

**RESEARCH REPORTS OF
NATIONAL INSTITUTE OF TECHNOLOGY,
NAGAOKA COLLEGE
VOL.52
NOVEMBER 2016**

CONTENTS

Paper

| | |
|---|--------|
| Numerical Temperature Determination of Frozen Duct in Frozen Soil Formation Based on Ground Freezing - Boundary Temperature Control Analysis Based on Adjoint Variable and Finite Element Methods - Takahiko KURAHASHI, Shin ISHIZU, Kotaro MARUOKA, Atsushi SHIMAMURA, Tsutomu TSUCHIYA and Yoshitaka KAWADA | ... 1 |
| Automatic Mesh Generation of Triangular Meshes in Finite Element Analysis - Mesh Generation Considering Stress Concentration near Crack and Notch Tips - Takahiko KURAHASHI, Akane SUKIGARA, Kengo YAMAGIWA, Kotaro MARUOKA and Tetsuro IYAMA | ... 11 |
| Numerical Simulation of Shallow Water Flow in Wave Tank - Comparison of Numerical Results by SUPG method and Observed Water Elevation - Takahiko KURAHASHI, Masato NOGAMI, Shinya IMAI, Taichi YOSHIARA and Toshihiko ETO | ... 21 |
| Numerical Simulation for Thermal Convection Based on Stabilized Bubble Function Finite Element Method Shinya IMAI, Takahiko KURAHASHI, Eiji KATAMINE and Yoshitaka KAWADA | ... 28 |
| Inverse analysis for Identification of Hammering Signal in Non-destructive Hammering Test Takahiko KURAHASHI, Eiki MATSUOKA, Yuki MURAKAMI, Shigehiro TOYAMA, Fujio IKEDA, Tetsuro IYAMA and Yoshihiro TAWARA | ... 34 |
| The Sangaku Lost from the Fuchū Hachiman Shrine in Naoetsu Kazuyoshi WAKUTA and Kazuhito TOGAWA | ... 41 |
| The sidewalk space of winter season by the survey of the snow belt in the snowfall regional city Kazuhiro MIYAKOSHI, Taku KOBAYASHI | ... 50 |
| Development of Students Personal Skills for Qualified Engineers - Skill Training Based on the Demand from Students of Electrical Department - Minako WATANABE, Yoshinori TOKOI, Shouhei YANO, Naritoshi AOYAGI and Makoto YAMAZAKI | ... 60 |
| Improvement of “Listening and Speaking skills” of English by ICT in Education Katsumi ICHIMURA, Takashi YUKAWA, Naritoshi AOYAGI and Yasuko TSUCHIDA | ... 66 |
| Data Analysis for Publicity Campaign Aiming at Increasing in Candidates for Admission Utilizing Open Data Akira TAKAHASHI, Kenji KAMIMURA, Hiroshi SATOH, and Shuichi SATO | ... 72 |
| College-wide Educational and Research Promotion by “Prelab” System Shin-ichi AKAZAWA, Yoshihiro TAWARA, Taku KIRYU, Yasuko TSUCHIDA, Yoshinori TOKOI, Yuki MURAKAMI, Fujio IKEDA, Tetsuro IYAMA, and Shigehiro TOYAMA | ... 78 |
| Note | |
| Reports on Trials of Support System for Mathematics Self-Instruction (SMSI) in NIT, Nagaoka College Rumi SHINDO TOGASHI, Akira YAMADA, Mayumi NAKAYAMA, Masaki YAMAGISHI and Takeshi NOZAWA | ... 83 |
| Practice of Engineering Design Education Utilizing ISATE 2015 Campus Tour Yoshinori TOKOI, Yoshihiro OMINATO, Michiaki OMORI, Katsumi ICHIMURA, Kensei KANEKO, Makoto NAGAI, Emi KAWAMOTO, Takahiro YAMAMOTO and Nobuo ARAKI | ... 88 |
| Uitemate Project at National Institute of Technology, Nagaoka College - Integration of the Society of Water Rescue and Survival Research and English Presentation Practice - Yoshihiro OMINATO, Takayuki IJIMA, Shinya OKA, Masahira TAKEDA, Shohei NIINO, and Tatsuya YAGI | ... 94 |
| Themes of Graduation Study 2015 | 101 |
| Thesis of Special Study at Advanced Engineering Courses 2015 | 107 |
| A List of Research Activities No.51 (2015.10-2016.9) | 120 |
