

Special Issue on “Advances in Geospatial Research of Coastal Environments”

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Source: Journal of Coastal Research, 102(sp1)

Published By: Coastal Education and Research Foundation

URL: <https://doi.org/10.2112/SI102-Editorial>

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EDITORIAL



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Special Issue on “Advances in Geospatial Research of Coastal Environments”

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ABSTRACT

Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T., 2020. Special Issue on “Advances in Geospatial Research of Coastal Environments”. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments*. *Journal of Coastal Research*, Special Issue No. 102, pp. vi-xiii. Coconut Creek (Florida), ISSN 0749-0208.

Geospatial research in the fields of remote sensing (RS), geospatial information system (GIS), global positioning system (GPS), digital photogrammetry (DP) has become essential to understanding the coastal environments. Thus, to create a multidisciplinary forum of discussion on recent advances in geospatial research of coastal environments, original research articles and literature review papers addressing advances in geospatial research of the coastal environments have been considered for the publication in this special issue. Finally, a total of 40 papers was published in this special issue. In this editorial paper, we review the previous special issue related to geospatial research of coastal environments and summarize the papers published in this special issue.

ADDITIONAL INDEX WORDS: Remote sensing, GIS, marine spatial planning, coastal environment.

INTRODUCTION

This special issue is designed for a multidisciplinary discussion on recent advances in geospatial research of coastal environments. The research area in this special issue covers all oceans on Earth. However, Yellow Sea (YS) and East China Sea (ECS) are widely used as research areas in most papers of this special issue, because a joint study between Korea and China is underway to come up with active countermeasures against the green, red and golden tides in the Yellow Sea and East China Sea.

Original research articles and literature review papers addressing advances in geospatial research of the coastal environments have been considered for the publication in this special issue, and finally a total of 40 papers was published in this special issue.

PREVIOUS SPECIAL ISSUE RELATED TO GEOSPATIAL RESEARCH OF COASTAL ENVIRONMENTS

The special issue on “advances in remote sensing and geoscience information systems of coastal environments” has been published in *Journal of Coastal Research* (Ryu *et al.*, 2019). In the special issue, a total of 52 papers have been published.

The detection and analysis of the green and golden tides in the Yellow Sea and the East China Sea have been performed (Chen

et al., 2019b; Kim *et al.*, 2019a; Liang *et al.*, 2019; Min *et al.*, 2019; Wang *et al.*, 2019) and the detection and prediction of the red tide have been studied (Kim *et al.*, 2019c; Liu *et al.*, 2019; Park *et al.*, 2019a; Shin *et al.*, 2019). And the environmental monitoring studies were also conducted from the OISST, ARGO, MODIS, Landsat, and TerraSAR-X images (Baek and Moon, 2019; Chen *et al.*, 2019a; Eom *et al.*, 2019; Hong *et al.*, 2019; Jeong *et al.*, 2019; Jung *et al.*, 2019; Lee *et al.*, 2019a; Li *et al.*, 2019; Ma *et al.*, 2019; Mu *et al.*, 2019; Sun *et al.*, 2019; Tong *et al.*, 2019; Qing, Hao, and Bao, 2019; Ren *et al.*, 2019b; Xiao, Zhang, and Qin, 2019; Zhang *et al.*, 2019a, 2019b).

The research topics of the oil spill, typhoon, flood, and nuclear radiation emergent have been carried out by using optical and SAR images (Bing *et al.*, 2019; Jin *et al.*, 2019; Kim and Moon, 2019; Park *et al.*, 2019b; Syifa *et al.*, 2019; Yang *et al.*, 2019). Moreover, the specific topics related to marine spatial planning have been studied (Achmad *et al.*, 2019; Bae *et al.*, 2019; Chu *et al.*, 2019; Chun and Lee, 2019; Cui *et al.*, 2019; Jang *et al.*, 2019; Kim *et al.*, 2019b; Kim, Baek, and Hwang, 2019; Ko and Lee, 2019; Koo *et al.*, 2019; Lee *et al.*, 2019b, 2019c, 2019d, 2019e; Oh *et al.*, 2019a, 2019b; Park, 2019; Park *et al.*, 2019c; Ren *et al.*, 2019a; Zhu *et al.*, 2019).

SUMMARY OF THIS SPECIAL ISSUE

The topic of this special issue is “advances in geospatial research of coastal environments”. This special issue was designed to deal with the advances in geospatial research of coastal environments. A total of 40 papers was published, and the topics of the papers are given as follows:

DOI: 10.2112/SI102-Editorial received 12 November 2020; accepted in revision 14 November 2020.

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Wang *et al.* (2020b) estimated and analyzed the nitrogen contents in the Yellow river estuary using GaoFen-1 satellite data. Wan and Ma (2020) applied the multi-scale spectral-spatial remote sensing classification method to coral reef habitats using a CNN-SVM approach. Li *et al.* (2020) used an LSTM neural network method for high-precision remote sensing water depth inversion of coral islands and reefs. Han and Lee (2020) proposed an efficient method to classify land and ocean areas via Sentinel-1 speckle noise reduction. Lee *et al.* (2020) analyzed a trend in marine water quality using environmental impact assessment data. Cho and Lee (2020) studied changes in coastal environment policy using text mining approach in South Korea. Zhu *et al.* (2020) performed a study on determining the sthumpf 2003 model parameters using multispectral (MS) shallow water bathymetry estimation. Choi, Kim, and Kim (2020) observed the changes in the distributions of zooplankton communities in a coastal lagoon and Kim, Kim, and Choi (2020b) also analyzed the effect of laver-farming on the distribution of copepod community in the west coast of Korea. Hakim *et al.* (2020) measured land subsidence in Jakarta, Indonesia using Sentinel-1 multi-temporal interferometry. Zhao *et al.* (2020a) proposed a method to detect ships in optical images using deep feature combined distance metric learning approach. Kim, Kim and Lee (2020) analyzed the characteristics of geological lineaments in the eastern coast of Korean peninsula. Kim, Lee, and Choi (2020) analyzed the topographic variations in coastal areas in the Riparian zone. Kim, Kim and Choi (2020a) proposed a management strategy for sustainable habitat utilization of coastal reclaimed areas in South Korea. Zhang *et al.* (2020) proposed an automatic method for sea ice drift retrieval using SAR images. Chun *et al.* (2020) observed diffusive methane emission from Holocene mud deposits. Baek, Jung and Kim (2020) detected oil spill areas, which occurred in Kerch strait in November 2007, using dual-polarized TerraSAR-X image and artificial neural network (ANN) and convolutional neural network (CNN) regression models. Yang *et al.* (2020) presented a preliminary approach for coastal image captioning, which describes salient semantic information of coastal images with accurate and meaningful sentences. Tai *et al.* (2020) showed a method to classify coastal images that possess noise. Park and Jang (2020) classified intertidal surface sediments using log-ratio transformation and a remote-sensed image having high spatial resolution. Niu and Lang (2020) had a study on a method for the ship matching among multi-source SAR images using CNN. Cao *et al.* (2020) classified aquatic vegetation in Ulanhsai lake using remote sensing approach. Choi *et al.* (2020) described the development of stratigraphic architectures on the Haeundae shallow sea area using high-resolution seismic stratigraphy. Li, Wang, Wang (2020) proposed an automatic method to measure absolute salinity using microfiber coaxial Mach-Zehnder interferometer. Shin, Kim, and Ryu (2020) quantified Margalefidinium polykrikoides Bloom from airborne hyperspectral images using machine learning technique. Park *et al.* (2020) analyzed and compared input image dimensions to detect ships from KOMPSAT-5 imagery using deep neural network. Nur, Achmad, and Lee (2020) measured land subsidence in reclaimed coastal land using C-band Sentinel-1 radar interferometry. Kim *et al.* (2020) classified green tide at coastal area only using RGB color

images obtained by a lightweight unmanned aerial vehicle (UAV). Lee, Choi and Lee (2020) studied on seasonal variations of suspended particulate matter in Korean coastal waters using GOCI images. Kim and Ryu (2020) mapped oyster reef distribution from KOMPSAT-2/3 images using spectral unmixing algorithm. Koo *et al.* (2020) introduced a practical remote sensing approach using a management policy for hybrid main memory (HMM) system. Kim, Park, and Lee (2020) performed the structural analysis of a fault-related anticline in the Southwestern Gyeonggi massif, Korea using UAV. Wu *et al.* (2020) observed spatiotemporal variations of Chlorophyll-a in the Jiaozhou bay using Landsat images obtained for about 32 years. Sun *et al.* (2020) introduced arctic grided sea surface temperature (SST) product created by using satellite radiometer. Zhao *et al.* (2020b) carried out a study on assessing ecological security of coastal zone in Guangdong-Hong Kong-Macao greater bay area. Wang *et al.* (2020a) proposed a method to extract natural coastlines from multiple satellite images. Yue *et al.* (2020) presented the satellite observations of suspended particulate matter concentration in complex estuarine and inland waters using optical water classification. Yu *et al.* (2020) proposed an automatic method to extract green tide from dual-polarized GF-3 SAR images. Wei *et al.* (2020) evaluated the geolocation accuracy of GF-4 Geostationary optical images, which are widely used for various ocean applications. Liao *et al.* (2020) performed a study on mangrove in the Xiezhou bay using maximum-likelihood reclassification method.

ACKNOWLEDGMENTS

Authors thank for the contributions of professional authors and reviewers and the excellent assistant of the editorial team of Journal of Coastal Research special issue #102. This work was supported by the Basic Study and Interdisciplinary R&D Foundation Fund of the University of Seoul (2019) for Prof. Hyung-Sup Jung.

LITERATURE CITED

- Achmad, A.R.; Syifa, M.; Park, S.J.; and Lee, C.W., 2019. Geomorphological transition research for affecting the coastal environment due to the volcanic eruption of Anak Krakatau by satellite imagery. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 214-220.
- Bae, S.; Yu, J.; Lei, W.; Kim, J., and Park, C., 2019. Experiments on unmanned aerial vehicle survey for detection of micro beach features. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 354-361.
- Baek, W.-K.; Jung, H.-S., and Kim, D., 2020. Oil spill detection of Kerch strait in November 2007 from dual-polarized TerraSAR-X image using artificial and convolutional neural network regression models. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 137-144.
- Baek, Y.-H. and Moon, I.-J., 2019. Estimation of satellite-based

- upper-ocean temperature profile in the western North Pacific and its application to tropical cyclone intensity predictions. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue, No. 90, pp. 261-266.
- Bing, L.; Xing, Q.G.; Liu, X., and Zou, N.N., 2019. Spatial distribution characteristics of oil spills in the Bohai Sea based on satellite remote sensing and GIS. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 164-170.
- Cao, M.; Qing, S.; Du, Y.; Yuan, R.; Shun, B.; Hao, Y., and Zhao, W., 2020. Remote sensing classification of aquatic vegetation in Ulansuhai lake based on discrete particle swarm optimization algorithm. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 176-186.
- Chen, X.Y.; Zhang, J.; Tong, C.; Liu, R.J.; Mu, B., and Ding, J., 2019a. Retrieval algorithm of chlorophyll-a concentration in turbid waters from satellite HY-1C coastal zone imager data. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 146-155.
- Chen, Y.L.; Wan, J.H.; Zhang, J.; Ma, Y.J.; Wang, L.; Zhao, J.H., and Wang, Z.Z., 2019b. Spatial-temporal distribution of golden tide based on high-resolution satellite remote sensing in the South Yellow Sea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 221-227.
- Cho, N.-W. and Lee, M.-J., 2020. Exploring changes in coastal environment policy using text mining: A case study in South Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 47-53.
- Choi, D.-L.; Shin, D.-H.; Jin, J.-Y.; Lee, Y.-K., and Kum, B.-C., 2020. High-resolution seismic stratigraphy offshore Haeundae beach in Busan, South Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 187-193.
- Choi, J.Y.; Kim, J.-C., and Kim, S.-K., 2020. Changing distributions of Zooplankton communities in a coastal lagoon in response to rainfall seasonality. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 69-74.
- Chu, J.L.; Suo, A.N.; Liu, B.Q.; Zhao J.H., and Wang, C.Y., 2019. Remote Sensing-Based Life Cycle Analysis of Land Reclamation Processes-Case Study on Tianjin Binhai New Area. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 77-85.
- Chun, J.-H. and Lee, H.-J., 2019. Subaerial and subaqueous investigations of volcanic debris avalanche and lahar deposits on the northern coast of Ulleung Island, Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 395-402.
- Chun, J.-H.; Kim, Y.; Choi, J.-Y.; Kim, Y.-J.; Lee, H.-J., and Kim Y.H., 2020. Observation of diffusive methane emission from Holocene mud deposits on the continental shelf offshore southeastern Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 127-136.
- Cui, B.G.; Zhong, Y.; Fei, D.; Zhang, Y.H.; Liu, R.J.; Chu, J.L., and Zhao, J.H., 2019. Floating Raft Aquaculture Area Automatic Extraction Based on Fully Convolutional Network. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 86-94.
- Eom, J.; Park, W.; Syifa, M.; Lee, C., and Yoon, S., 2019. Monitoring variation in sea surface temperature in the Nakdong River estuary, Korea, using multiple satellite images. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 183-189.
- Hakim, W.L.; Achmad, A.R.; Eom, J., and Lee, C.-W., 2020. Land subsidence measurement of Jakarta coastal area using time series interferometry with Sentinel-1 SAR data. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 75-81.
- Han, H.-G. and Lee, M.-J., 2020. A method for classifying land and ocean area by removing Sentinel-1 speckle noise. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 33-38.
- Hong, S.H.; Kim, J.H.; Park, J.W., and Won, J.S., 2019. Detection and velocity measurement of brash ice in the Arctic Ocean by TerraSAR-X quad-pol SAR. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 1-10.
- Jang, J.Y.; Yoon, J.H.; Cho, N.W., and Lee, M.J., 2019. Expanding the use of environmental conservation value assessment maps to marine environments – a case study in South Korea In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 346-353.
- Jeong, Y.; Kim, D.; Jo, Y.-H.; Kim, D.-W.; Jo, Y.-H., 2019. Interactions of eddies with the Kuroshio Current based on satellite altimeter measurements In: Jung, H.-S.; Lee, S.;

- Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 289-293.
- Jin, J.-C.; Zhang, J.; Liu, D.-Q.; Shao, F.; Wang, D.; Shi, J.-N., and Li, F.-X., 2019. Design and Experiment for an Offshore Nuclear Radiation Emergent Observation System based on an Unmanned Surface Vehicle. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 35-40.
- Jung, D.; Lee, J.S.; Baek, J.Y.; Nam, J.; Jo, Y.H.; Song, K.M., and Cheong Y.I., 2019. High temporal and spatial resolutions of sea surface current from low-altitude remote sensing. Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 282-288.
- Kim, H.-J. and Moon, I.-J., 2019. Determination of rain-/wind-dominant type for typhoons approaching South Korea based on satellite-estimated rainfall and best-track data, In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue, No. 90, pp. 340-345.
- Kim, H.C.; Baek, S.K., and Hwang, J.H., 2019. GIS analysis and evaluation on the geothermal reserves of the costal area of Jeju Island and Ulleung Island, volcanic island in South Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 377-385.
- Kim, I.; Park, S.-I., and Lee, H.-J., 2020. Structural analysis of a fault-related anticline in the southwestern Gyeonggi massif, Korea using an unmanned aerial vehicle and field surveys: The role of rejoining splays in a duplex-like structure. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 261-270.
- Kim, J.-C.; Lee, H.-J., and Choi, J.-Y., 2020. Topographical change in coastal areas arising from soil erosion in the Riparian zone. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 101-106.
- Kim, K. and Ryu, J.-H., 2020. Mapping oyster reef distribution using Kompsat-2/3 and linear spectral unmixing algorithm: A case study at Hwangdo tidal flat. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 246-253.
- Kim, K.; Kim, B.-J.; Kim, E., and Ryu, J.-H., 2020. Classification of green tide at coastal area using lightweight UAV and only RGB images. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 224-231.
- Kim, K.; Shin, J.; Kim, K.Y., and Ryu, J.-H., 2019a. Long-term trend of green and golden tide in the eastern Yellow Sea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 317-323.
- Kim, S.-K.; Kim, J.-C., and Choi, J.-Y., 2020a. Distribution and utilization plan of reclaimed lands (RLs) as waterfowl habitat on the south coast of Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 107-112.
- Kim, S.-K.; Kim, J.-C., and Choi, J.-Y., 2020b. The effect of laver-farming on the distribution of copepod community in the west coast of Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 63-68.
- Kim, S.; Park, S.; Han, J.; Son, S.; Lee, S.; Han, K.; Kim, J., and Kim, J., 2019b. Feasibility of UAV photogrammetry for coastal monitoring: a case study in Imlang Beach, South Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 386-392.
- Kim, S.M.; Shin, J.; Baek, S., and Ryu, J.-H., 2019c. U-Net convolutional neural network model for deep red tide learning using GOCI. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 302-309.
- Kim, T.; Kim, Y.-S., and Lee, H.-J., 2020. Characteristics of geological lineaments along the eastern coast of the Korean peninsula: A statistical approach. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 88-100.
- Ko, K. and Lee, H.-J., 2019. Detecting geological structures in coastal areas with unmanned aerial vehicle photogrammetric surveys. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 362-368.
- Koo, S.; Seo, J.; Son, Y., and Baek, S., 2020. Storage class memory based hybrid memory system for practical remote sensing. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 254-260.
- Koo, S.; Song, Y.J.; Lim, S.H.; Oh, M.H.; Seo, S.N., and Baek, S.J., 2019. Development of a remote supervisory control and data acquisition system for offshore waste final disposal facility. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 205-213.
- Lee, D.; Jeong, J.-Y.; Jang, H.K.; Min, J.-O.; Kim, M.J.; Youn,

- S.H.; Lee, T., and Lee, S.H., 2019a. Comparison of particulate organic carbon to Chlorophyll-*a* ratio based on the ocean color satellite data at the Ieodo and Socheongcho ocean research stations. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 267-271.
- Lee, S.; Lee, E.; Yoo, H.-S., and Lee, M.-J., 2020. Analysis of trends in marine water quality using environmental impact assessment monitoring data: A case study of Busan new port. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, 39-46.
- Lee, S.; Syifa, M.; Koo, B.J.; Lee, C.-W., and Oh, H.-J., 2019b. Spatial macrobenthos habitat on Ganghwa tidal flat, Korea: Part II - habitat potential mapping of *Potamocorbula laevis* using probability models. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 401-408.
- Lee, S.M.; Oh, H.J.; Lee, S., and Lee, M.J., 2019c. Spatial distribution analysis of *Ruditapes philippinarum* habitat using data mining. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 112-119.
- Lee, Y.-K.; Choi, J.-K., and Lee, H.J., 2020. A study on seasonal dynamics of suspended particulate matter in Korean coastal waters using GOCI. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 232-245.
- Lee, Y.K.; Eom, J.; Do, J.D.; Kim, B.J., and Ryu, J.-H., 2019d. Shoreline movement monitoring and geomorphologic changes of beaches using lidar UAVs images on the coast of the East Sea, Korea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 409-414.
- Lee, Y.S.; Park, S.H.; Cho, Y.H.; Lee, W.J.; Jung, H.-S.; Lee, M.J., and Kim, S.H., 2019e. Classification of halophytes from airborne hyperspectral imagery in Ganghwa Island, Korea using multilayer perceptron artificial neural network. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 243-250.
- Li, W.K.; Tian, L.Q.; Li, J.; Zhou, Q.; Li, Y., and Li, S., 2019. Impact of Natural and Anthropogenic Changes on the Spatial-Temporal Variations of Total Suspended Matter in the Pearl River Estuary, China. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 66-76.
- Li, X.-M.; Ma, Y.; Leng, Z.-H.; Zhang, J., and Lu, X.-X., 2020. High-accuracy remote sensing water depth retrieval for coral islands and reefs based on LSTM neural network. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 21-32.
- Li, Y.; Wang, J., and Wang, S., 2020. Automatic absolute salinity measurement based on microfiber coaxial Mach-Zehnder interferometer. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 194-201.
- Liang, X.J.; Qin, P.; Xiao, Y.F.; Kim, K.Y.; Liu, R.J.; Chen, X.Y., and Wang, Q.B., 2019. Automatic remote sensing detection of floating macroalgae in the yellow and east china seas using extreme learning machine. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 272-281.
- Liao, Y.; Liao, Y.; Zhao, W.; Li, T., and Yang, T., 2020. Study on mangrove of maximum likelihood: Reclassification method in Xiezhou bay. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 334-343.
- Liu, R.J.; Zhang, J.; Cui, B.G.; Ma, Y.; Song, P.J., and An, J.B., 2019. Red Tide Detection Based on High Spatial Resolution Broad Band Satellite Data: A Case Study of GF-1. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 120-128.
- Ma, Y.; Zhang, J.; Zhang, Z., and Zhang, J.Y., 2019. Bathymetry retrieval method of LiDAR waveform based on multi-Gaussian functions. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 324-331.
- Min, S.H.; Hwang, J.D.; Oh, H., and Son, Y.B., 2019. Reflectivity characteristics of the green and golden tides from the Yellow Sea and East China Sea. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 310-316.
- Mu, B.; Qin, P.; Liu, C.; Liang, X.J., and Huang, T.X., 2019. An assessment of atmospheric correction methods for GOCI images in the Yellow River estuary. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 171-182.
- Niu, L. and Lang, H., 2020. Ship matching using convolutional neural network in multi-source synthetic aperture radar images. In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), *Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 166-175.

- Nur, A.S.; Achmad, A.R., and Lee, C.-W., 2020. Land subsidence measurement in reclaimed coastal land: Noksan using C-band Sentinel-1 radar interferometry. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 218-223.
- Oh, H.-J.; Koo, B.J.; Ryu, J.-H., and Lee, S., 2019a. Spatial macrobenthos habitat on Ganghwa tidal flat, Korea: Part I – spatial relationship between *Potamocorbula laevis* and spatial variables. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 393-400.
- Oh, H.-J.; Syifa, M.; Lee, C.-W., and Lee, S., 2019b. *Ruditapes Philippinarum* Habitat Potential Mapping Using SVM and Naïve Bayes. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 41-48.
- Park, J.; Kown, Y.S.; Baek, S.H.; Lim, W.A.; Park, J.; Jang, J., and Park, Y., 2019a. Identifying Environmental Effects on an Annual Variation in *Margalefidinium Polykrikoides* in the South Korean Sea using Statistical Analysis. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 11-18.
- Park, N.-W. and Jang, D.-H., 2020. Geostatistical classification of intertidal surface sediments using log-ratio transformation and high-resolution remote sensing imagery. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 157-165.
- Park, N.-W., 2019. Geostatistical integration of field measurements and multi-sensor remote sensing images for spatial prediction of grain size of intertidal surface sediments. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 190-196.
- Park, S.-J.; Achmad, A.-R.; Syifa, M., and Lee, C.-W., 2019b. Machine learning application for coastal area change detection in Gangwon province, South Korea using high-resolution satellite imagery. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 228-235.
- Park, S.H.; Jung, H.-S.; Lee, M.J.; Lee, W.J., and Choi, M.J., 2019c. Oil spill detection from PlanetScope satellite image: application to Oil spill Accident near Ras Al Zour area, Kuwait in august 2017. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 251-260.
- Park, W.; Baek, W.-K.; Won, J.-S., and Jung, H.-S., 2020. Comparison of input image dimensions for ship detection from a KOMPSAT-5 SAR image using deep neural network. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 208-217.
- Qing, S.; Hao, Y.L., and Bao, Y.H., 2019. Retrieval of Inorganic Suspended Particle Size with Landsat-8 OLI Data in the Yellow River Estuary. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 19-26.
- Ren, G.B.; Wang, J.J.; Wang, A.D.; Wang, J.B.; Zhu, Y.L.; Wu, P.Q.; Ma, Y., and Zhang, J.B., 2019a. Monitoring the invasion of Smooth cordgrass *Spartina alterniflora* within the modern Yellow River Delta using remote sensing. *In: Jung, H.-S.; Lee, S., and Ryu, J.-H. (eds.), Advances in Remote Sensing and Geoscience Information Systems of the Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 135-145.
- Ren, P.; Yu, Z.Q.; Dong, G.S.; Wang, G.X., and Wei, K., 2019b. Sea ice classification with first-order logic refined sliding bagging. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 129-134.
- Ryu, J.-H.; Jung, H.-S.; Lee, S., and Cui, T., 2019. Special Issue on “Advances in Remote Sensing and Geoscience Information Systems of the Coastal Environments”. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. v-xi.
- Shin, J.; Kim, S.M., and Ryu, J.-H., 2020. Machine learning approaches for quantifying *Margalefidinium polykrikoides* bloom from airborne hyperspectral imagery. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 202-207.
- Shin, J.; Kim, S.M.; Son, Y.B.; Kim, K., Ryu, J.-H., 2019. Early prediction of *Margalefidinium polykrikoides* bloom using a LSTM neural network model in the South Sea of Korea. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 236-242.
- Sun, W.; Zhang, J.; Meng, J., and Liu, Y., 2019. Sea Surface Temperature Characteristics and Trends in China Offshore Seas from 1982 to 2017. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research*, Special Issue No. 90, pp. 27-34.
- Sun, W.; Zhang, J.; Meng, J.; Li, Y., and Cao, K., 2020. An arctic gridded sea surface temperature product constructed from spaceborne radiometer data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research*, Special Issue No. 102, pp. 280-286.

- Syifa, M.; Park, S.-J.; Achmad, A.-R.; Lee, C.-W., and Eom, J., 2019. Flood mapping using remote sensing imagery and artificial intelligence techniques: a case study in Brumadinho, Brazil. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 197-204.*
- Tai, X.; Wang, G.; Grescos, C., and Ren, P., 2020. Coastal image classification under noisy labels. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 151-156.*
- Tong, C.; Mu, B.; Liu, R.J.; Ding, J.; Zhang, M.W.; Xiao, Y.F.; Liang, X.J., and Chen, X.Y., 2019. Atmospheric correction algorithm for HY-1C CZI over turbid waters. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 156-163.*
- Wan, J. and Ma, Y., 2020. Multi-scale spectral-spatial remote sensing classification of coral reef habitats using CNN-SVM. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 11-20.*
- Wang, C.; Yang, J.; Li, J., and Chu, J., 2020a. Deriving natural coastlines using multiple satellite remote sensing images. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 296-302.*
- Wang, J.B.; Ren, G.B.; Lin, Z.Y.; Wang, A.D.; Hu, Y.B.; Li, X.M.; Wu, P.Q.; Ma, Y., and Zhang, J., 2020. Estimation and analysis of nitrogen contents in the yellow river estuary wetland using Gaofen-1 remote sensing data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 1-10.*
- Wang, R.F.; Zhang, Y.; Li, J.G.; Zhao, W.; Wang, F.Z.; Cao, H.J., and Duan, Y.P., 2019. Development of Green Tide Monitoring with Satellite Images. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 104-111.*
- Wei, Y.; Zhang, Z.; Mu, B.; Li, Y.; Wang, Q., and Liu, R., 2020. Geolocation accuracy evaluation of GF-4 geostationary high-resolution optical images over coastal zones and offshore areas. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 326-333.*
- Wu, M.; Zhao, Y.; Sun, L.; Huang, J.; Wang, X., and Ma, Y., 2020. Remote sensing of spatial-temporal variation of chlorophyll-a in the Jiaozhou bay using 32 years Landsat data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 271-279.*
- Xiao, Y.F.; Zhang, J., and Qin, P., 2019. An Algorithm for Daytime Sea Fog Detection Over the Greenland Sea Based on MODIS and CALIOP Data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 95-103.*
- Yang, J.F.; Wan, J.H.; Ma, Y.; Zhang, J.; Hu, Y.B., and Jiang, Z.C., 2019. Oil spill hyperspectral remote sensing detection based on DCNN with multi-scale features. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 332-339.*
- Yang, Q.; Wang, G.; Zhang, X.; Grecos, C., and Ren, P., 2020. Coastal image captioning. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 145-150.*
- Yu, H.; Wang, C.; Sui, Y.; Li, J., and Chu, J., 2020. Automatic extraction of green tide using dual polarization Chinese GF-3 SAR images. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 318-325.*
- Yue, Y.; Qing, S.; Diao, R., and Hao, Y., 2020. Remote sensing of suspended particulate matter in optically complex estuarine and inland waters based on optical classification. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 303-317.*
- Zhang, J.Y.; Zhang, J.; Ma, Y.; Chen, A.N.; Cheng, J., and Wan, J.X., 2019a. Satellite-derived bathymetry model in the Arctic waters based on support vector regression. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 294-301.*
- Zhang, K.; Jiang, T., and Huang, J., 2019b. Spatial-Temporal Variation in Sea Surface Temperature from Landsat Time Series Data Using Annual Temperature Cycle. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 58-65.*
- Zhang, X.; Zhu, Y.; Zhang, J.; Meng, J.; Li, X., and Li, X., 2020. An algorithm for sea ice drift retrieval based on trend of ice drift constraints from SAR data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 113-126.*
- Zhao, S.; Xu, Y.; Li, W., and Lang, H., 2020a. Optical remote sensing ship image classification based on deep feature combined distance metric learning. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 82-87.*

- Zhao, W.; Zhao, G.; Yang, J.; Xu, M., and Kou, J., 2020b. Assessment of the ecological security of the coastal zone of the Guangdong/Hong Kong/Macao Greater Bay area. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 287-295.*
- Zhu, H.; Li, K.; Wang, L.; Chu, J.; Gao, N., and Chen, Y., 2019. Spectral Characteristic Analysis and Remote Sensing Classification of Coastal Aquaculture Areas Based on GF-1 Data. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Remote Sensing and Geoscience Information Systems of Coastal Environments. Journal of Coastal Research, Special Issue No. 90, pp. 49-57.*
- Zhu, J.; Hu, P.; Zhao, L.; Gao, L.; Qi, J.; Zhang, Y., and Wang, R., 2020. Determine the Stumpf 2003 Model parameters for multispectral remote sensing shallow water bathymetry. *In: Jung, H.-S.; Lee, S.; Ryu, J.-H., and Cui, T. (eds.), Advances in Geospatial Research of Coastal Environments. Journal of Coastal Research, Special Issue No. 102, pp. 54-62.*