Conference Program

12th IIAI International Congress on

Advanced Applied Informatics

July 2-7, 2022, Kanazawa Japan

Venue: The Kanazawa Chamber of Commerce and Industry, Kanazawa City, Japan

July 2 (Sat) 4:00PM-5:00PM
Room F

Welcome Beverage

July 3 (Sun) 1:30PM-2:45PM
Room A   SCAI-1

Session Chair: Hisashi Hayashi, Advanced Institute of Industrial Technology, Japan

A Public Transportation Reservation System for Congestion Relief with E-tickets

Tomoaki Takemura, Kazuhiko Iwase, Jieshuo Zhang, Shoko Abe, Tomoyuki Ohkubo and Hisashi Hayashi

Deepfake Detection on Videos Based on Ratio Images

Rafael L. Testa, Ariane Machado-Lima and Fátima L. S. Nunes

Isometric Convolutional Neural Networks for Bone Suppression of Multi-Planar Dual Energy Chest Radiograph

Yossathorn Tianrungroj and Iba Hitoshi

Improved Response Generation Consistency in Multiturn Dialog

Takamune Onishi, Sakuei Onishi and Hiromitsu Shiina

Room B   LTLE-1 & LTLE-SS1

Session Co-Chairs: Noriko Uosaki(Osaka University, Japan), Kousuke Mouri(Hiroshima City University, Japan), Takafumi Tanaka(Tamagawa University, Japan), Nehal Hasnine(Housei Univerity, Japan)

 (LTLE-SS1) A Support System for Programming Exercises Using Test-first Approach
Kana Suetake and Takafumi Tanaka

(LTLE-SS1) Visual Programming Environment for Learning Functional Programming Using Unit Test
Kouki Asakawa and Takafumi Tanaka

Music learning support system using blocks
Nahoko Kobayashi and Mitsuharu Matsumoto

Room C   DSTM-SS2

Session Chair: Takaaki Hosoda, Advanced Institute of Industrial Technology, Japan

(DSTM-SS2) Impact of Missing Data on the Processing of Educational Questionnaires and the Reported Results
Hiroyuki Maruyama, Takaaki Hosoda and Tokuro Matsuo

(DSTM-SS2) Reconsideration of the recursive processing model in the problem formulation and solving processes
Hiroyuki Furuya, Hiroyuki Maruyama, Tokuro Matsuo and Takaaki Hosoda

(DSTM-SS2) An Analysis of the Characteristics of Victims of   Special Fraud
Eriko Musashi, Hiroyuki Maruyama and Takaaki Hosoda

Room D   IIAI-1

Session Co-Chairs: Kousuke Mouri (Hiroshima City University, Japan), Chengjiu Yin (Kobe University, Japan)

Proposal of a Method for Reframing Irrational Beliefs with Forced Generation of Intermediate Concept
Moe Motohashi and Makoto Ioki

Sandwich robot: how non-programmers solve computational problems
Emanuela Marchetti, Andrea Valente and Nina Bonderup Dohn

An Analysis on Bangladesh Patent Act 2022: a step forward from an LDC to a Developing Country
Yaeko Mitsumori

July 3 (Sun) 3:00PM-4:40PM

Room A   SCAI-2

Session Chair: Kei Nakagawa, Nomura Asset Management Co., Ltd., Japan

Human Frontal Face Tracking System in Thermal Images
Mohammad Ariff Rashidan, Shahrul Naim Sidek and Nazreen Rusli

The Judgment of Masked Facial Expressions by Humans and Classifiers

Koji Kashihara and Mizuki Shinguu

Investment Strategy via Lead Lag Effect using Economic Causal Chain and SSESTM Model

Shingo Sashida, Kei Nakagawa and Hiroki Sakaji

Enhanced Quantile Portfolio for Multifactor Model with Deep Learning

Masaya Abe and Kei Nakagawa

Room B   ESKM-SS3

Session Chair: Hideto Ogasawara, Chiba Institute of Technology, Japan

(ESKM-SS3) Development of robot-assisted recreation system based on assessment of operational issues in aged care facilities

Shiroh Itai, Tomoko Nariai and Hiroaki Kojima

(ESKM-SS3) System development for overseas expansion of scenario-type robot recreation program

Shiroh Itai, Toshimitsu Hamada and Sabina Misoch

(ESKM-SS3) Designing Animal Robot Recreation to Increase the Amount of Communication for Elderly People with Dementia

Kagehisa Nakayama

(ESKM-SS3) Application of a Communication Robot as a Moderator for Recreational Speech Rehabilitation

Atsushi Shimoda, Shiro Itai, Toshimitsu Hamada and Maki Matsumoto

Room C   DSTM-SS2 & DSTM-SS3

Session Co-Chairs: Takaaki Hosoda(Advanced Institute of Industrial Technology, Japan), Hiroyuki Maruyama(Advanced Institute of Industrial Technology, Japan)

(DSTM-SS2) Construction of a New Learning Motivation Model in an Online Lecture Environment

Takaaki Hosoda, Hiroyuki Maruyama and Tokuro Matsuo

(DSTM-SS3) Factors Affecting Employee Engagement Based on an Employee Attitude Survey in Japan

Morihiko Ikemizu, Hiroyuki Maruyama, Takaaki Hosoda, Tokuro Matsuo and Teruhisa Hochin

(DSTM-SS3) Method of Emotion Estimation Based on the Heart Rate Data of a Smartwatch

Toru Hirono, Hiroyuki Maruyama, Eriko Musashi and Takaaki Hosoda

July 4 (Mon) 9:30AM-12:00PM
Room A   **SCAI-3**

Session Chair: Toshiharu Sugawara, Waseda University, Japan

Identifying Top-k Peaks Using an Extended Particle Swarm Optimization Algorithm with Re-diversification Mechanism

Stephen Raharja and Toshiharu Sugawara

Algorithms for estimation of comic speakers considering reading order of frames and texts

Yuga Omori, Kota Nagamizo and Daisuke Ikeda

Note for Shape-Based Clustering on Stock Prices

Seiji Matsuhashi and Yukari Shirota

Analog Neural Network Model based on Improved Logarithmic Multipliers

Masashi Kawaguchi, Naohiro Ishii and Masayoshi Umeno

Applying Reward Design Based on Payment Mechanism to Shaped-Reward DQN for Beer Game

Masaaki Hori and Toshihiro Matsui

Pseudo data acquisition using machine translation and   simile identification

Jintaro Jimi and Kazutaka Shimada

July 4 (Mon) 1:00PM-1:20PM

Room A   **Opening Ceremony**

Welcome Speech and Greetings

- Honorary Chair, Naohiro Ishii, International Institute of Applied Informatics, Japan
- Congress General Chair, Yuichi Ono, University of Tsukuba, Japan
- Congress Program Chair, Kunihiko Takamatsu, Tokyo Institute of Technology, Japan
- Hideaki Yamamoto, Executive General, Kanazawa Convention Bureau, Japan

Conference Chairs

- ESKM 2022: Daisuke Ikeda, Kyushu University, Japan
- LTLE 2022: Yuichi Ono, University of Tsukuba, Japan
- DSIR 2022: Yoshikazu Asada, Jichi Medical University, Japan
- SCAI 2022: Tenda Okimoto, Kobe University, Japan
- BMOT 2022: Antonio Oliveira Nzinga Rene, Toyama Prefectural University, Japan
- EAIS 2022: Atsushi Shimoda, Chiba Institute of Technology, Japan
- IDDC 2022: Taishi Nemoto, Kagoshima Women's College, Japan
- DSTM 2022: Takaaki Hosoda, Advanced Institute of Industrial Technology, Japan

July 4 (Mon) 1:20PM-3:10PM

Room A   **Keynote Addresses**

Keynote 1

Practical Approach of Time Series Data Clustering

Prof. Yukari Shirota (Professor, Gakushuin University, Japan)

Keynote 2

How to Manage Your Research Footprints in the New Age of Scholarly Communication

Ms. Nobuko Miyairi (Scholarly Communications Consultant, Tokyo, Japan)

July 4 (Mon) 3:30PM-3:50PM

Bus Departure from convention center

July 4 (Mon) 4:10PM-5:30PM

Excursion at Yamato Koji Park

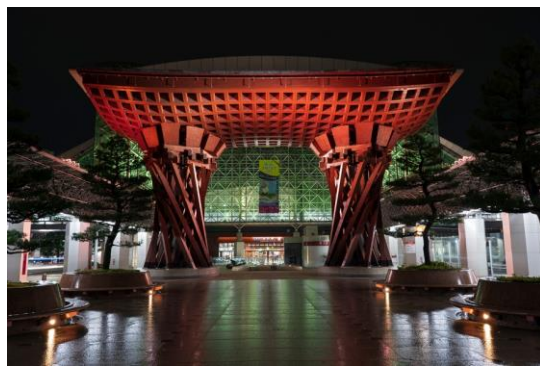

July 4 (Mon) 6:00PM-8:00PM

Welcome Reception, Kanazawa Port Cruise Terminal

July 4 (Mon) 8:00PM-8:45PM

City Night Tour by Shuttle Bus

Each bus goes to Kanazawa Station, Musashi-ga-tsuji, or Korinbo.

July 5 (Tue) 9:30AM-12:00PM

Room A   ESKM-SS1 & ESKM-1

Session Chair: Hidehiko Hayashi, Hokusei Gakuen University, Japan

(ESKM-SS1) MinpakuBERT: A Language Model for Understanding Cultural Properties in Museum

Ryota Mibayashi, Masaki Ueta, Takafumi Kawahara, Naoaki Matsumoto, Takuma Yoshimura, Kenro Aihara, Noriko Kando, Yoshiyuki Shoji, Yuta Nakajima, Takehiro Yamamoto, Yusuke Yamamoto and Hiroaki Ohshima

(ESKM-SS1) Detection of Flaming Participants Using Account Information and Stylistic Features of Posts

Taisei Aoyama, Linshuo Yang and Daisuke Ikeda

(ESKM-SS1) Analysis of International Public Emotional Responses Toward the COVID-19 Vaccine

Satoshi Fukuda, Hidetsugu Nanba and Hiroko Shoji

(ESKM) Adversarial Examples of Time Series Data based on Partial Perturbations

Jun Teraoka and Keiichi Tamura

(ESKM) Cross-Domain Event Participant Prediction with Public Event Description

Yihong Zhang, Masumi Shirakawa and Takahiro Hara

(ESKM) An Investigation on the Scatter of Opinions in the Replies towards Predicting Reaction of a Tweet Gaining a Public Interest

Tokinori Suzuki, Shintaro Deguchi and Yoichi Tomiura

Room B   LTLE-SS1-2 & LTLE-2

Session Co-Chairs: Noriko Uosaki(Osaka University, Japan), Kousuke Mouri(Hiroshima City University, Japan), Takafumi Tanaka(Tamagawa University, Japan), Nehal Hasnine(Housei Univerity, Japan)

(LTLE-SS1) Development and evaluation of car training system using VR and eye tracking technology

Tetsuhiro Ito, Kousuke Mouri, Masaru Okamoto and Yukihiro Matsubara

(LTLE-SS1) Visualizing learners' level of understanding of lecture using digital text book system

Morita Hiroto, Kousuke Mouri, Masaru Okamot and Yukihiro Matsubara

(LTLE-SS1) Smartphone-Only Introduction to Animation Class for Students with no Art Background

Yoriko Murakami

Analyze the enjoyment of soccer school in the elementary school age

Hiroki Tanioka, Mitsuhiro Sato and Ryuji Tsuge

Development of Learning Support System with Problem Posing of Fill-in-the-Blank Questions

Hiroshi Shigematsu and Shimpei Matsumoto

BSGenerator: a Tool to Design Unique Online Examinations using Question Variations

Miguel Nicolau

Room C   **BMOT-1**

Session Chair: Hidekazu Iwamoto, Josai International University, Japan

The Effects of the Combination of Online Visual and Audio Cues on Salesperson Credibility

Kayoko Yashiro, Shinichiro Haruyama and Seiko Shirasaka

Estimation of Employee Trust in Management and Multi-Agent Model for Analyzing Employee Morale during Organizational Change

Hidefumi Kawakatsu, Nobuhiko Yamanaka, Kosuke Kato and Dong Li

Comparison of patent strategies using the maintenance status of registered patents

Jun Hosoya

What content of user reviews is considered "helpful"?

Yuichi Goto and Rikiya Tsuchihashi

Blockchain for supply chain traceability: A Survey

Anusorn Chaikaew, Sukhuntha Osiriphun and Ekkarat Boonchieng

The impact of zoning on congestion caused by workers with different walking speeds in order picking operations

Kirika Matsuda and Aya Ishigaki

Room D   **DSIR-1 & DSIR-SS2**

Session Chair: Yoshikazu Asada, Jichi Medical University Japan

(DSIR) Progressive Prediction of Students' Future Performance on Coherent Vertical Curriculum

Satrio Priyambada, Fatharani Wafda, Tsuyoshi Usagawa and Mahendrawathi Er

(DSIR) Applicability of Existing Computer Literacy Education to Data Science Education

Takaaki Arahira and Yoshimitsu Hashizume

(DSIR) Scholarship-based performance funding policies: do they increase faculty productivity?

Charles Mathies, Stephen Porter, Paul Umbach, Mio Takei and Keisuke Honda

(DSIR) Introducing new mass screening in institutional research based on Eduinformatics

Kunihiko Takamatsu, Akira Ito, Takafumi Kirimura, Katsuhiko Murakami, Yasuhiro Kozaki, Aoi Kishida, Ikuhiro Noda, Nao Ichikawa, Kenya Bannaka, Ryosuke Kozaki, Masato Omori and Yasuo Nakata

Short Break (5 minutes)

Session Co-Chairs: Kenjiro Sakaki(Tenshi College, Japan), Yasuo Nakata(Kobe Tokiwa University, Japan), Kunihiko Takamatsu(Tokyo Institute of Technology, Japan)

(DSIR-SS2) Analysis of the pass/fail results of the Pharmacist National Examination
Shintaro Tajiri

(DSIR-SS2) Forum Discussion: Institutional Research in universities to encourage students to qualify for the national examinations

July 5 (Tue) 1:00PM-2:40PM
Room A   ESKM-SS2
Session Chair: Shiroh Itai, Hiroshima Institute of Technology, Japan
(ESKM-SS2) Development and evaluation of cardiopulmonary resuscitation training system using Azure Kinect DK
Tomoki Kuriyagawa and Akinori Minaduki

(ESKM-SS2) Personality Traits Estimation of Participants Based on Multimodal Information in Knowledge-Transfer-type Discussion

Tessai Hayama and Shota Yokoyama

(ESKM-SS2) Design and Implementation of System for URL Signature Construction and Impact Assessment

Shota Fujii, Nobutaka Kawaguchi, Shoya Kojima, Tomoya Suzuki and Toshihiro Yamauchi

(ESKM-SS2) A pictogram creation framework for real and virtual worlds and evaluation of viewpoint elements

Hidehiko Hayashi

Room B   SCAI-4

Session Chair: Tsunenori Mine, Kyushu University, Japan

Consideration of Service Robot with reference to Joruri Puppet, assuming Street fundraising activities

Masahiko Narita and Sachiko Nakagawa

Hyperheuristic Method Based on Deep Reinforcement Learning

Hitoshi Iima and Yoshiyuki Nakamura

Product Defect Detection Based on Multi-Label Classification

Takumi Meguro, Shota Nakada and Qiangfu Zhao

Statistical Learning Models for Japanese Essay Scoring Toward One-shot Learning

Chihiro Ejima and Koichi Takeuchi

Room C   BMOT-2

Session Chair: Shimpei Matsumoto, Hiroshima Institute of Technology, Japan

Usefulness Analysis of a Video-Based Local Resource Promotion Website

Tatsuya Matsuo and Shimpei Matsumoto

Social Endorser Advertising Dissemination Mechanism Based on Social, Mobility and Contextual Intelligence

Lien-Fa Lin

Predicting CTR of Regional Flyer Images Using CNN

Daichi Inoue and Shimpei Matsumoto

Room D   DSIR-SS3 & DSIR-2

Session Chair: Yoshikazu Asada, Jichi Medical University Japan

(DSIR-SS3) Reliability and Validity of the Multiple Mini Interview in the General Entrance Examination for Medical Schools at a National University

Koji Tsunekawa, Michiyo Nakashima and Toshiki Shioiri

(DSIR-SS3) Changes of Moodle Usage Trends by Academic Year in a Medical School during the COVID-19 Pandemic

Yoshikazu Asada and Machiko Saeki Yagi

(DSIR) Evaluation of Predictive Models in Institutional Research Based on Multi-Objective Optimization

Nobuhiko Kondo, Toshiharu Hatanaka and Takeshi Matsuda

(DSIR) Student's interests and career understanding: A topic analysis of first-year career courses

Tatsuya Tsumagari, Yoko Nakazato and Takashi Tsumagari

July 5 (Tue) 2:50PM-4:30PM

Room A   ESKM-SS1

Session Chair: Hidehiko Hayashi, Hokusei Gakuen University, Japan

(ESKM-SS1) Domain Bias in Fake News Datasets Consisting of Fake and Real News Pairs

Shingo Kato, Linshuo Yang and Daisuke Ikeda

(ESKM-SS1) Analyzing the Structure of U.S. Patents Using Patent Families

Jun Nakamitsu, Satoshi Fukuda and Hidetsugu Nanba

(ESKM-SS1) A Book Recommendation System Considering Contents and Emotions of User Interests

Takumi Fujimoto and Harumi Murakami

(ESKM-SS1) Visual Metaphor Construction for Image and Description of Fashion Goods

Dan Wang, Ryota Mibayashi and Hiroaki Ohshima

Room B   LTLE-3

Session Chair: Chengjiu Yin, Kobe University, Japan

Graph Expression for Various Software Documents As Unified Format

Mika Ohtsuki and Tetsuro Kakeshita

FunPhysics: A Gamification-Based Web Platform for Interactive Teaching and Learning

Toshiki Katanosaka, Fahim Khan and Ken Sakamura

Generating Trace Table for Java Programs

Masateru Kishikawa, Mika Ohtsuki and Tetsuro Kakeshita

Development and Assessment of Recommendation System Based on Behavioral Intervention Analysis

Pin-Chen Chen and Chih-Kai Chang

Room C   BMOT-SS1 & BMOT SS-2

Session Co-Chairs: Koji Okuhara(Toyama Prefectural University, Japan), Hidekazu Iwamoto(Josai International University, Japan)

(BMOT-SS1) Citizen Perceptions of Intention to Live in a Smart Cities Based on its Characteristics

Kenichi Shibuya and Hideo Suzuki

(BMOT-SS2) Convention attendees' expectation toward tourism resources at destination

Hidekazu Iwamoto and Tokuro Matsuo

(BMOT-SS1) Multi-Item Multi-Stage Production Inventory System Using AVaR and Permission Value

Antonio Rene, Ryo Haruna and Koji Okuhara

Room D   IDDC-1 & EAIS-1

Session Co-Chairs: Taishi Nemoto(Kagoshima Women's College, Japan), Atsushi Shimoda(Chiba Institute of Technology, Japan)

(IDDC) Prototype of virtual reality and CAVE installation for transdisciplinary archeology

Vincenzo Lombardo and Vittorio Lauro

(IDDC) A Proposal for Creating Congruent Content of Different Media Types by Interactive Evolutionary Computation

Makoto Fukumoto, Taichi Miyamoto and Haoran Gan

(IDDC) Composition of Musical Piece Suited to Natural Sound by Interactive GA using User's EEG as Fitness

Haoran Gan and Makoto Fukumoto

(EAIS) Product Design Model by ArchiMate

Shuichiro Yamamoto and Atsumi Tanaka

July 5 (Tue) 5:00PM-5:30PM
Poster Setting, Aioi Room (4ᵗʰ floor), Kanazawa New Grand Hotel

July 5 (Tue) 5:30PM-6:30PM

Poster Session, Aioi Room (4th floor), Kanazawa New Grand Hotel

ESKM Posters

Proposal of Method for Recommending Suitable Pesticides under each Cultivation Environment

Keisuke Noguchi, Tatsuki Nakatake, Koji Yamauchi, Noriko Horibe and Shin-ish Aoqui

Extraction Method for Important Words as a Viewer's Reaction Arousal Factor from YouTube-Transcription

Ryuichi Hirano, Ryotaro Okada and Takafumi Nakanishi

Dimension Reduction Method by Principal Component Analysis in the Prediction of Final User Satisfaction

Kitti Koonsanit, Daiki Hiruma and Nobuyuki Nishiuchi

HOUND: Log Analysis Support for Threat Hunting by Log Visualization

Rei Yamagishi, Takahiro Katayama, Nobutaka Kawaguchi and Tomohiro Shigemoto

A problem finder with giving hints to modify learners' program codes

Wakana Hashimoto, Yo Amano and Kazuhiro Takeuchi

A Monitor-based Trust Evaluation Framework for Private Blockchain

Wen-Wei Li, Yuan-Hsiu Chou, Jen-Hao Wang and Shi-Cho Cha

LTLE Posters

Efficiently Organizing Student Groups in Hybrid Classes Using Attendance Confirmation Tools

Kahori Ogashiwa, Shigeaki F. Hasegawa and Noriko Asamoto

Estimating the difficulty of courses from syllabuses

Masako Furukawa and Yoshitomo Yaginuma

Development of a Human Resource Promotional Tool to Visualize Skills Acquired by Newcomer Nurses at Home-Visit Nursing Stations in Japan

Sachiko Somaki, Yukie Majima, Seiko Masuda and Yumiko Nakamura

Where are Dropouters?

Hiroshi Konashi, Kenji Kume and Katsuichi Higuchi

Designing a library-use instruction educational board game with situated history story to enhance information literacy learning

Chih-Chen Kuo and Huei Tse Hou

Applying an escape room game in synchronous online learning activity: A preliminary analysis of learners' learning achievement, flow and technology acceptance

Cheng-Tai Li, Chai-Ping Wang and Huei Tse Hou

Relationship Between Information Moral Behavior and Risk Awareness Associated With SNS Use

Sakiko Sumai, Norio Ishii, Yuri Suzuki, Haruta Kayo, Mieko Suwa, Shintarou Higashiyama, Tomomi Morishita and Yukari Murayama

A Classroom Support in Smartphone Learning Environments Using Tangibles Materials

Toshiyasu Kato and Yasushi Kambayashi

DSIR Posters

Current Status and Issues of University Education-related Data in TOKYO OPEN DATA

Mio Tsubakimoto

Basic research for collaborative PBL in online environment

Kenji Nakamura, Syunya Shibusawa, Masaki Konya, Kayoko Katayama, Syogo Matsuno, Takayuki Asao and Michiko Yasukawa

What is the Essential Curriculum for IR in Japan?

Tetsuya Oishi

Changes in the social positioning of higher education and the emergence of new great divergence

Noriko Ito, Nobuhiko Seki and Masao Mori

SCAI Posters

Collocation Extraction Method Using Mutual Information Contents

Iori Fukumura and Sanggyu Shin

A Bottom-Up Enumeration Algorithm of Minimal Generators without Support Counting for Compressing Negative Association Rules

Kento Yajima, Koji Iwanuma and Yoshitaka Yamamoto

Framework for Comparing Accuracy of Time-Series Forecasting Methods

Junichi Sekitani and Harumi Murakami

Determining Disease Method by Judging Urgency Based on Morphological Analysis of Twitter Data

Iori Fukumura, Atsushi Suzuki, Tomoyuki Kanno and Sanggyu Shin

Deep Reinforcement Learning for Multi-agent Simulation using a partial floor field cutout

Yasuki Iizuka

Verification of textual entailment in Japanese Using Sigmoid and ReLU Function

Iori Fukumura, Masashi Akahori, Ryu Kubota and Sanggyu Shin

Topic Model Analysis of Japanese Microblog Profile Text

Daiki Sato and Yoshitomo Yaginuma

A high performance approach with MATSim for traffic road simulation

Sara Moukir and Nahid Emad

Automatic Generation of Algorithm Procedures using General Pre-trained Models

Sakuei Onishi and Hiromitsu Shiina

EAIS Posters

Bed management for Inpatient Using Particle Swarm Optimization

Mari Ito and Masaaki Suzuki

A Visual Modeling Environment for the nuXmv Model Checker intended for Novice Users

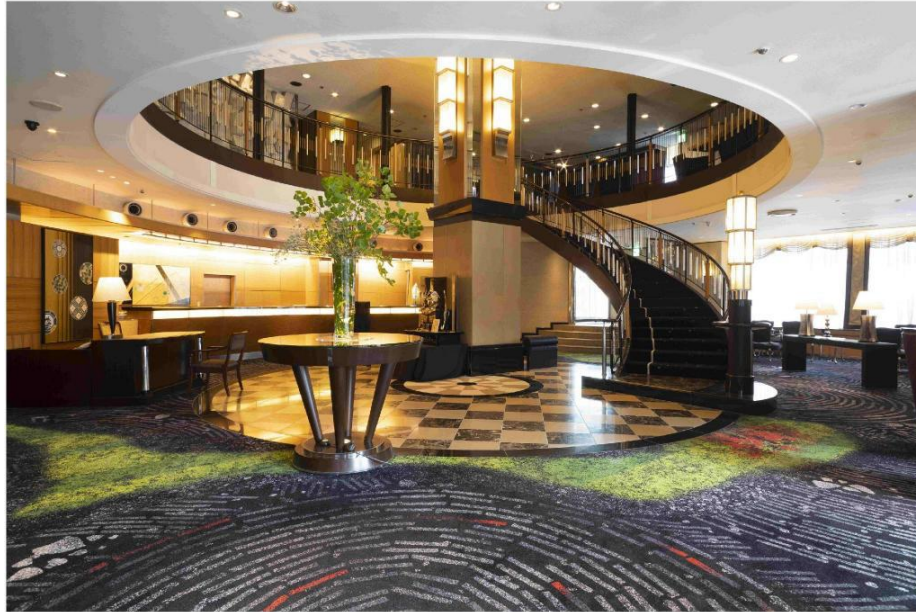*Kazuma Toyota, Tomoyuki Yokogawa, Sousuke Amasaki, Hirohisa Aman and Kazutami Arimoto*

IDDC Posters

A Preliminary Prototype Application of Adaptive Drawing Practice Support with Style-based Advice on a Creative Process Analysis

Yushin Jinno and Naoki Fukuta

July 5 (Tue) 6:30PM-8:30PM

Banquet, Kinsen Ballroom (4th floor), Kanazawa New Grand Hotel

July 6 (Wed) 9:30AM-12:00PM

Room A   **EAIS-SS2**

Session Chair: Motoi Iwashita, Chiba Institute of Technology, Japan

(EAIS-SS2) Using SNS for loan review at the bank

Motoi Iwashita and Naoko Nomoto

(EAIS-SS2) Risk Assessment Quantification for Remote Learning Based on Lecture Type

Teruo Endo, Nao Ohmori, Shigeaki Tanimoto, Takashi Hatashima and Atsushi Kanai

(EAIS-SS2) Study on Organizational Response Management to System Failures

Atsushi Shimoda

(EAIS-SS2) A Study of Risk Assessment Quantification for Secure Telework

Hiroki Koyama, Yuuna Nakagawa, Shigeaki Tanimoto, Teruo Endo, Takashi Hatashima and Atsushi Kanai

Room B   **ESKM-2**

Session Chair: Daisuke Ikeda, Kyushu University, Japan

A System for Generating Student Progress Reports in Cram School

Shumpei Kobashi and Tsunenori Mine

Classifying Gram Positive Cocci and Gram Negative Bacilli in Gram Stained Smear Images

Ibuki Kawano, Eri Kurumida, Syoma Terada and Kouichi Hirata

Finding Correlated Mutations of Positions among Structural Proteins in SARS-CoV-2 Amino Acid Sequences

Kan Yonashiro, Yuichi Shimaya and Kouichi Hirata

Dataset Construction and Classification based on Pre-trained Models for Opinion Holder Detection

Al Mahmud and Kazutaka Shimada

Developing a Component Comment Extractor from Product Reviews on E-Commerce Sites

Shogo Anda, Masato Kikuchi and Tadachika Ozono

Visual Question Answering Focusing on Object Positional Relation with Capsule Network

Hidekazu Yanagimoto, Riki Nakatani and Kiyota Hashimoto

Room C   DSTM-SS1

Session Chair: Takayuki Shiina, Waseda University, Japan

(DSTM-SS1) Solving stochastic integer-programming problems in electric bus introduction planning

Yusuke Ishitani, Tetsuya Sato, Takayuki Shiina and Ryunosuke Hamada

(DSTM-SS1) Multi-product Inventory Routing Problem Considering Demand Uncertainty

Taichi Kawamura, Takayuki Shiina and Tetsuya Sato

(DSTM-SS1) Optimization of EV bus charging schedule by stochastic programming

Tetsuya Sato, Takayuki Shiina and Ryunosuke Hamada

(DSTM-SS1) A cutting-plane solution for chance-constrained unit commitment problems

Yang Chen, Tetsuya Sato and Takayuki Shiina

(DSTM-SS1) Operational Planning of Fixed-Route Buses Considering the Charging of Electric Cars

Takuma Ohzeki, Tetsuya Sato, Takayuki Shiina and Ryunosuke Hamada

Room D   DSIR-SS1

Session Co-Chairs: Kahori Ogashiwa(Ochanomizu University, Japan), Soichiro Aihara(Shibaura Institute of Technology, Japan), Toru Sugihara(Kanto Gakuin University, Japan), Kumiko Kanekawa(Research Organization of Information and Systems, Japan)

(DSIR-SS1) Feature Selection by Thematic and Temporal Distinction in Research Grant Applications

Michiko Yasukawa and Koichi Yamazaki

(DSIR-SS1) Text Analysis to the Preambles of the 4th Medium-term Goals/Plans of National University Corporations

Soichiro Aihara, Kahori Ogashiwa, Masao Mori, Sachio Hirokawa, Kumiko Kanekawa and Toru Sugihara

(DSIR-SS1) To predict first-year grades by including data on relationships with people inside and outside the university

Naruhiko Shiratori

(DSIR-SS1) A Study of Research Performance against KAKENHI, using Osaka University as a Case Study

Toshiki Shimbaru and Naoto Kai

(DSIR-SS1) An architecture of the information collected from higher education institutions by NIAD-QE

Kei Kurakawa and Syun Tutiya

(DSIR-SS1) Characteristic Analysis of Data Description　in Highly Cited Research Data

Naoto Kai and Toshiki Shimbaru

July 6 (Wed) 1:00PM-3:30PM

Room A　　　　　SCAI-5

Session Chair: Toshihiro Matsui, Nagoya Institute of Technology, Japan

Enhanced Computation of the EEG-IC Polarities using a Genetic Algorithm

Jorge Munilla, Andrés Ortiz, Haedar Alsafi and Juan Luis Luque

Meaning of the Clusters on Dimensionality Reduction by Word Clustering

Toshinori Deguchi, Sinsuke Seo and Naohiro Ishii

Recovering Shape and Size from a Single Endoscope Image using Optimization

Yuji Iwahori, Shun Emoto, Kenji Funahashi, M. K. Bhuyan, Aili Wang and Kunio Kasugai

Accurate Image Cutout Using Automatically Generated Trimaps

Yuki Matsuura and Takahiro Hayashi

A computationally efficient approach for solving RBSC-based formulation of the subset selection problem

Kohei Furuya, Zeynep Yucel, Parisa Supitayakul and Akito Monden

CNN-based visible ingredient segmentation in food images for food ingredient recognition

Zhu Ziyi and Dai Ying

Room B   ESKM-3

Session Chair: Tokinori Suzuki, Kyushu University, Japan

Segmental Distance between Rooted Labeled Caterpillars

Manami Hagihara, Tomoya Miyazaki and Kouichi Hirata

Improving Transparency of Hardware Breakpoints with Virtual Machine Introspection

Masaya Sato, Ryosuke Nakamura, Toshihiro Yamauchi and Hideo Taniguchi

Modality estimation methods in internal training reflection texts using BERT.

Makoto Yamada and Tsunenori Mine

Coupling of semantic and syntactic graphs generated via tweets to detect local events

Landy Rajaonarivo, Tsunenori Mine and Yutaka Arakawa

Object Detection as Gram Positive Cocci in Gram Stained Smear Images

Hitoshi Sugimoto and Kouichi Hirata

General Theory of Information Paves the Way to a Secure, Service-Oriented Internet Connecting People, Things, and Businesses

Mark Burgin and Rao Mikkilineni

Room C   DSTM-1

Session Chair: Sachio Hirokawa, Kyusyu University, Japan

Estimates of CO_2 concentrations based on satellite data and their usefulness in developing a more accurate picture of economic activity

Yoshiyuki Suimon, Hiroto Tanabe and Kiyoshi Izumi

Construction of a prototype syllabus-based Point of Parity estimation and visualization system for department branding

Hazuki Shibayama and Aya Ishigaki

Facility location selection considering distance and transportation mode

Akane Hagimoto, Aya Ishigaki and Ryuta Takashima

July 6 (Wed) 3:50PM-6:20PM

Room A   SCAI-6

Session Chair: Naoki Fukuta, Shizuoka University, Japan

A Navigation System for Visual Impaired People Based on Object Detection

Wei Shi, Rui Shan and Yoshihiro Okada

Generic Synthetic Image Detector Based on Deep Convolutional Neural Network

Wei-Chung Lin, Yi-Leh Wu and Ting-Chieh Tsen

Industry Momentum Strategy Based on Text Mining in the Japanese Stock Market

Yuya Kimura and Kei Nakagawa

Observing and Understanding Agent's Characteristics With Environmental Changes for Learning Agents

Dipta Das, Ihsan Ibrahim and Naoki Fukuta

Evaluating Contrastive Learning for Fine-grained Reading Detection

Md. Rabiul Islam, Andrew Vargo, Motoi Iwata, Masakazu Iwamura and Koichi Kise

Interpretable Predictive Results in Classification of Waka Poets

Aiha Ikegami and Takafumi Nakanishi

Room B   LTLE-4

Session Chair: Shimpei Matsumoto, Hiroshima Institute of Technology, Japan

Proposing a mitigating stagnation method to expand involvement in discussions on Social Networking Services

Hideki Kondo, Sayaka Tohyama, Ayano Ohsaki and Masayuki Yamada

Automatic assessment of student understanding for estimateing test score

Kyouhei Ueno and Tsunenori Mine

Preliminary Analysis of Educational Cloud Platforms using Multi-agent Learning

Asmita Kandel, Ihsan Ibrahim and Naoki Fukuta

Applications of Intelligent Environmental IoT Detection Tools in Environmental Education of College Students

Wu Tzu-Ning, Kai Yi Chin and Yu-Chung Lai

Evaluating the effectiveness of toggle function for card operation-based programming learning support system

Hiroshi Shigematsu, Shimpei Matsumoto, Terumasa Maeta and Shuichi Yamagishi

July 7 (Thu) 9:00AM-11:30AM

Room A   **SCAI-7**

Session Chair: Takafumi Nakanishi, Musashino University, Japan

Music Recommendation Method for Time-Series Emotions from Lyrics Using Valence-Arousal-Dominance Model

Hiroki Nakata and Takafumi Nakanishi

Multiple Portfolio Blending Strategy with Thompson Sampling

Keigo Fujishima and Kei Nakagawa

Object vs Pixel-based Flood/Drought detection in Paddy Fields using deep learning

Aakash Thapa, Bipul Neupane and Teerayut Horanont

Teaching support cockpit: Real-time avatarization for learning-activity logs with communication function

Sachiko Nakagawa, Hiroshi Maruyama and Yasufumi Takama

Data Augmention for Question Answering Using Transformer-based VAE with Negative Sampling

Wataru Kano and Koichi Takeuchi

Room B   **LTLE-5**

Session Chair: Tetsuo Tanaka, Kanagawa Institute of Technology, Japan

Investigating the effect of various types of audio reinforcement on memory retention

Parisa Supitayakul, Zeynep Yucel, Misato Nose and Akito Monden

Prototype of Programming Exercise Support System Able to Visualize Coding Status

Atsutoshi Satoh and Tetsuo Tanaka

A case study of mathematics educations using WeBWorK in Hokkaido University

Daichi Komori, Shun'Ichi Honda, Takao Namiki, Keisuke Yoshida and Toru Ohmoto

A Proposal of Programming Learning System with Reading Aloud "ONDOKU"

Mari Ueda, Nobuyuki Ishida, Kodai Odagiri, Hideo Kasuga and Tetsuo Tanaka

An Applicability Study on Refactoring Principles in Reading-Based Programming Learning

Terumasa Maeta and Shimpei Matsumoto

Analyzing Process of Distance Learning Using Resilience Engineering and Qualitative Approach

Shigeru Kusakabe

Room C   BMOT-3

Session Chair: Antonio Oliveira Nzinga Rene, Toyama Prefectural University, Japan

A Framework to Anticipate Indirect Impacts of the   Events in Project External Environment

Nguyen Dinh Chau Minh, Yoshiko Ohno, Kohei Tanaka, Mikiko Nakada, Fumihito Oura and Seiko Shirasaka

The Impact of Social Networking Services (SNS) on Cosmetic Buying Behavior

Ayane Sato, Ayana Okazaki, Kyoko Yoshida and Kayo Iizuka

Towards Sustainable Road Network in the Era of Shrinking Population: Case Study Using MATSim

Shun Higashikawa, Shoko Abe, Kazuhiko Iwase, Tomoaki Takemura, Jieshuo Zhang, Tomoyuki Ohkubo and Hisashi Hayashi

Increasing solvers' participation intention: Reducing heterogeneity and feedback in online ideation crowdsourcing contests

Tingting Liu and Quanwu Zhao

Analysis of Demand Response Scenarios by Industrial Consumers Using Artificial Electric Power Market Simulations

Masanori Hirano, Ryo Wakasugi and Kiyoshi Izumi

July 7 (Thu) 9:00AM-11:30AM

Room F   **Congress Adjournment**