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Computational Linguistics and Intelligent Text Processing

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Preface

CICLing 2011 was the 12th Annual Conference on Intelligent Text Processing and Computational Linguistics. The CICLing conferences provide a wide-scope forum for the discussion of the art and craft of natural language processing research as well as the best practices in its applications.

This set of two books contains four invited papers and a selection of regular papers accepted for presentation at the conference. Since 2001, the proceedings of the CICLing conferences have been published in Springer's *Lecture Notes in Computer Science* series as volume numbers 2004, 2276, 2588, 2945, 3406, 3878, 4394, 4919, 5449, and 6008.

The set has been structured into 13 sections:

- Lexical resources
- Syntax and parsing
- Part-of-speech tagging and morphology
- Word sense disambiguation
- Semantics and discourse
- Opinion mining and sentiment analysis
- Text generation
- Machine translation and multilingualism
- Information extraction and information retrieval
- Text categorization and classification
- Summarization and recognizing textual entailment
- Authoring aid, error correction, and style analysis
- Speech recognition and generation

The 2011 event received a record high number of submissions. A total of 298 papers by 658 authors from 48 countries were submitted for evaluation by the International Program Committee, see Tables 1 and 2. This two-volume set contains revised versions of 74 papers, by 227 authors, selected for presentation; thus the acceptance rate for this set was 25%.

The books feature invited papers by

- Christopher Manning, Stanford University, USA
- Diana McCarthy, Lexical Computing Ltd., UK
- Jun'ichi Tsujii, U. of Tokyo, Japan, and U. of Manchester and NacTeM, UK
- Hans Uszkoreit, Saarland University and DFKI, Germany

who presented excellent keynote lectures at the conference. Publication of extended full-text invited papers in the proceedings is a distinctive feature of the CICLing conferences. Furthermore, in addition to the presentation of their invited papers, the keynote speakers organized separate vivid informal events; this is also a distinctive feature of this conference series.

Table 1. Statistics of submissions and accepted papers by country or region

Country or region	Authors		Papers ¹	Country or region	Authors		Papers ¹
	Subm.	Subm.	Accp.		Subm.	Subm.	Accp.
Australia	17	7	3	Korea (South)	10	4.29	1
Austria	2	1.33	0.33	Macao	4	1	–
Belgium	4	2	1	Malaysia	5	2	–
Brazil	5	2	1	Mexico	13	6.92	2
Canada	11	6.33	2	Myanmar	7	2	–
China	47	17.67	5.67	Nigeria	3	1	–
Colombia	3	2	–	Norway	7	2.17	–
Croatia	3	2	–	Pakistan	6	3.57	–
Cuba	2	0.67	–	Peru	2	0.50	–
Czech Rep.	14	8.50	3	Poland	2	2	–
Egypt	9	2.67	1.67	Portugal	25	9.67	2
Finland	3	2	–	Romania	7	3.33	–
France	36	16.68	4.83	Russia	8	2.33	–
Georgia	1	1	–	Saudi Arabia	1	1	–
Germany	29	12.58	3.50	Singapore	7	2.50	1
Greece	6	2	1	Spain	39	14.30	4.30
Hong Kong	5	2	1	Sweden	5	1.39	1
India	85	41.75	6.42	Taiwan	13	5	–
Iran	23	18	3	Thailand	6	3	1
Ireland	14	7	1	Tunisia	9	3.15	–
Israel	3	1.75	–	Turkey	8	4.17	1
Italy	17	6.25	2.25	UK	13	6.67	0.50
Japan	71	29.67	14	USA	39	17.87	4.53
Jordan	1	0.50	–	Viet Nam	8	4.33	1
				<i>Total:</i>	658	298	74

¹ By the number of authors: e.g., a paper by two authors from the USA and one from the UK is counted as 0.67 for the USA and 0.33 for the UK.

With this event we introduced a new policy of giving preference to papers with verifiable and reproducible results: we encouraged the authors to provide, in electronic form, a proof of their claims or a working description of the suggested algorithm, in addition to the verbal description given in the paper. If the paper claimed experimental results, we encouraged the authors to make available to the community all the input data necessary to verify and reproduce these results; if it claimed to advance human knowledge by introducing an algorithm, we encouraged the authors to make the algorithm itself, in some programming language, available to the public. This additional electronic material will be permanently stored on CICLing’s server, www.CICLing.org, and will be available to the readers of the corresponding paper for download under a license that permits its free use for research purposes.

In the long run we expect that computational linguistics will have verifiability and clarity standards similar to those of mathematics: in mathematics, each claim is accompanied by a complete and verifiable proof (usually much

Table 2. Statistics of submissions and accepted papers by topic²

Accepted	Submitted	% accepted	Topic
13	40	33	Lexical resources
13	47	28	Practical applications
11	39	28	Clustering and categorization
11	44	25	Other
10	28	36	Acquisition of lexical resources
10	29	34	Statistical methods (mathematics)
10	52	19	Machine translation & multilingualism
9	25	36	Syntax and chunking (linguistics)
9	31	29	Semantics and discourse
9	58	16	Information extraction
7	46	15	Text mining
6	12	50	Symbolic and linguistic methods
6	50	12	Information retrieval
5	13	38	Parsing algorithms (mathematics)
5	16	31	Noisy text processing and cleaning
5	18	28	Summarization
4	11	36	Text generation
4	16	25	Opinion mining
4	17	24	POS tagging
3	7	43	Speech processing
3	8	38	Cross-language information retrieval
3	15	20	Word sense disambiguation
3	20	15	Formalisms and knowledge representation
2	6	33	Emotions and humor
2	13	15	Named entity recognition
1	5	20	Spelling and grammar checking
1	7	14	Anaphora resolution
1	7	14	Textual entailment
1	8	12	Question answering
1	11	9	Natural language interfaces
1	12	8	Morphology
–	6	0	Computational terminology

² As indicated by the authors. A paper may belong to several topics.

greater in size than the claim itself); each theorem—and not just its description or general idea—is completely and precisely presented to the reader. Electronic media allow computational linguists to provide material analogous to the proofs and formulas in mathematics in full length—which can amount to megabytes or gigabytes of data—separately from a 12-page description published in a book. A more detailed argumentation for this new policy can be found on www.CICLing.org/why_verify.htm.

To encourage the authors to provide algorithms and data along with the published papers, we introduced a new Verifiability, Reproducibility, and Working Description Award. The main factors in choosing the awarded submission were

technical correctness and completeness, readability of the code and documentation, simplicity of installation and use, and exact correspondence to the claims of the paper. Unnecessary sophistication of the user interface was discouraged; novelty and usefulness of the results were not evaluated—those parameters were evaluated for the paper itself and not for the data.

The following papers received the Best Paper Awards, the Best Student Paper Award, as well as the Verifiability, Reproducibility, and Working Description Award, correspondingly (the best student paper was selected from the papers of which the first author was a full-time student, excluding the papers that received a Best Paper Award):

- 1st Place: *Co-related Verb Argument Selectional Preferences*, by Hiram Calvo, Kentaro Inui, and Yuji Matsumoto;
- 2nd Place: *Self-Adjusting Bootstrapping*, by Shoji Fujiwara and Satoshi Sekine;
- 3rd Place: *Effective Use of Dependency Structure for Bilingual Lexicon Creation*, by Daniel Andrade, Takuya Matsuzaki, and Jun'ichi Tsujii;
- Student: *Incorporating Coreference Resolution into Word Sense Disambiguation*, by Shangfeng Hu and Chengfei Liu;
- Verifiability: *Improving Text Segmentation with Non-systematic Semantic Relation*, by Viet Cuong Nguyen, Le Minh Nguyen, and Akira Shimazu.

The authors of the awarded papers (except for the Verifiability Award) were given extra time for their presentations. In addition, the Best Presentation Award and the Best Poster Award winners were selected by a ballot among the attendees of the conference.

Besides its high scientific level, one of the success factors of CICLing conferences is their excellent cultural program. The attendees of the conference had a chance to visit Kamakura—known for the Kamakura period of ancient history of Japan—where they experienced historical Japanese cultural heritage explained by highly-educated local volunteers and saw Shinto (traditional religion of Japan) shrines and old Buddhist temples characteristic of Japan. They recalled recent history at the Daigo Fukuryu Maru Exhibition Hall, which tells the story of a Japanese boat exposed to and contaminated by nuclear fallout from a thermonuclear device test in 1954. Finally, the participants familiarized themselves with modern Japanese technology during guided tours to Toshiba Science Museum and Sony Square; the latter can only be accessed by special invitation from Sony. And of course they enjoyed Tokyo, the largest city in the world, futuristic and traditional at the same time, during an excursion to the Japanese-style East Gardens of the Imperial Palace and a guided tour of the city, by bus and boat (see photos on www.CICLing.org).

I would like to thank all those involved in the organization of this conference. In the first place these are the authors of the papers that constitute this book: it is the excellence of their research work that gives value to the book and sense to the work of all other people. I thank all those who served on the Program Committee, Software Reviewing Committee, Award Selection Committee, as

well as the additional reviewers, for their hard and very professional work. Special thanks go to Ted Pedersen, Grigori Sidorov, Yasunari Harada, Manuel Vilares Ferro, and Adam Kilgariff, for their invaluable support in the reviewing process.

I thank the School of Law and Media Network Center of Waseda University, Japan, for hosting the conference; the Institute for Digital Enhancement of Cognitive Development (DECODE) of Waseda University for valuable collaboration in its organization; and Waseda University for providing us with the best conference facilities. With deep gratitude I acknowledge the support of Professor Waichiro Iwashi, the dean of the School of Law of Waseda University, and Professor Toshiyasu Matsushima, Dean and Director of Media Network Center of Waseda University. I express my most cordial thanks to the members of the local Organizing Committee for their enthusiastic and hard work. The conference would not have been a success without the kind help of Professor Mieko Ebara, Ms. Mayumi Kawamura, Dr. Kyoko Kanzaki, and all the other people involved in the organization of the conference and cultural program activities.

My most special thanks go to Professor Yasunari Harada, Director of DECODE, for his great enthusiasm and infinite kindness and patience; countless nights without sleep, after a whole day of teaching and meetings, spent on the organization of the conference, from the strategic planning to the finest details. I feel very lucky to have had the opportunity to collaborate with this prominent scientist, talented organizer, and caring friend. From him I learnt a lot about human relationships as well as about planning and organization.

With great gratitude I acknowledge the financial support of the Kayamori Foundation of Information Science Advancement, which greatly helped us to keep the fees low. I would like to express my gratitude to the Kamakura Welcome Guide Association for making our visit to this historical city of Japan a memorable and enjoyable one. Thanks are also due to Sony and Totsusangyo Corporation, Toshiba Science Museum, and Daigo Fukuryu Maru Exhibition Hall, for arranging special visits and guided tours for CICLing 2011 participants. I would like to specifically recognize the help of Mr. Masahiko Fukakushi, Executive Officer and Corporate Senior Vice President of Toshiba Corporation, in arranging our visit to Toshiba Science Museum and the help of Dr. Atsushi Ito, Distinguished Research Engineer at KDDI R&D Laboratories, in providing wireless Internet access to the attendees of the conference.

The entire submission and reviewing process was supported for free by the EasyChair system (www.EasyChair.org). Last but not least, I deeply appreciate the Springer staff's patience and help in editing this volume and getting it printed in record short time—it is always a great pleasure to work with Springer.

February 2011

Alexander Gelbukh
General Chair

Organization

CICLing 2011 was co-hosted by the School of Law and Media Network Center of Waseda University, and was organized by the CICLing 2011 Organizing Committee, in conjunction with the Natural Language and Text Processing Laboratory of the CIC (Center for Computing Research) of the IPN (National Polytechnic Institute), Mexico, and the Institute for Digital Enhancement of Cognitive Development of Waseda University, with partial financial support from the Kayamori Foundation of Information Science Advancement.

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