## Contents

**LENLS 12**

Towards a Probabilistic Analysis for Conditionals and Unconditionals . . . . 3  
*Stefan Kaufmann*

What Do Proper Names Refer to? The Simple Sentence Puzzle  
and Identity Statements . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 15  
*Tomohiro Sakai*

Particles of (Un)expectedness: Cantonese *Wo* and *Lo* . . . . . . . . . . . . . 27  
*Yurie Hara and Eric McCready*

Rhetorical Structure and QUDs . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 41  
*Julie Hunter and Mártka Abrusán*

An Inference Problem Set for Evaluating Semantic Theories  
and Semantic Processing Systems for Japanese . . . . . . . . . . . . . . . . . . . . . . . . . . 58  
*Ai Kawazoe, Ribeka Tanaka, Koji Mineshima, and Daisuke Bekki*

Applicative Abstract Categorial Grammars in Full Swing . . . . . . . . . . . . . 66  
*Oleg Kiselyov*

Scope Parallelism in Coordination in Dependent Type Semantics . . . . . . . . 79  
*Yusuke Kubota and Robert Levine*

Discourse Particles as CCP-modifiers: German *doch* and *ja*  
as Context Filters . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 93  
*Lukas Rieser*

Tracking Down Disjunction . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 109  
*Uli Sauerland, Ayaka Tamura, Masatoshi Koizumi,  
and John M. Tomlinson Jr.*

The Projection of Not-at-issue Meaning via Modal Support:  
The Meaning and Use of the Japanese Counter-Expectational Adverbs . . . . . 122  
*Osamu Sawada*

Evaluative Predicates and Evaluative Uses of Ordinary Predicates . . . . . . . . 138  
*Isidora Stojanovic*

Strong Permission in Prescriptive Causal Models . . . . . . . . . . . . . . . . . . . . 151  
*Linton Wang*
Truth as a Logical Connective ........................................... 166
Shunsuke Yatabe

JURISIN 9

Abductive Logic Programming for Normative Reasoning and Ontologies . . . 187
Marco Gavanelli, Evelina Lamma, Fabrizio Riguzzi, Elena Bellodi, Zese Riccardo, and Giuseppe Cota

A Belief Revision Technique to Model Civil Code Updates .................. 204
Ryuta Arisaka

Combining Input/Output Logic and Reification for Representing Real-World Obligations ........................................... 217
Livio Robaldo, Llio Humphreys, Xin Sun, Loredana Cupi, Cristiana Santos, and Robert Muthuri

Using Ontologies to Model Data Protection Requirements in Workflows . . 233
Cesare Bartolini, Robert Muthuri, and Cristiana Santos

Utilization of Multi-word Expressions to Improve Statistical Machine Translation of Statutory Sentences ..................................... 249
Satomi Sakamoto, Yasuhiro Ogawa, Makoto Nakamura, Tomohiro Ohno, and Katsuhiko Toyama

Argumentation Support Tool with Reliability-Based Argumentation Framework ........................................... 265
Kei Nishina, Yuki Katsura, Shogo Okada, and Katsumi Nitta

Applying a Convolutional Neural Network to Legal Question Answering ... 282
Mi-Young Kim, Ying Xu, and Randy Goebel

Lexical-Morphological Modeling for Legal Text Analysis ................... 295
Danilo S. Carvalho, Minh-Tien Nguyen, Chien-Xuan Tran, and Minh-Le Nguyen

AAA 2015

On the Issue of Argumentation and Informedness ................................ 317
Martin Caminada and Chiaki Sakama

On the Interpretation of Assurance Case Arguments .......................... 331
John Rushby

Learning Argument Acceptability from Abstract Argumentation Frameworks . . . . 348
Hiroyuki Kido
HAT-MASH 2015
Designing Intelligent Sleep Analysis Systems for Automated Contextual Exploration on Personal Sleep-Tracking Data .............................. 367
Zilu Liang, Wanyu Liu, Bernd Ploderer, James Bailey, Lars Kulik, and Yuxuan Li

Axis Visualizer: Enjoy Core Torsion and Be Healthy for Health Promotion Community Support ................................................................. 380
Takuichi Nishimura, Zilu Liang, Satoshi Nishimura, Tomoka Nagao, Satoko Okubo, Yasuyuki Yoshida, Kazuya Imaizumi, Hisae Konosu, Hiroyasu Miwa, Kanako Nakajima, and Ken Fukuda

TSDAA 2015
A Comparative Study of Similarity Measures for Time Series Classification . . 397
Sho Yoshida and Basabi Chakraborty

Extracting Propagation Patterns from Bacterial Culture Data in Medical Facility ................................................................. 409
Kazuki Nagayama, Kouichi Hirata, Shigeki Yokoyama, and Kimiko Matsuoka

Real-Time Anomaly Detection of Continuously Monitored Periodic Bio-Signals Like ECG ............................................................. 418
Takuya Kamiyama and Goutam Chakraborty

Aggregating and Analyzing Articles and Comments on a News Website . . . 428
David Ramamonjisoa

ASD-HR 2015
Positive Bias of Gaze-Following to Android Robot in Adolescents with Autism Spectrum Disorders .............................................................. 447
Yuichiro Yoshikawa, Yoshio Matsumoto, Hirokazu Kumazaki, Yujin Wakita, Sakiko Nemoto, Hiroshi Ishiguro, Masaru Mimura, and Masutomo Miyao

Feasibility of Collaborative Learning and Work Between Robots and Children with Autism Spectrum Disorders ........................................ 454
Felix Jimenez, Tomohiro Yoshikawa, Takeshi Furuhashi, Masayoshi Kanoh, and Tsuyoshi Nakamura

Teachers’ Impressions on Robots for Therapeutic Applications ................ 462
Hidenobu Sumioka, Yuichiro Yoshikawa, Yasuo Wada, and Hiroshi Ishiguro
An Intervention for Children with Social Anxiety and Autism Spectrum Disorders Using an Android Robot ........................................... 470

Hirokazu Kumazaki, Yuichiro Yoshikawa, Yoshio Matsumoto,
Masutomo Miyao, Hiroshi Ishiguro, Taro Muramatsu,
and Masaru Mimura

Usefulness of Animal Type Robot Assisted Therapy for Autism Spectrum Disorder in the Child and Adolescent Psychiatric Ward .......................... 478

Yoshihiro Nakadoi

SKL 2015

The Trend in the Frontal Area Activity Shift with Embodied Knowledge Acquisition During Imitation Learning of Assembly Work .......................... 485

Yusuke Asaka, Keiichi Watanuki, and Lei Hou

The Cognitive Role of Analogical Abduction in Skill Acquisition ............ 499

Koichi Furukawa, Keita Kinjo, Tomonobu Ozaki,
and Makotoc Haraguchi

Identifying Context-Dependent Modes of Reading ........................... 514

Miho Fuyama and Shohei Hidaka

Whole-Body Coordination Skill for Dynamic Balancing on a Slackline .... 528

Kentaro Kodama, Yusuke Kikuchi, and Hideo Yamagiwa

Author Index ................................................................. 547
New Frontiers in Artificial Intelligence
JSAI-isAI 2015 Workshops, LENLS, JURISIN, AAA,
HAT-MASH, TSDAA, ASD-HR, and SKL, Kanagawa, Japan,
November 16-18, 2015, Revised Selected Papers
Otake, M.; Kurahashi, S.; Ota, Y.; Satoh, K.; Bekki, D.
(Eds.)
2017, XVI, 548 p. 130 illus., Softcover
ISBN: 978-3-319-50952-5