

## Contents

Practical Researches for Regional Revitalization in Hokkaido - Report of Research Institute of Northern Regional Community in 2019 - .....Naohito Kimura, Takashi Kajiya, Masahiro Hamaya, Keiko Ikariyama, Naohiro Taniguchi, Kumiko Tsukagoshi, Akihiro Kotani, Toshifumi Sakai, Junko Michio, Tsutomu Bandoh and Yoshimi Itoh	1
2018 and 2019 exhibition planning Research report on "Hokkaido Railways x Media Arts" Exhibition .....Akihiro Kotani, Takashi Kajiya, Masahiro Hamaya, Kumiko Tsukagoshi, Toshifumi Sakai	9
Report on the 6th Northern Regional Community (RINC) Forum: "The Person Concerned of the Town" Thinks about Somebody from Evolution of the Staying .....Junko MICHIO, Naohito KIMURA, Takashi KAJIYA, Naohiro TANIGUCHI, Keiko IKARIYAMA, Masahiro HAMAYA, Akihiro KOTANI, Toshifumi SAKAI , Kumiko TSUKAGOSHI, Tsutomu BANDO and Yoshimi ITOH	13
Report on the College Footpath Forum 2019 and the Fieldwork on Walking Experience and Local Context .....Junko MICHIO, Hideyuki NANBA, Akina OHNO, Momoka SAITOH, Konoka ISHII, Teruya SASAKI, Aya SUGAWARA, Mayuka SUNO, Aoi TOKUNOH, Yuka ZENZAI	17
Study on the sustainability of Esashi regional cultural resources selected as Hokkaido heritage ( 2 ) .....Masahiro Hamaya	21
Industry-Academia-Government Collaboration Education Utilizing RESAS .....Toshifumi SAKAI	29
Activity Report of Laboratory of Advanced Materials for Cold Region in FY2019 .....Katsumi MIYAMA	37
Influence of Construction Temperature of Stud Welding .....Kentarō Maeda, Toshihiro Yoshida, Kanou Yoshida, Shigeru Saito, Katsumi Miyama	39
Cross Sectional Microstructure and Hardness in Welded Zone of Duplex Stainless Steel by Fiber Laser Welding .....Shigeru Saito, Kentarō Maeda, Yoshinobu Tanuma, Toshiya Shioda and Kai Ohshima	43
Study of ZnSe layer and transparent ITO electrode for CIGS solar cell. .....Yoshihito Ichinohe	47
Evaluation of Degradation of Mechanical Properties of Polypropylene for Ankle Foot Orthoses by Thermal Cycle Test .....Shin Murahara, Toshiaki Horiuchi, Akihiro Koike, Yasuyuki Hayakawa, Katsumi Miyama	51

Formation Behavior of Reacted Products in Resistance-spot Welding of Steel and Aluminum alloy .....Katsumi Miyama, Koichi Hayashi, Toshiaki Horiuchi, Kentaro Maeda, ToshihiroYoshizu, Shigeru Saito, KanouYoshida, Yoshito Sugino, Aoi Mizuguchi, and Haruto Hashimoto	55
Report of Laboratory of Active Ageing in the North in 2019 .....Toshiaki Tanaka	59
Report of Research Institute of Research Life Style and Environment for Future in 2019 .....Hirofumi Sanada	61
Factors Related to Dietary Variety of Elderly in cold region .....Yuko Hayashi, Kumiko Miyata, Junko Ouchi, Michiyo Yamamoto, Koru Fukura Michiko Matsubara, Yumie Okumura, Yoichirou Satou, Naofumi Wada, Hirofumi Sanada	65
Experimental Study on Relationship between Wind Speed Characteristics and Snow Cornice Formation on Flat Roofs .....Takahiro Chiba, Evgeny Isenko, Kohei Nishida, Yoshihiko Saito and Masaya Otsuki	73
A Study on Chair Stand Test using Microsoft Kinect .....H. Sanada N. Wada K. Miyata Y. Hayashi	81
Development Study on anti-snow/snow melting techniques using Plasma Actuator .....Hisashi MATSUDA, Takahiro CHIBA, Masaki YAGAMI and Yusuke TAJIMA	85
Characteristics of Elementary School Teachers' Views of English Classes Due to Differences in Educational Environments-Survey by a qualitative research method .....Kaeko NAKAMURA, Akinobu SHIMURA, Toshiyuki SAKABE	91
Characteristics of elementary school teachers as language teachers due to differences in educational environment: A survey of four regions in Hokkaido .....Kaeko NAKAMURA, Akinobu SHIMURA, Toshiyuki SAKABE	99
The Efforts of Information Sharing Using Information Liaison Forms at Hokkaido University of Science Affiliated Pharmacy .....Kaori Yama, Yoshiki Nakane, Hideyuki Hara, Maho Hanami, Atsuya Shimizu, Tomohiro Manabe, Yoshimi Itoh, Isao Hasegawa, Hideki Sato	109
Clinical judgment of expert nurses working in a facility for severe motor and intellectual disabilities .....Kaoru Fukura	117
Review of The Literature on Disease Notification to Children with Developmental Disorders .....TOMOMI KUSANO , HIROE THUSHIMA	125
New stress markers by analyzing heart rate variability .....Tomokazu INDO, Toshitsugu SUGAWARA, Toru YOKOYAMA, Takeshi AIKAWA, Ayato TANISHI and Kaito KOBAYASHI	133
Development of a Novel Silent Alarm System for a Dialysis Machine Using Color Extraction Processing .....Shotaro Watanabe, Daisuke Furuya, Hisae O. Shimizu	141

A Reflection on the historical development of the Phenomenology of Religion in interwar Romania. .....	Fumiaki Okuyama	147
Development of Moodle Questionnaire Creation Support Tool .....	Yuji Fukai	155
Consideration of Introduction of IoT Devices in Development of Smart Lock Systems .....	Yuji Fukai	161
Data Analysis of Rubric Self-Assessment in Basic Information Courses .....	Yuji Fukai	167
The Current Status and Issues in Japanese Comprehensive Junior and Senior High School Education .....	Kazuhiro Aoyama ,Akihito Takahashi	173
Promotion of training to build student-centered learning. .....	Suguru Yamashita Yasuhiro Watanabe Kazuhisa Kobayashi	181
Promotion of global education at Hokkaido University of Science High school .....	Suguru Yamashita, Kouki Watanabe, Sigeru Nishida	185
The Study and Promotion of 'an Inquiry-Based Learning into Integrated Studies' in Accordance with the High School/University Connection Education Program. .....	Kazuhisa Kobayashi, Suguru Yamashita, Naoki Ikewaki	189