LA	Y	Y
Meeting Date	MD	Y	Y
Meeting Location	ML	Y	Y

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Meeting Title	MT	Y	Y
Meeting Year	MY	Y	Y
Number of Report	NR	Y	Y
Note	NTE	Y	Y
Occurrence Count of Hit Terms	OCC	N	Y
Publisher	PB	Y	Y
Publication Date	PD	Y	Y
Publication Year	PY	Y	Y
Research Program	PRO	Y	Y
Reference Count	REC (RE.CNT)	Y	Y
Source	SO	Y (5)	N
Summary Language	SL	Y	Y
Title	TI	Y (default)	Y
Uniform Resource Locator	URL	Y	Y
Update Date	UP	Y	Y
Word Count, Title	WC.T	Y	Y

- (1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT AU.
 (2) Extracts first author, publication year, volume, and first page with a truncation symbol appended and with /RE appended to the terms created by SELECT.
 (3) SELECT HIT and ANALYZE HIT are not valid with this field.
 (4) Selects or analyzes CODEN, ISBN, ISSN with /ISN appended to the terms created by SELECT.
 (5) Selects or analyzes CODEN, ISBN, ISSN with /SO appended to the terms created by SELECT.

Sample Records**DISPLAY BIB OF JOURNAL**

AN 2023:3343 GEOREF
 DN 2023-003343
 TI Frost heave mitigation of silt clay using nonionic polyacrylamide
 AU Wang Haihang; Ji Yukun; Zhou Guoqing; Zhao Xiaodong; Vandeginste, Veerle
 CS China University of Mining and Technology, Laboratory for Geomechanics
 and Deep Underground Engineering, Xuzhou, China; Katholieke Universiteit
 Leuven, Belgium
 EMAIL: jykcunt@163.com
 SO Cold Regions Science and Technology (Feb 2023), Volume 206, Article no.
 103755, 46 refs.
 ISSN: 0165-232X E-ISSN: 1872-7441
 DOI: <https://doi.org/10.1016/j.coldregions.2022.103755>
 Published by: Elsevier, Amsterdam
 URL (Source): <http://www.sciencedirect.com/science/journal/0165232X>
 NTE Based on Publisher-supplied data
 CY Netherlands
 DT Serial
 BL Analytic
 LA English
 ED Entered STN: 20 Jan 2023
 Last updated on STN: 20 Jan 2023

DISPLAY ALL OF CONFERENCE

AN 2023:2867 GEOREF
 DN 2023-002867
 TI Displacement prediction of Jiuxianping Landslide using gated recurrent unit (GRU) networks
 AU Zhang Wengang; Li Hongrui; Tang Libin; Gu Xin; Wang Luqi; Wang Lin
 CS Chongqing University, School of Civil Engineering, Chongqing, China
 SO Acta Geotechnica (Berlin) (Apr 2022), Volume 17, Number 4, pp. 1367-1382, 46 refs., illus. incl. 4 tables, sketch map
 ISSN: 1861-1125 E-ISSN: 1861-1133
 DOI: <https://doi.org/10.1007/s11440-022-01495-8>
 Published by: Springer-Verlag, co-published with Versita, Heidelberg-Berlin
 Conference: 4th international conference on Information technology in geo-engineering; Machine learning in geotechnics, Singapore, Singapore, 4 Aug 2022 - 5 Aug 2022
 URL (Source): <https://www.springer.com/journal/11440>
 Monographic: Machine learning in geotechnics
 Editor(s): Zhang Wengang; Liu, Zhongqiang
 Chongqing University, School of Civil Engineering, Chongqing, China
 CY Germany
 DT Serial; **Conference**
 BL Analytic
 LA English
 ED Entered STN: 20 Jan 2023
 Last updated on STN: 20 Jan 2023
 AB Displacement prediction plays a significant role in the landslide disaster early warning. However, landslide deformation is a complex nonlinear dynamic process, posing difficulties in the displacement prediction especially for the commonly used static models. This study applies an advanced deep machine learning method called gated recurrent unit (GRU) to the displacement prediction of the Jiuxianping landslide, which is a typical reservoir landslide located in the Yunyang County of Chongqing, China. Results show that the GRU-based approach is able to portray the variation of the periodic displacement in the testing dataset with fewer outliers. Although both the artificial neural network (ANN) and random forest regression (RFR) can capture the variation tendency of data points in the training dataset, they are unable to predict the local peaks well in the testing dataset. For the multivariate adaptive regression splines (MARS), the deformation characteristics of the periodic displacement curve cannot be well captured, and the overall predictive performance is unsatisfactory. Different from the three static models, the GRU model is essentially a dynamic model making full use of the historical information, which can portray the deformation characteristics of the Jiuxianping landslide rationally.
 CC 23 (Geomorphology)
 CT Asia; China; Chongqing China; deep learning; deformation; displacements; early warning systems; Far East; faults; gated recurrent unit; landslides; machine learning; mass movements; models; multivariate analysis; neural networks; prediction; random forest; regression analysis; statistical analysis; time series analysis; warning systems; Yunyang China
 MAPC NLAT 305600; NLAT 305600; ELON 1084700; ELON 1084700

DISPLAY ALL OF MAP

AN 2023:622 GEOREF
 DN 2023-000622
 TI Bathymetric map and surface area and capacity table for Table Rock Lake near Branson, Missouri, 2020
 AU Huizinga, Richard J.; Rivers, Benjamin C.; Richards, Joseph M.
 CS U. S. Geological Survey, Central Midwest Water Science Center, Rolla, MO, United States
 NR SIM-3499
 SO Scientific Investigations Map (2022), 3 sheets, 20 refs., illus. incl. 1 table
 ISSN: 2329-1311 E-ISSN: 2329-132X
 DOI: <https://doi.org/10.3133/sim3499>
 Published by: U. S. Geological Survey, Reston, VA
 Source Note: Prepared in cooperation with the U. S. Army Corps of Engineers, Southwestern Division, Little Rock District
 URL (Source): <https://pubs.er.usgs.gov/browse/Report/USGS%20Numbered%20Series/Scientific%20Investigations%20Map/>
 NTE Includes link to data files
 CY United States
 DT **Map**; Serial; Report
 BL Monographic
 LA English
 ED Entered STN: **9 Jan 2023**
 Last updated on STN: 9 Jan 2023
 AB Table Rock Lake was completed in 1958 on the White River in southwestern Missouri and northwestern Arkansas for flood control, hydroelectric power, public water supply, and recreation. The surface area of Table Rock Lake is about 42,400 acres, and about 715 miles of shoreline are at the conservation pool level (915 feet above the North American Vertical Datum of 1988). Sedimentation in reservoirs can result in reduced water storage capacity and a reduction in usable aquatic habitat; therefore, accurate and up-to-date estimates of reservoir water capacity are important for managing pool levels, power generation, recreation, and downstream aquatic habitat. Many of the lakes operated by the U. S. Army Corps of Engineers are periodically surveyed to monitor bathymetric changes that affect water capacity. In October and November 2020, the U.S. Geological Survey, in cooperation with the U. S. Army Corps of Engineers, completed one such survey of Table Rock Lake using a multibeam echosounder. The echosounder data were combined with U. S. Geological Survey 1/3 arc-second digital elevation model data and light detection and ranging (lidar) data, where present, to prepare a bathymetric map and a surface area and capacity table up to the flood pool elevation of 931 feet above the North American Vertical Datum of 1988.
 PRO USGS Publications of the U. S. Geological Survey
 CC 14 (Geologic maps); 20 (Applied geophysics)
 CT Arkansas; Barry County Missouri; bathymetric maps; bathymetry; Boone County Arkansas; Branson Missouri; Carroll County Arkansas; cartography; data processing; digital cartography; digital terrain models; echo sounding; elevation; fresh water; geophysical surveys; global navigation satellite systems; Global Positioning System; laser methods; lidar methods; maps; Missouri; multibeam methods; reservoirs; Stone County Missouri; surface water; surveys; Table Rock Lake; Taney County Missouri; United States; USGS; water storage; White River
 MAPC NLAT 363500; NLAT 365000; WLON 0931000; WLON 0935500

In North America

CAS
STN North America
P.O. Box 3012
Columbus, Ohio 43210-0012 U.S.A.

CAS Customer Center:
Phone: 800-753-4227 (North America)
614-447-3731 (worldwide)
E-mail: help@cas.org
Internet: www.cas.org

In Europe

CAS Customer Center EMEA
(represented by FIZ Karlsruhe)
P.O. Box 2465
76012 Karlsruhe
Germany

Phone: +49-7247-808-555
E-mail: EMEAhelp@cas.org

In Japan

JAICI (Japan Association for
International Chemical Information)
STN Japan
Nakai Building
6-25-4 Honkomagome, Bunkyo-ku
Tokyo 113-0021, Japan

Phone: +81-3-5978-3601 (Technical Service)
+81-3-5978-3621 (Customer Service)
E-mail: support@jaici.or.jp (Technical Service)
customer@jaici.or.jp (Customer Service)
Internet: www.jaici.or.jp