

The 27th Game Programming Workshop Nov. 11 – 13 , 2022

Nov. 11

12:45 – 13:00 Opening	
13:00 – 14:00	
Strongly Solving 2048 on 3 × 3 Board and Performance Evaluation of Reinforcement Learning Agents	Shuhei Yamashita;;Tomoyuki Kaneko;;Taichi Nakayashiki
Strongly Solving NOCCA × NOCCA	Atsuya Yamamoto;;Kunihito Hoki
14:15 – 15:15	
Determining the Winner of Split-and-delete Nim	Tomoaki Abuku;;Ko Sakai;;Masato Shinoda;;Koki Suetsugu
Number-Guessing Game introducing a Reward and a Failure Cost	Riku Yoshioka;;Yuko Sakurai;;Satoshi Oyama;;Masato Shinoda
15:30 – 16:20	
Linear time algorithm for generalized 2-player Shichinarabe	Hironori kiya;;Koki Suetsugu
Strategy of the memory game in various settings	Tomoki Urata;;Diptarama Hendrian;;Ryo Yoshinaka;;Ayumi Shinohara
Poster session 1 16:30 – 17:30	
An Analysis of Human Behavioral Selection for Introducing Cognitive Biases and Biological Constraints into Game AI	Hikaru Sakamoto;;Chu-Hsuan Hsueh;;Kokolo Ikeda
Existence of a Creature that is a Paving Winner but still a Loser in One-Dimensional Achievement Games	Takayuki Tokuhisa
A system that allows AI players to make rich facial expressions in response to game situations	Okuda Makoto;;Hashimoto Tsuyoshi
Developing New Digital Curling System that is Extendable with Additional Simulation Models	Kaoru Uehara;;Takeshi Ito
A Study on Geister AI using the policy gradient method for UCT	Aoki Renju;;Hashimoto Tsuyoshi
Artificial Player for Colluding with other players with Monte Carlo method in Mahjong game	KOSUKE TAKADA;;NAOYUKI SATO
Various Levels Generation with Data Augmentation Using GAN	Soichiro Takata;;Yuichi Sei;;Yasuyuki Tahara;;Akihiko Ohsuga
17:30– Night sessions (free talk)	

Nov. 12 morning

9:00 – 10:00	
Research of Geister AI using UCT	Nishikori Koji;;Aoki Renju;;Hashimoto Tsuyoshi
Efficient Generation of Sudoku Puzzles with Seventeen Clues Using Beam Search	Suguru Nagao;;Osami Yamamoto
10:15 – 11:15	
Towards a universally effective utilization of board similarities in General Game Playing	Yoshiaki Uemiya;;Daisaku Yokoyama
Improving Neural-network Players for Two-player 2048 with $\alpha$ $\beta$ -search	Hayato Oda;;Kiminori Matsuzaki
Estimating Strategy and Imitating Play Style of Human Players Using Sequence Information in Mahjong	KOKI MAEKAWA;;SHOGO TAKEUCHI
Poster session 2 11:30 – 12:30	
Study of reinforcement using multi-task learning in computer Go	Tanida Masashi;;Fujita Gen
Explainable Game AI using Hierarchical Reinforcement Learning	Takuma Iwasa;;Yoshimasa Tsuruoka
Generations of Instances for Minesweeper Using Simplex Noise	Souya Ichikawa;;Tatsuya Arakawa
Study of reinforcement using multi-task learning in computer Go	Iwamoto Eitaro;;Tanida Masashi;;Fujita Gen
Dynamic difficulty adjustment using evaluation values in competitive Tetris	DOI KAIRI;;TAKEUCHI SHOGO
Opponent Hand Estimation in Mahjong using Transformer	Takuya Ogami;;Ryoya Nara;;Katsutoshi Amano;;Yuki Imajuku;;Yoshimasa Tsuruoka

Nov. 12 afternoon

14:00 – 15:00	
Invited talk : Hiroki Tanai (Professional Shogi Player, Ph.D candidate)	
15:15 – 16:45	
The Influence of Shogi AI on Professional Player's Records – A Study from Quantitative Analysis –	MASASHI SAITO;;TAKESHI ITO
Predict Shogi Player Names from Game Records Using Deep Learning	Hiroshi Yamashita
Classification of human thinking time using convolutional neural network for evaluation of Shogi-board difficulty	Hidetoshi Ikeda;;Genki Ichinose
Consideration and classification of positions that are difficult for move prediction models to predict	Tatsuyoshi Ogawa;;Chu-Hsuan Hsueh;;Kokolo Ikeda
Poster session 3 17:00 – 18:00	
Qinoa Shogi and Go Site Analysis of User-submitted Data and AI	MOTOKI YAMADA
Adjustments of Deals of Daihinmin for game utilities	Kenta Shimosawa;;Tatsuya Arakawa
Reinforcement Learning in Rogue-like Games with Temporary Curiosity	Koki Kagaya;;Yoshimasa Tsuruoka
Strategy Analysis for Three Player Mahjong Through Simulation Study	TAKUMA OKUMURA;;HITOSHI MATSUBARA
Group Control with Reward Functions by using Deep Reinforcement Learning	TAIGA IWAI;;YOUICHIROU MIYAKE
An Accurate Deep Learning Model on Computer Shogi	SEIJI SHIBA
18:00– Night sessions (free talk)	

Nov. 13

9:00 – 9:50	
The Extraction of Go AI-Specific Moves that Differ From Human Sences	ZHIWEI MA;;TAKESHI ITO
A support system to help fighting game beginners understand mind games	Makoto Sakemi;;Chu-Hsuan Hsueh;;Kokolo Ikeda
10:00 – 10:50	
Memory-Efficient Reinforcement Learning with Priority based on Surprise and On-policyyness	Ryosuke Unno;;Yoshimasa Tsuruoka
Sudden-death prediction using Deep Convolutional Neural Network in Connect6	Jung-Kuei Yang;;Shi-Jim Yen;;Yu-Yu Yang
11:00 – 12:00	
Multi-Agent Reinforcement Learning with Assistive Agents	Atsuki Nakata;;Yoshimasa Tsuruoka
Adaption of MC Softmax Search for 2048	Shota Watanabe;;Kiminori Matsuzaki
Character AI Reinforcement Learning by Using Finite State Machine with Deep Neural Network in Action Games	Jitao Zhou;;Youichiro Miyake
12:00 – 12:15 Closing	