# WELCOMING MESSAGE FROM THE GENERAL CHAIR

It is my great pleasure to extend a sincere welcome to all of you who are participating in IEEE NLP-KE-2003 conference, the 2003 International Conference on Natural Language Processing and Knowledge Engineering, being held here at the beautiful and elegant Media Center in Beijing, China.

The NLP-KE Conference serves as an international forum for academic and industrial researchers and practitioners to discuss the applications of new computer technologies to natural language processing and knowledge engineering. The main objective of this conference is to bring together researchers from both natural language processing and knowledge engineering to exchange ideas and experience in their respective fields. It provides an international forum for an overview of the most recent trends in these active research fields and a common starting-point to tackle the most acute problems of information processing. I am blessed with the presence of our distinguished keynote speakers, who are ones of the prominent scholars in the world in their respective areas, or even just the founders of their respective research areas. Their participation and contributions are deeply appreciated.

The NLP-KE-2003 is sponsored by IEEE Signal Processing Society, IEEE Systems, Man and Cybernetics Society, IEEE Beijing Section, Chinese Association for Artificial Intelligence, Chinese Institute of Electronics, Chinese Information Processing Society, Beijing Network and Multimedia Lab, Natural Science Foundation of China, Chinese Association for Science and Technology, and Ministry of Science and Technology of China.

During our preparation for this conference, we encountered an additional and unexpected difficulty - the outbreak of Severe Acute Respiratory Syndrome. At some moment even made us consider to cancel the conference. However, we have received numerous messages of encouragement from our scientific community, which convinced us to continue in our preparation of this conference. These encouragements helped us tremendously to overcome the difficulties due to the SARS. We have received 183 high-quality paper submissions from 23 countries, out of which 127 were selected for presentation by the program committee.

The success of NLP-KE-2003 is due to the tremendous efforts and good-will of all those who were involved in organizing the conference. I would like to express my sincere gratitude to those who helped in numerous ways to produce this high-quality conference. Last but not the least, I would like to express my thanks to all who submitted their work to NLPKE-2003 and who attend the conference.

I sincerely hope that all the participants will benefit from the technical contents of this conference, and enjoy the stay in Beijing.

Fuji Ren IEEE NLP-KE 2003 General Chair Professor, Faculty of Engineering The University of Tokushima 770-8506 2-1 Minamijosanjima, Tokushima, Japan ren@is.tokushima-u.ac.jp

# **GREETINGS FROM THE PROGRAM COMMITTEE**

Respectable Colleagues and Dear Friends,

On behalf of the Program Committee, 2003 Beijing International Conference on Natural Language Processing and Knowledge Engineering, NLP-KE'03-Beijing, I would like to extend to you our warmest welcome and most cordial greetings.

The theme of Natural Language Processing and Understanding has become one of the focuses in AI research and the related fields due to the great needs and challenges from the worldwide trend of globalization. This explains why the researchers over the world feel a high responsibility on their shoulders and why so many colleagues and friends would like to join in with us here in Beijing in exchanging ideas and sharing experiences in the field during such a busy period of time though.

The conference received over 180 papers submitted by the authors from more than 20 countries among which 127 were accepted and included in the Proceedings through the restrict viewing procedure. Most of the papers made contributions to the core technology of natural language processing while many others were contributed to various applications and theoretical studies. A special session on Upper Ontology and Natural Language Processing has been organized, in dealing with the knowledge representation and applications to NLP. In view of the real demand from practical applications of Natural Language Processing and Understanding products, like 2004 Olympic Game in Athens and 2008 in Beijing and so on, a Forum on NLP/NLU standards has been arranged in the conference with the purpose of exchanging ideas on how to effectively push forward the research on standards to meet the needs.

The Program Committee would like to express sincere gratitude to the authors who contribute papers with high quality to the conference. Many thanks also go to the paper reviewers who spent valuable time for selecting good papers. We feel also very much indebted to those people who organize wonderful special session and thoughtful forum for the conference. Without all the efforts made by our friends, the program of the conference would not be so fruitful and attractive.

Wish you a very successful conference and a highly enjoyable stay in Beijing.

Y. X. ZHONG IEEE NLP-KE 2003 PC Chair Beijing University of Posts and Telecommunications, Beijing 100876, China E-mail: <u>yxzhong@ieee.org</u>

# ORGANIZATIONS

#### **Conference Chair:**

Fuji Ren (The University of Tokushima, Japan)

### **International Advisory Committee Co-Chairs:**

Christian Boitet (GETA, CLIPS-IMAG, France) Nicoletta Calzolari (Istituto di Linguistica Computazionale del CNR, Italy) Taiyi Huang (Institute of Automation, Chinese Academy of Sciences (CAS), China) Ruslan Mitkov (The University of Wolverhampton, UK) Jun-ichi Tsujii (The University of Tokyo, Japan) Lotfi Zadeh (The University of California, USA) Zixin Zhuang (Beijing Multimedia & Network Lab, China)

### **Keynote Speakers**

Nicoletta Calzolari (Istituto di Linguistica Computazionale del CNR, Italy) Eduard Hovy (The University of Southern California, USA) Adam Kilgarriff (The University of Brighton, UK) Ruslan Mitkov (The University of Wolverhampton, UK) Jun-ichi Tsujii (The University of Tokyo, Japan) Lotfi Zadeh (The University of California, USA)

#### **Program Committee Chair**

Yixin Zhong (Beijing University of Posts and Telecommunications, China)

#### **Program Committee Co-Chairs**

Alexander Gelbukh (National Polytechnic Institute, Mexico) Kang K. Yen (Florida International University, USA) Chengqing Zong (Institute of Automation, CAS, China)

#### **Program Committee Members**

Eneko Agirre (Basque Country University, Spain) Kenji Araki (Hokkaido University, Japan) Kalina Bontcheva (The University of Sheffield, UK) Keh-Jiann Chen (Academia Sinica, Taiwan, China) Zhaoxiong Chen (China Electronics Corp., China) Key-Sun Choi (KAIST, Korea) Walter Daelemans (The University of Antwerp, Belgium) Zhendong Dong (RCCLIE, CAS, China) Limin Du (Institute of Acoustics, CAS, China) Antje Duesterhoeft (The University of Applied Science Wismar, Germany) Zhiwei Feng (Institute of Applied Linguistics, Ministry of Education, China) Koiti Hasida (Electrotechnical Laboratory, Japan) Chu-Ren Huang (Academia Sinica, Taiwan, China) Heyan Huang (RCCLIE, CAS, China) Taivi Huang (Institute of Automation, CAS, China) Aravind Joshi (The University of Pennsylvania, USA) Martin Kay (Stanford University, USA) Kenji Kita (The University of Tokushima, Japan) Richard Kittredge (The University of Montreal, Canada) Shingo Kuroiwa (The University of Tokushima, Japan) K.L. Kwok (The City University of New York, USA) Kim-Teng Lua (NUS, Singapore) Robert W.P. Luk (Hong Kong Polytechnic University, China) Qing Ma (Ryukoku University, Japan) Petros Maragos (National Technical University of Athens, Greece) Elisabeth Metais (CEDRIC/CNAM, France) Dan Moldovan (The University of Texas at Dallas, USA) Diego Molla (Macquarie University, Australia) Jian-Yun Nie (The University de Montreal, Canada) Wee Keong Ng (NTU, Singapore) Manuel Palomar (The University of Alicante, Spain) Ted Pedersen (The University of Minnesota in Duluth, USA) Horacio Rodriguez (The Universitat Politècnica de Catalunya, Spain) Ivan Sag (Stanford University, USA) Grigori Sidorov (National Polytechnic Institute, Mexico) Hongchi Shi (The University of Missouri, USA) Keh-Yih Su (Science-based Industrial Park, Taiwan, China) Junping Sun (Nova Southern University, USA) Maosong Sun (Tsinghua University, China) John Tait (The University of Sunderland, UK) Arturo Trujillo (Canon Research Centre Europe Ltd in Bracknell, UK) Hans Uszkoreit (DFKI, Germany) Felisa Verdejo (ETS Ingenieros Industriales, Spain) Manuel Vilares-Ferro (University of Vigo, Spain) Huilin Wang (Institute of Scientific and Technical Information, China) Yorick Wilks (The University of Sheffield, UK) Dekai Wu (Hong Kong University of Science and Technology, China) Fei Xia (IBM, USA) Bo Xu (Institute of Automation, Chinese Academy of Sciences, China) Tianshun Yao (North-east University, China) David Yarowsky (Johns Hopkins University, USA) Shiwen Yu (Peking University, China) Zaharin Yusoff (The University of Sains, Malaysia) Bo Zhang (Tsinghua University, China)

## **Organizing Committee Co-Chairs**

Mengqi Zhou (Chinese Institute of Electronics, China) Youqi Cao (Chinese Information Processing Society of China, China)

### **Publication Co-chairs**

Amaury Caballero (Florida International University, USA) Mengqi Zhou (Chinese Institute of Electronics, China)

### **Publicity Chair**

Weiquan Liu (Beijing Multimedia & Network Lab, China)

# **ADDITONAL REVIEWERS**

Christain Boitet (GETA, CLIPS-IMAG, France) Yang Cao (Nokia (China) Co. Ltd., China) Yuzhong Chen (Institute of Computing Technology, CAS, China) Feng Ding (Nokia (China) Co. Ltd., China) David Hung-Chang Du (The University of Minnesota, USA) Jianfeng Gao (Microsoft Research, China) Jun Guo (The University of Posts and Telecommunications, China) Qin Guo (Beijing Multimedia & Network Lab, China) Yanhui Guo (The University of Posts and Telecommunications, China) Adolfo Guzman-Arenas (National Polytechnic Institute, Mexico) Sang-Yong Han (Chung-Ang University, Korea) Huacan He (West-north University of Technology, China) Qing He (Institute of Computing Technology, CAS, China) Eduard Hovy (Information Sciences Institute of the University of Southern California, USA) Kenji Imamura (ATR-SLT, Japan) Donghong Ji (Institute for Infocomm Research, Singapore) Minghu Jiang (Tsinghua University, China) Yaohong Jin (Institute of Acoustics, CAS, China) Tang Enya Kong (The University of Sains, Malaysia) Aijun Li (Institute of Linguistics, CASS, China) Cong Li (Microsoft Research, China) Haizhou Li (InfoTalk Corp. Ltd, Singapore) Juanzi Li (Tsinghua University, China) Mu Li (Microsoft Research, China) Qun Liu (Institute of Computing Technology, CAS, China) Wenju Liu (Institute of Automation, CAS, China) Ying Liu (Tsinghua University, China) Weihua Luo (Institute of Computing Technology, CAS, China) Shinan Lü (Institute of Acoustics, CAS, China) Shaoping Ma (Tsinghua University, China) Patricio Martínez-Barco (The University of Alicante, Spain) Rafael Muñoz (The University of Alicante, Spain) Michael Oakes (The University of Sunderland, UK) Jesús Peral (The University of Alicante, Spain) Tao Qi (The University of Posts and Telecommunications, China) Fuji Ren (The University of Tokushima, Japan) Maximiliano Saiz-Noeda (The University of Alicante, Spain) Mark Seligman (Spoken Translation Co. Ltd., USA) Yuqiu Shan (Beijing Multimedia & Network Lab, China) Chris Stokoe (The University of Sunderland, UK) Jian Su (Institute for Infocomm Research, Singapore)

Eiichiro Sumita (ATR-SLT, Japan) Jian Sun (Institute of Computing Technology, CAS, China) Jianjun Sun (Multran Translation Co. Ltd, China) Yuezhong Tang (Nokia (China) Co. Ltd., China) Jianhua Tao (Institute of Automation, CAS, China) Xuyan Tu (Beijing University of Science and Technology, China) Bin Wang (Institute of Computing Technology, CAS, China) Cong Wang (The University of Posts and Telecommunications, China) Xia Wang (Nokia (China) Co. Ltd., China) Xiaojie Wang (The University of Posts and Telecommunications, China) Taro Watanabe (ATR-SLT, Japan) Fuliang Weng (Research and Technology Center, Robert Bosch Corp., USA) Andi Wu (Microsoft, USA) Hua Wu (Toshiba (China) Co. Ltd., China) Xihong Wu, (Peking University, China) Peng Xu (Johns Hopkins University, USA) Kazuhide Yamamoto (Nagaoka University of Technology, Japan) Yixian Yang (The University of Posts and Telecommunications, China) Baozong Yuan (North Jiaotong University, China) Quan Zhang (Institute of Acoustics, CAS, China) Sen Zhang (Nancy Second University, France) Shuwu Zhang (Institute of Automation, CAS, China) Yujie Zhang (CRL, Japan) Jun Zhao (Institute of Automation, CAS, China) Guodong Zhou (Institute for Infocomm Research, Singapore) Qiang Zhou (Tsinghua University, China)