

V International Scientific Conference on Regional Problems of Earth Remote Sensing (RPERS 2018)

E3S Web of Conferences Volume 75 (2019)

Krasnoyarsk City, Russia
11 - 14 September 2018

Editors:

**G.M. Tsibulsky
M.V. Noskov
E.A. Lupyan
L.G. Sverdlik**

**A.K. Sagatelian
V.I. Kharuk
V.B. Kashkin**

ISBN: 978-1-5108-7907-2

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.

This work is licensed under a Creative Commons Attribution 4.0 International License. License details:
<http://creativecommons.org/licenses/by/4.0/>.

No changes have been made to the content of these proceedings. There may be changes to pagination and minor adjustments for aesthetics.

Printed by Curran Associates, Inc. (2019)

For additional information, please contact EDP Sciences – Web of Conferences at the address below.

EDP Sciences – Web of Conferences
17, Avenue du Hoggar
Parc d'Activité de Courtabœuf
BP 112
F-91944 Les Ulis Cedex A
France

Phone: +33 (0) 1 69 18 75 75

Fax: +33 (0) 1 69 28 84 91

contact-edps@webofconferences.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
Web: www.proceedings.com

TABLE OF CONTENTS

THE DYNAMIC MODEL OF AGRICULTURAL LAND STRUCTURE ON THE SPACE IMAGES IN THE PRECISION AGRICULTURE TASKS.....	1
<i>Brezhnev Ruslan V., Maglinets Yuriy A.</i>	
RESEARCH OF EFFICIENCY OF THE STATISTICAL NON-PARAMETRIC PATTERN RECOGNITION MODELS FOR FOREST LAND CLASSIFICATION.....	7
<i>Guk Aleksander P., Evstratova Larisa G.</i>	
REMOTE SENSING METHODS FOR THE RETRIEVAL OF INVENTORY AND BIOPRODUCTIVITY PARAMETERS OF FORESTS USING HIGH RESOLUTION SATELLITE IMAGES.....	12
<i>Dmitriev Egor, Kozoderov Vladimir, Donskoy Sergey, Melnik Petr, Sokolov Anton</i>	
NUMERICAL ANALYSIS FOR PROBLEMS OF REMOTE SENSING WITH RANDOM INPUT DATA.....	18
<i>Dobronets Boris, Popova Olga</i>	
MULTI-VERSION APPROACH TO IMPROVE THE RELIABILITY OF PROCESSING DATA OF THE EARTH REMOTE SENSING IN THE REAL-TIME	24
<i>Saramud Mikhail V., Kovalev Igor V., Losev Vasilii V., Petrosyan Mariam O., Kovalev Dmitriy I.</i>	
THE TECHNOLOGY TO IDENTIFY FIREBREAK PLOWING OBJECTS BASED ON THE SATELLITE DATA OF THE EARTH REMOTE SENSING.....	28
<i>Maltsev Evgenii A., Maglinets Yuri A., Tsibulskii Gennady M.</i>	
FOREST VEGETATION INTERACTION WITH L-BAND SATELLITE SIGNALS.....	34
<i>Podoprigora Vladimir, Sorokin Anatoly</i>	
DYNAMIC TEXTURE RECOGNITION UNDER ADVERSE LIGHTING AND WEATHER CONDITIONS FOR OUTDOOR ENVIRONMENTS	38
<i>Pyataeva Anna</i>	
SEMI-SUPERVISED LEARNING THROUGH HIERARCHICAL CLUSTERING FOR INTERACTIVE AEROSPACE IMAGE ANALYSIS	44
<i>Rylov Sergey</i>	
EXTENSION OF TRAINING SET USING MEAN SHIFT PROCEDURE FOR AEROSPACE IMAGES CLASSIFICATION.....	50
<i>Sinyavskiy Yuriy N., Melnikov Pavel V., Pestunov Igor A.</i>	
FOREST DIELECTRIC CHARACTERISTICS FOR NAVIGATION SATELLITES SIGNALS IN L 1 RANGE.....	55
<i>Sorokin Anatoly, Podoprigora Vladimir, Ponomarev Evgenii</i>	
APPLICATION OF PARALLEL VERSION TWO-DIMENSIONAL FAST FOURIER TRANSFORM ALGORITHM, ANALOG OF THE COOLEY-TUKEY ALGORITHM, FOR DIGITAL IMAGE PROCESSING OF SATELLITE DATA	61
<i>Noskov Mikhail, Tutatchikov Valeriy, Lapchik Mikhail, Ragulina Marina, Yamskikh Tatiana</i>	
SATELLITE IMAGERY OF LENGTHY TERRITORIES WITH COMPLEX CONFIGURATION WITH THE ACCOUNT OF ATTITUDE AND POSITIONING ERRORS.....	67
<i>Mozgovoy Dmitriy, Svinarenko Dmitriy, Tsarev Roman, Yamskikh Tatiana</i>	
SIMULATED SATELLITE IMAGERY OF LENGTHY TERRITORIES WITH COMPLEX CONFIGURATION	73
<i>Mozgovoy Dmitriy, Svinarenko Dmitriy, Tsarev Roman, Yamskikh Tatiana</i>	
NON-PARAMETRIC APPROACH FOR PRELIMINARY PROCESSING OF EARTH REMOTE SENSING DATA	79
<i>Maksim A Denisov, Ekaterina A Chzhan, Anna A Korneeva</i>	
EXPERIENCE OF THE APPLICATION OF REMOTE SENSING DATA IN THE PROBLEMS OF GEO-ECOLOGICAL MONITORING OF THE COAL MINING AREA	85
<i>Giniyatullina Olga, Schastlivtsev Evgeniy, Kovalev Vladimir</i>	
USE OF REMOTE EARTH SENSING FOR AGRO-ECOLOGICAL ESTIMATION OF SOIL COVER STRUCTURES AND OPTIMISATION OF AGRICULTURE IN THE FOREST-STEPPE ZONE OF THE KRASNOYARSK TERRITORY	91
<i>Gorbunova Yuliya V., Demyanenko Tatyana N., Chuprova Valentina V.</i>	
MANAGEMENT OF THE RIVER VEDI ANNUAL RUNOFF	97
<i>Margaryan Varduhi, Raevich Ksenia</i>	

ANOMALOUS ATMOSPHERIC TEMPERATURE PERTURBATIONS OVER SEISMICALLY ACTIVE REGIONS OF EUROPE ACCORDING TO SATELLITE MEASUREMENTS	102
<i>Sverdlik Leonid, Imashev Sanjar, Yamskikh Tatiana</i>	
ESTIMATION OF FOREST COVER RESTORATION DAMAGED BY SIBERIAN SILKMOTH USING REMOTE SENSING DATA AND MAPS	108
<i>Fedotova Elena</i>	
STUDYING THE THERMAL FIELD DYNAMICS IN THE FOREST HARVESTING SITES	114
<i>Khamedov Vladimir</i>	
ANALYSIS OF GRACE SATELLITE MEASUREMENTS OVER SEISMICALLY ACTIVE AREAS OF THE STRONGEST EARTHQUAKES	121
<i>Simonov Konstantin V., Kashkin Valentin B., Rubleva Tatyana V., Krasnoshekov Konstantin V.</i>	
ANTARCTIC OZONE HOLE AS A NATURAL GEOPHYSICAL OBJECT	126
<i>Dergunov Alexander V., Kashkin Valentin B., Rubleva Tatyana V., Romanov Alexey A., Odintsov Roman V.</i>	
FRAMEWORK OF CLOUD WEB SERVICES FOR PROCESSING REMOTE SENSING DATA	132
<i>Buchnev Alexey, Kim Pavel, Pyatkin Valery, Pyatkin Fedor, Rusin Evgeny</i>	
TECHNOLOGY OF 3D RELIEF MODELLING BASED ON DELAUNAY TRIANGULATION ALGORITHMS	138
<i>Andrey Gachenko, Alexey Khmelnov</i>	
COMPLEX FOR RECEPTION AND REAL TIME PROCESSING OF REMOTE SENSING DATA	144
<i>Yakubailik Oleg, Romas'ko Victor, Pavlichenko Evgeny</i>	
SOFTWARE FOR DATA VISUALIZATION IN THE SYSTEM OF REAL-TIME SATELLITE MONITORING	150
<i>Yakubailik Oleg, Kadochnikov Alexey, Tokarev Alexey</i>	
THE INTELLIGENT MANAGERIAL DECISION SUPPORT SYSTEM FOR AGRICULTURAL LAND EVALUATION	156
<i>Maglinets Yury, Raevich Ksenia, Tsibulsky Gennady</i>	
Author Index	