

# **XIII International Scientific Conference "Monitoring of Geological Processes and Ecological Condition of the Environment" 2019**

Kiev, Ukraine  
12 - 15 November 2019

ISBN: 978-1-7138-1187-9

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571



**Some format issues inherent in the e-media version may also appear in this print version.**

Copyright© (2019) by the European Association of Geoscientists & Engineers (EAGE)  
All rights reserved.

Printed with permission by Curran Associates, Inc. (2020)

For permission requests, please contact by the European Association of Geoscientists & Engineers (EAGE)  
at the address below.

European Association of Geoscientists & Engineers (EAGE)  
PO Box 59  
3990 DB Houten  
The Netherlands

Phone: +31 88 995 5055  
Fax: +31 30 634 3524

[eage@eage.org](mailto:eage@eage.org)

**Additional copies of this publication are available from:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571 USA  
Phone: 845-758-0400  
Fax: 845-758-2633  
Email: [curran@proceedings.com](mailto:curran@proceedings.com)  
Web: [www.proceedings.com](http://www.proceedings.com)

# TABLE OF CONTENTS

SYSTEM OF SEISMIC ACOUSTIC MONITORING OF IMPORTANT OBJECTS .....	1
<i>A. Lukiyanchuk, P. Savkov, I. Pampukha, I. Syniavska, A. Dubinetskiy</i>	
THE RESULTS OF GRAVIMETRIC MONITORING ON THE WORKED-OUT POTASSIUM SALT DEPOSIT IN THE PRECARPATHIAN REGION .....	6
<i>S.G. Anikeyev, E.D. Kuzmenko, S.M. Bagriy, B.B. Hablovskiy, U.O. Dzoba</i>	
CREATION OF ENVIRONMENTAL MONITORING SYSTEM ON THE BASIS OF GEOINFORMATION PLATFORM.....	11
<i>O.P. Fedchenko, I.V. Tolok, I.K. Syniavska, I.V. Pampukha, R.V. Pysarenko</i>	
DEVELOPMENT OF THE COMPUTER DATA BANK CONCEPT OF NEOTECTONIC AND EXOGENOUS PROCESSES TO MONITOR ECO-LOGICAL STATE OF THE ENVIRONMENT (BY THE EXAMPLE OF THE CARPATHIAN FOLD BELT).....	17
<i>A. Fedechko, A. Popliuiko, M. Medvid, O. Ihnatiuk, N. Bronitska</i>	
RISK MANAGEMENT IN SEISMIC HAZARD ZONES ON THE BASIS OF CALCULATIONS OF STRESS USING ACOUSTO-ELASTIC CORRELATIONS .....	22
<i>H.H. Guliyev, G.M. Efendiyev, K.K. Aghayeva, I.A. Piriverdiyev</i>	
PROGNOSTIC MODEL OF MINERAL RESOURCES DEVELOPMENT IN UKRAINE .....	27
<i>L. Horoshkova, V. Volkov, Ie. Khlobystov</i>	
POTENTIAL OF MINING WASTE RECYCLING IN UKRAINE.....	32
<i>O. Hrinchenko, O. Yushin</i>	
THE MAIN APPROACHES OF LANDSLIDES CLASSIFICATION AND MODELING OF THEIR IMPACT ON INFRASTRUCTURE .....	37
<i>O. Ivanik, V. Shevchuk, M. Lavrenyuk, D. Kravchenko</i>	
DEVELOPMENT A PERMEABLE REACTIVE BARRIER FOR IMPROVEMENT OF ECOLOGY STATUS OF ZHOVTY VODY CITY .....	43
<i>B. Kornilovych, L. Spasonova, I. Kovalchuk, Y. Koshyk</i>	
RECONSTRUCTION OF PALEO STRESS FIELDS ON HUAI KHOK GOLD DEPOSIT (LAOS) .....	48
<i>D. Kravchenko, A. Drozdova, R. Chaika</i>	
TERRAIN ELEVATION CHANGES BY RADAR SATELLITE IMAGES INTERPRETATION AS A COMPONENT OF GEO-ENVIRONMENTAL MONITORING.....	53
<i>T. Kril, S. Shekhunova</i>	
ASSESSMENT OF THE ROCK MASS DEFORMATIONS IN THE INFLUENCE ZONE OF KHOTIN MINE FIELD OF KALUSH SALT MINE (PRECARPATHIAN AREA).....	58
<i>E.D. Kuzmenko, S.M. Bagriy, U.O. Dzoba, V.V. Kostiv, V.Yu. Maksymchuk</i>	
MONITORING OF PILE FOUNDATION ENGINEERING IN DENSE URBAN DEVELOPMENT CONDITIONS ON LANDSLIDE HAZARDOUS SITE .....	63
<i>N. Marienkov, K. Babik, Y. Bolotov, V. Dunin</i>	
MUNICIPAL WASTE AS A FACTOR OF NEGATIVE IMPACT ON THE ENVIRONMENT: FACTS, PROBLEMS, PROPOSITIONS.....	68
<i>R. Melnyk, M. Kravchenko</i>	

MONITORING RESEARCH OF GEOLOGICAL ENVIRONMENT IN TARAS SHEVCHENKO NATIONAL UNIVERSITY OF KYIV.....	73
<i>V. Mykhailov, I. Bezrodna, O. Ivanik</i>	
QITIANLINGITE - A NEW MINERAL FROM THE GRANITE PEGMATITES OF THE VOLODARSK-VOLYN DEPOSIT.....	78
<i>Eu. Naumenko, A. Andreev, S. Shnyukov</i>	
ECOLOGICAL AND MONITORING STUDIES OF OIL PRODUCTION TERRITORIES AND POSSIBILITY OF THEIR USE IN RECREATION.....	83
<i>N. Pobihun, Y. Korobeinykova, O. Pobihun, I. Iuras</i>	
STRUCTURE OF AN AUTOMATED GEOINFORMATION MONITORING SYSTEM FOR THE DECISION-MAKING SUPPORT IN EMERGENCY SITUATIONS.....	88
<i>B. Popkov, M. Okhramovych, M. Nikiforov, V. Loza, V. Savran</i>	
MODELLING OF THE LATE PLEISTOCENE CLIMATIC CHANGES IN THE BUKOVYNA AREA BASED ON QUANTITATIVE RECONSTRUCTION METHODOLOGIES AND PALYNOLOGICAL DATA FROM GEOARCHAEOLOGICAL SITES.....	93
<i>Ye. Rohozin, T. Yurchenko, N. Gerasimenko</i>	
MONITORING AND MODELING OF DANGEROUS GEOLOGICAL PROCESSES IN UKRAINE.....	98
<i>G.I. Rudko</i>	
GEOLOGICAL-STRUCTURAL-THERMO-ATMOGEOCHEMICAL TECHNOLOGY FOR QUICK PREDICTION AND MONITORING OF DANGEROUS GEOLOGICAL PROCESSES AND PHENOMENA IN THE TERRITORY OF UKRAINE.....	104
<i>I.D. Bagriy, N.V. Maslun, U.Z. Naumenko, D.M. Bozhezha, S.D. Zubal</i>	
NEW TECHNOLOGY FOR EXPLORATION OF HYDROGEN ACCUMULATIONS AND FORECAST OF GEODYNAMIC PHENOMENA.....	110
<i>I.D. Bagriy, S.O. Kuzmenko, U.Z. Naumenko, S.D. Zubal</i>	
REGULATORY FACTORS OF GEOLOGICAL PROCESSES AND EVENTS IN THE CENOZOIC BASIN OF THE CARPATHIAN-BLACK SEA SEGMENT OF TETHYS.....	114
<i>P. Gozyk, O. Ivanik, N. Maslun, M. Ivanik, N. Zhabina, G. Kliushyna, Z. Voizizkiy, I. Suprun</i>	
MONITORING OF THE ECOLOGICAL STATUS OF THE TERRITORIES OF DEVELOPMENT OF POTASSIUM SALT DEPOSITS AND ESTABLISHING THE METOD FOR MINIMIZING ECOLOGICAL RISKS.....	119
<i>Y. Khomyn, O. Maniuk, M. Maniuk, H. Horvanko, N. Khovanets</i>	
PROCESSING METHODS OF GEOPHYSICAL SIGNAL DURING MONITORING OF TECHNOGENIC PHENOMENA.....	124
<i>I.V. Korniienko, O.I. Liashchuk, I.M. Sashchuk, V.K. Zhukovsky, L.I. Kolesnykov</i>	
GEOGRAPHIC INFORMATION SYSTEMS IN GEOLOGICAL MONITORING DURING THE CONSTRUCTION OF URBAN UNDERGROUND STRUCTURES.....	129
<i>E. Kulikova, A. Ivannikov</i>	
GEODYNAMIC CONDITIONS OF NATURAL HAZARDS WITHIN MIDDLE DNIEPER REGION (BASED ON STRUCTURAL-MORPHOMETRIC ANALYSIS).....	134
<i>V.V. Shevchuk, O.M. Ivanik, L.V. Tustanovska</i>	

THE COMPARISON OF RANDOM FIELDS WITH CIRCULAR AND WHITTLE-MATERN CORRELATION FUNCTIONS BY STATISTICAL SIMULATION IN THE GEOPHYSICS PROBLEM OF ENVIRONMENT MONITORING .....	139
<i>Z. Vyzhva, V. Demidov, A. Vyzhva</i>	
MONITORING OF GEODYNAMIC PROCESSES IN THE DEVELOPMENT OF HYDROCARBON DEPOSITS.....	144
<i>V. Zhiriy, N. Goptarova, G. Zhuchenko, G. Gorvanko, V. Maniuk</i>	
ALGORITHM DEVELOPMENT FOR QUANTITATIVE ASSESSMENT OF RISKS OF GAS TRANSPORTATION PROCESS BY MAIN GAS PIPELINES.....	149
<i>V.M. Maniuk, O.R. Maniuk, M.I. Maniuk, M.I. Medvid</i>	
MONITORING OF HAZARDOUS GEOLOGICAL PROCESSES AS A TOOL FOR RISKS MINIMIZATION ON POST-MINING AREAS IN SOLOTVYNO (TRANSCARPATHIAN REGION, UKRAINE).....	154
<i>S.B. Shekhunova, M.V. Aleksieienkova, S.D. Meijer, S.M. Stadnichenko, E.O. Yakovlev</i>	
DETRITAL ZIRCON AND MONAZITE AS A TOOL FOR RETROSPECTIVE MONITORING OF THE EARTH'S CONTINENTAL CRUST EVOLUTION: CURRENT PROBLEMS AND TASKS .....	159
<i>S.E. Shnyukov, O.V. Andreev, I.I. Lazareva, E.T. Tegkaev, A.G. Aleksieienko</i>	
Land Surface Displacement Study for Kryvyi Rih Mining Area using Radar Interferometry Time Series Analysis .....	164
<i>S. Stankevich, I. Piestova, O. Titarenko, V. Filipobich, T. Dudar, M. Svideniuk</i>	
HYDROGEOLOGICAL CONDITIONS AS A DETERMINING FACTOR IN HYDROCARBON POLLUTION ELIMINATION TECHNOLOGY .....	170
<i>I. Udalov, A. Kononenko, V. Petik, V. Socolov</i>	
RESEARCH OF VERTICAL CHANGES IN ZAKARPATYA, KIEV AND CHERKASSY REGIONS USING THE METHOD OF RADAR INTERFEROMETRY .....	175
<i>E. Uglitskih</i>	
NUMERICAL MODELLING OF SALT TECTONICS WITH DUCTILE-BRITTLE DEFORMATIONS OF SALT OVERBURDEN.....	180
<i>D.B. Vengrovitch, S.M. Stovba</i>	
CREATION OF A GEO-INFORMATION ANALYTIC COMPLEX FOR ECOLOGICAL MONITORING TASKS.....	185
<i>V. Zatserkovnyi, A. Zinchenko, T. Muzhanova, B. Popkov, D. Romanukha</i>	
EXPERIMENTS WITH AVERAGING TRANSFORMATION OF GRAVITY FIELD (ON THE EXAMPLE OF THE SOUTH EAST UKRAINIAN CARPATHIANS).....	190
<i>S.G. Anikeyev, S.E. Rozlovska, B.B. Hablovskiy, M.V. Shtogryn, M.O. Karpenko</i>	
MULTIPLE REGRESSIONS AND ANN TECHNIQUES TO PREDICT PERMEABILITY FROM PORE STRUCTURE FOR TERRIGENOUS RESERVOIRS, WEST-SHEBELYNSKA AREA .....	196
<i>V. Antoniuk, I. Bezrodna, O. Petrokushyn</i>	
MODERN SEISMICITY OF PODILLYA .....	201
<i>M. Baryshnikova, I. Tsiupa</i>	
COMPARATIVE ANALYSIS OF ACOUSTIC ANISOTROPY IN ROCKS FROM PISHCHANKA IRON-ORE STRUCTURE .....	207
<i>I. Bezrodna, D. Bezrodnyi, V. Svystov</i>	

EVALUATION OF CS-137 CONCENTRATION IN ONE OF THE LOCATION OF FINAL DEPOSITION ACCORDING TO GEOPHYSICAL EXPLORATION .....	212
<i>M. Danylova</i>	
MAGNETOMINERALOGICAL SUBSTANTIATION OF MAGNETIZATION OF THE ROCKS OF THE LOWER CRUST AND UPPER MANTLE.....	217
<i>V. Drukarenko, M. Orlyuk, O. Shestopalova</i>	
RADIOECOLOGICAL MONITORING OF LOCAL SOURCES OF EXISTING AND POTENTIAL RADIOACTIVE CONTAMINATION USING GEOINFORMATIONAL SYSTM .....	222
<i>O. Fedchenko, I. Syniavska, N. Levinskova, P. Savkov, V. Savkova</i>	
PETROPHYSICAL MODEL FOR POROSITY DETERMINATION OF COLLECTORS WITH DIFFERENT CONTENT OF CLAY MATERIALS ACCORDING TO THE ACOUSTICAL AND RADIOACTIVE RESEARCHES .....	227
<i>D.D. Fedoryshyn, V.V. Fedoriv, R.O. Marynchak</i>	
THE PERSPECTIVES FOR OIL AND GAS CONTENT OF INDIVIDUAL LITHOLOGIC-STRATIGRAPHIC STRATA OF THE RUDAVETS OIL FIELD .....	232
<i>D.D. Fedoryshyn, O.M. Trubenko, S.D. Fedoryshyn, R.O. Marynchak</i>	
CORRELATION AND CLUSTER ANALYSIS OF PRINCIPAL GEOLOGICAL PARAMETERS OF GIANT HYDROCARBON FIELDS .....	237
<i>G.N. Gahramanov, N.R. Narimanov, M.S. Babayev, S. Shpyrko, M.T. Babayeva</i>	
LOCATION OF GAS-SATURATED OBJECTS OF UNCONVENTIONAL TYPES IN THE WELL SECTIONS BY THE WELL-LOGGING DATA .....	242
<i>O. Karpenko, V. Mykhailov, I. Baysarovych</i>	
PREDICTION OF PERMEABILITY USING PORE NETWORK MODELS CONSTRUCTED FROM THIN SECTION IMAGE OF RESERVOIR ROCK SAMPLE.....	247
<i>I. Kurovets, A. Shyra, Y. Shpot, S. Kurovets, V. Kurovets</i>	
THE CHEMICAL COMPOSITION OF THE THORIUM ORTOSILICATES FROM ALBITITES OF THE NOVOOLEKSIIVKA THORIUM-URANIUM OCCURRENCE (UKRAINIAN SHIELD) .....	252
<i>I. Mihalchenko, O. Andreev, S. Shnyukov</i>	
THE METHOD TO RESEARCH EQUIVALENT SOLUTIONS ZONES FOR INVERSE PROBLEM OF WELL LOGGING ELECTROMETRY .....	258
<i>M. Myrontsov</i>	
INTEGRATED MODELING OF PETROPHYSICAL PARAMETERS TO DETERMINE THE MINERALOGICAL COMPOSITION OF THE CRUST .....	263
<i>I. Pap, I. Virshylo</i>	
REPEATED GEOPHYSICAL RESEARCHES OF HAZARDOUS GEOECOLOGICAL PROCESSES NEAR MINING WASTE STORAGE FACILITIES OF SOUTHERN KRYVBAS .....	268
<i>P. Pihulevskiy, V. Svystun, O. Tiapkin, A. Tolkunov, S. Slobodianiuk</i>	
EVALUATION OF THE INFLUENCE OF GEOLOGICAL-TECHNICAL FACTORS ON THE DURABILITY OF CASING COLUMNS IN OIL AND GAS WELLS.....	273
<i>V.Ya. Femiak, I.M. Kovbasiuk, O.B. Martsynkiv, Ya.M. Femiak, I.I. Vytvytskyy</i>	
MODERN DEFORMATION AND NEWEST MOVEMENTS OF THE EARTH'S SURFACE ON THE TERRITORY OF UKRALNE.....	278
<i>M. Orlyuk, M. Ishchenko</i>	

SEISMIC OBSERVATIONS IN THE LOCATION OF THE STEBNYK POTASSIUM SALT DEPOSIT .....	283
<i>I. Sapuzhak, S. Verbitskyj</i>	
NONLINEAR WAVES PROPAGATION IN EARTH'S CRUST AS PRESTRESSED CHAINS OF BLOCKS .....	288
<i>D.B. Vengrovich</i>	
HYDRAULIC FRACTURE CRACK PROPAGATION MODELING IN MULTI-COMPONENT NONELASTIC GEOLOGICAL MEDIA .....	293
<i>S. Vyzhva, B. Maslov, I. Onyshchuk, O. Kozionova</i>	
THE MAPPING OF SUBMERGED (FLOODING) LANDS BY GEOPHYSICAL METHODS .....	298
<i>S. Vyzhva, V. Onyshchuk, I. Onyshchuk, N. Reva, O. Shabatura</i>	
APPLICATION OF TWO-PARAMETER CLASSIFICATION OF SEISMIC ATTRIBUTES FOR PREDICTION OF HYDROCARBON DEPOSITS IN THE DNIEPER-DONETSK DEPRESSION .....	303
<i>S. Vyzhva, I. Solovyov, V. Kruhlyk, G. Lisny</i>	
GEOSPATIAL MODELLING AND RESERVES ESTIMATION OF WADI AL SHATI IRON ORE DEPOSIT (LIBYA).....	308
<i>M. Wadi, O. Ivanik</i>	
MONITORING AND ASSESSMENT OF IMPACT OF MUNICIPAL SOLID WASTE LANDFILLS ON THE SURFACE WATER QUALITY IN THE ADJACENT PONDS .....	313
<i>O.T. Azimov, Ye.M. Dorofey, O.M. Trofymchuk, I.V. Kuraeva, K.S. Zlobina, S.P. Karmazynenko</i>	
LONG-TERM DYNAMICS AND CURRENT TRENDS IN FLUCTUATIONS OF THE FLOW CHARACTERISTICS OF THE SIVERSKYI DONETS RIVER BASIN.....	319
<i>H. Bolbot, V. Grebin</i>	
USING THE RASTER CALCULATOR TOOL TO APPRAISE RIVERBED ELEVATION CHANGES NEARBY HYDROTECHNICAL OBJECTS ON ALLUVIAL RIVERS.....	324
<i>M. Habel, O. Obodovskiy, D. Szatten, Z. Babinski, Z. Rozlach, O. Pochaievets</i>	
MULTIPURPOSE CLASSIFICATION OF THE SUBSYSTEMS OF GEOLOGICAL-ECOLOGICAL SYSTEM OF THE BLACK SEA BOTTOM DEPOSITS .....	329
<i>V. Iemelianov</i>	
MODELING IN MONITORING SYSTEM OF UNDERGROUND HYDROSPHERE FOR TERRITORIES UNDER TECHNOGENIC PRESSURE .....	334
<i>O. Koshliakov, O. Dyniak, I. Koshliakova</i>	
THE PROBLEM OF DRINKING GROUNDWATER QUALITY WITHIN THE TATARBUNARY DISTRICT OF ODESA REGION .....	338
<i>O. Miedviedieva, O. Dyniak</i>	
LEGAL REGULATION OF GROUNDWATER EXTRACTION PROCESSES TO SUPPORT THE NEEDS OF MILITARY UNITS .....	343
<i>S. Pasika, D. Chomko, O. Opanasenko, D. Khomiakov, O. Skyba</i>	
MONITORING OF THE STATE OF THE GEOLOGICAL ENVIRONMENT AND ANALYSIS OF THE OF SUBMARINE VOLCANISM IMPACT ON THE GEOECOLOGICAL CONDITIONS OF THE BLACK SEA DEEP SEA ZONE.....	348
<i>V. Iemelianov, O. Ivanik</i>	

ENVIRONMENTAL ASPECTS OF UKRAINIAN ENERGY SECTOR IN CONNECTION WITH TRANSITION TO LOW-CARBON DEVELOPMENT.....	353
<i>V. Okhariev, V. Trysnyuk</i>	
IMPROVEMENT OF STATISTICAL METHOD FOR ENVIRONMENTAL MONITORING DATASETS INTERPRETATION.....	358
<i>V. Okhariev</i>	
THE METHODOLOGICAL APPROACH TO THE DETERMINATION OF GEOLOGICAL RESERVES CHEMICAL COMPONENTS IN THE PRODUCED WATER OF OIL AND GAS FIELDS .....	363
<i>M. Reva, D. Chomko, F. Chomko</i>	
MONITORING SURFACE WATER STATUS USING AN INTEGRATED INDICATOR.....	368
<i>V.I. Zatserkovnyi, L.V. Plichko, T.M. Malik, O.Ye. Nikolaienko, I.V. Pampukha</i>	
VARIOGRAM ANALYSIS TO MEASURE THE SPATIAL STRUCTURE OF BRIOGEOCHEMICAL FIELD OF NORTHERN UKRAINE.....	373
<i>Yu. Tyutyunnik, O. Shabatura</i>	
CLIMATE MONITORING DATA APPLICATION IN THE TECHNOLOGICAL REGIONAL ASSESSMENT SCHEME AND SIMULATION OF WATER FLOW.....	378
<i>S. Snizhko, O. Shevchenko, I. Didovets, O. Obodovskiy, O. Pochaievets</i>	
THE ECOLOGICAL AND HYDROGEOLOGICAL FACTORS OF DESTABILIZATION OF DRINKING GROUNDWATER QUALITY WITHIN EASTERN UKRAINE AND THE MEASURES FOR ITS ENVIRONMENTALLY SAFE USE .....	383
<i>I.V. Udalov, S.M. Levoniuk, V.V. Samoilov</i>	
THE STUDY OF THE QUALITY STATUS OF SURFACE WATER OF THE DESNA RIVER USING GEOINFORMATION TECHNOLOGIES AND METHODS OF REMOTE SENSING OF THE EARTH.....	388
<i>V. Zatserkovnyi, L. Plichko, O. Storublyov</i>	
THE METHOD TO SOLVE THE INVERSE PROBLEM OF LATERAL LOGGING SOUNDING AND LATERAL LOGGING .....	394
<i>M. Myrontsov</i>	
OIL AND GAS PERSPECTIVES OF ATESHGAH STRUCTURE (BAKU ARCHIPELAGO) IN THE CONTEXT OF ITS GEOLOGICAL HISTORY.....	399
<i>V.Sh. Gurbanov, M.S. Babayev, N.R. Narimanov, S. Shpyrko</i>	
THE USE OF GROUND PENETRATING RADAR TO IDENTIFY THE BURIED STRUCTURE IN THE CHURCH OF ST. ELIAS - BOHDAN KHMELNYTSKY BURIAL VAULT .....	404
<i>K. Bondar, R. Khomenko, A. Chernov</i>	
DEVELOPMENT OF ALGORITHM FOR CALCULATING EXPOSITION VALUE OF CO .....	409
<i>O.I. Bondar, P.I. Trofymenko, N.V. Trofimenko, V.I. Zatserkovnyi, F.I. Borysov</i>	
MORPHOSTRUCTURAL POSITION OF “MEZHRYTSKYI CAPE”: GEOARCHAEOLOGICAL ASPECT .....	414
<i>S. Bortnyk, O. Kovtoniuk, N. Pohorilchuk</i>	
AN ANALYTICAL ASSESSMENT OF MECHANICAL STABILITY CONDITIONS FOR NATURAL SOILS USING CORE DATA FROM GUSAR-DIVICHI TECTONIC ZONE.....	419
<i>H. Guliyev, A. Hasanov</i>	



MAPPING OF THE SOIL MAGNETIC SUSCEPTIBILITY FOR THE EROSION PROCESSES MODELING.....	424
<i>O. Kruglov, O. Menshov</i>	
PLISNESK ARCHEOLOGICAL COMPLEX. SOME RESULTS OF MAGNETOMETRY PROSPECTION .....	429
<i>R. Kuderavets, I. Chobotok, O. Menshov, V. Shelep, A. Fylypchuk</i>	
WIND POWER STATIONS CONSTRUCTION IN THE MOUNTAIN ENVIRONMENT. PRELIMINARY RESULTS OF COMBINING SOIL MAGNETIC AND HYDROGEOLOGICAL METHODS FOR THE RISK ASSESSMENT IN UKRAINE.....	434
<i>O. Menshov, O. Shevchenko, R. Kuderavets</i>	
RISKS OF DEPLETION OF PHYTODIVERSITY OF HYDROPOWER INSTALLATION INFLUENCE ZONES, INTRODUCTION OF THEIR INTEGRATED ECO-MONITORING AND DEVELOPMENT OF EFFECTIVE MEASURES TO MINIMIZE THE NEGATIVE IMPACT ON THE SURROUNDING PHYTOSYSTEMS .....	439
<i>V. Novosad, O. Scherbakova, K. Novosad</i>	
INFLUENCE OF REDOX CONDITIONS ON THE TRANSFORMATION OF MAGNETIC PROPERTIES OF MAGNETITE NANOPARTICLES.....	444
<i>V. Ponomar, T. Antonenko, M. Bahmut, O. Vyshnevskiy, O. Brik</i>	
RECONSTRUCTION OF SURVIVAL CURVES IN THE STUDY OF SOFT-BODY ORGANISMS' NATURE AND LIVING CONDITIONS FROM UPPER VENDIAN DEPOSITS IN THE MIDDLE DNIESTER AREA.....	449
<i>A. Mienasova</i>	
MONITORING OF THE MICROBIOLOGICAL CONDITION OF VIRGIN CHERNOZEM UNDER DIFFERENT MANAGEMENT .....	454
<i>O. Tonkha, O. Pikovska, A. Balaev, G. Kovalyshyna, V. Zavgorodniy, V. Kovalenko</i>	
ORGANIC CARBON CONTENT IN THE OLD-ARABLE SOILS OF THE UKRAINIAN POLISSIA FOREST ECOSYSTEMS .....	459
<i>S.P. Raspopina, V.V. Degtyarjov, P.I. Trofymenko, N.V. Trofimenko, V.I. Zatserkovnyi</i>	
LAND CONVERSION INFLUENCE MONITORING FOR CO .....	464
<i>P.I. Trofymenko, V.V. Lyashenko, O.A. Tymoshchuk, N.V. Trofimenko</i>	
AGRO-ENVIRONMENTAL MONITORING OF THE APPLICATION OF MINERAL AND ORGANIC FERTILIZERS ON DRIED POLISH TERRACE SOILS .....	469
<i>V.I. Zatserkovnyi, N.V. Tsuman, P.I. Trofymenko, O.I. Bondar, A.D. Balayev</i>	
USAGE OF GIS DURING THE MONITORING OF WASTES UTILIZATION AND SAVING .....	474
<i>R. Yu. Koltsov, V.I. Zatserkovnyi, A.S. Shcheniavskiy, I.B. Chepkov, O. Miroshnichenko</i>	
GROUND AND SPACE COMPLEX MONITORING OF NATURAL AND ANTHROPOGENIC PHENOMENA AND DISASTERS .....	479
<i>O. Liashchuk, Yu. Andrushchenko, P. Topolnytskyi, A. Poikhalo, V. Mamariev</i>	
GEOINFORMATION SYSTEM OF MONITORING AND DECISION MAKING SUPPORT IN THE CONDITIONS OF HYBRIDIZATION OF MODERN WARFARE.....	484
<i>V. Loza, M. Kubiavka, M. Nikiforov, V. Zlatnikov, O. Prylipko</i>	
ESTIMATION OF INFORMATIVE PARAMETERS OF SIGNALS OF MORTAR EXPLOSIONS.....	489
<i>A.A. Lukiyanchuk, P.A. Savkov, I.V. Pampukha, H.A. Pidnebesna, O.B. Popkov</i>	

THE DEEP LEARNING APPROACH FOR PAN SHARPENING ASTER SWIR DATA .....	494
<i>R. Okhrimchuk, I. Tishaiev, V. Zatserkovnyi</i>	
DETECTION OF DEFORESTATION AREAS USING SATELLITE IMAGES .....	499
<i>V. Romaniuk, D. Kukhtar, L. Dorosh, Ye. Ripetskyi, S. Serediuk</i>	
USE OF REMOTE FIELD MONITORING DATA TO PREDICT YIELDS AND RESOURCE MANAGEMENT WHEN GROWING WINTER CROPS .....	504
<i>O.A. Furmanets, O.I. Bondar, S.I. Veremeenko, P.I. Trofymenko, D.P. Trofymenko</i>	
APPLICATION OF DECOMPOSITION METHODS FOR SOLVING THE PROBLEMS OF PROCESSING OF GEOINFORMATION SYSTEMS' INFORMATION.....	510
<i>V. Khilenko, I. Butko, V. Ternavsjka</i>	
ASSESS THE BENEFITS OF USING UAVs FOR MONITORING OBJECTS OF MILITARY DESTINATION .....	515
<i>I. Pampukha, V. Zatserkovnyi, P. Savkov, M. Okhramovych, V. Shevchenko</i>	
REMOTE ASSESSMENT OF EARTH'S SURFACE DEFORMATION DYNAMICS ABOVE SOLOTVYNO SALT MINE.....	520
<i>O. Tomchenko, P. Zhyrnov, I. Pidlisetska, O. Mykolaenko</i>	
CREATION OF THE GEOLOGICAL VIRTUAL GOVORUHA DOME OUTCROP (GALINDEZ ISLAND, WESTERN ANTARTICA) .....	525
<i>I. Savchyn, Y. Shylo, I. Bubniak, A. Bubniak</i>	
IMPROVEMENT OF APPROACHES FOR MONITORING OF EXOGENOUS GEOLOGICAL PROCESSES WITH USING OF SATELLITE INTERFEROMETRY METHODS.....	530
<i>V. Stasyuk, M. Pakshyn, I. Liaska, S. Yanchevskyi</i>	
THE IMPROVEMENT OF THE SYSTEM OF ECOLOGICAL MONITORING OF THE ENVIRONMENT THROUGH THE APPLICATION OF REMOTELY PILOTED AIRCRAFT SYSTEMS.....	535
<i>V.M. Trysnyuk, K.V. Smetanin, Y.V. Holowan, O.L. Kashchishin, K.O. Radlowska</i>	
DETERMINATION OF THE CONTENT OF CHEMICAL ELEMENTS IN SAMPLES OF MINERALS AND ROCKS BY THE FREQUENCY-RESONANCE METHOD OF SATELLITE IMAGES AND PHOTOGRAPHS PROCESSING.....	540
<i>M. Yakymchuk, I. Korchagin</i>	
SPATIAL ANALYSIS OF CROP YIELD USING OF NORMALIZED DIFFERENCE VEGETATION INDICES.....	545
<i>V.I. Zatserkovnyi, O.Ye. Nikolaienko, S.G. Volkova, Y.A. Krucheniuk, I.V. Pampukha</i>	
UPDATING OF CARTOGRAPHIC MATERIALS USING UNMANNED AERIAL VEHICLE .....	550
<i>V. Zatserkovnyi, I. Pampukha, S. Kolachov, G. Zyrov, V. Lukanovskiy</i>	
ENVIRONMENTAL ASPECTS OF NATIONAL NATURAL PARKS OF UKRAINE AND DETERMINATION OF THE STATUS OF PROTECTIVE ZONES IN THE SYSTEM OF REGISTRATION AND ACCOUNTING .....	555
<i>P.D. Krelshhteyn, L.V. Tustanovska, I.S. Bugaenko</i>	
GEOLOGICAL RESEARCH DURING 24-TH UKRAINIAN ANTARCTIC EXPEDITION, JANUARY - APRIL 2019: GRAHAM COAST OF ANTARCTIC PENINSULA AND ADJACENT ISLANDS.....	560
<i>O. Mytrokhyn, V. Bakhmutov</i>	

**Author Index**