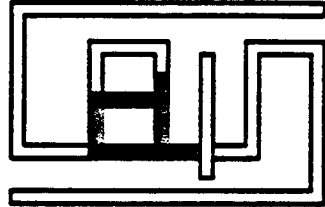


10th International  
Conference on  
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22nd Annual Meeting of  
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Computational Linguistics

**Proceedings of Coling84**

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## PREFACE

I hope you like the programme; I do personally, and look forward to hearing many of the papers, even those I disagree with. There has been a lot of effort behind the production of what you see, and enormous thanks are due to the large committee of 40 distinguished persons who gave a great deal of time to review a large field quickly. The method used was more akin to that of previous COLING meetings than of ACL ones, but I think it has yielded a programme as interesting as those produced by more strenuous methods. I also owe a special personal word of thanks to my back-up team at Essex who coped with the dog work while staying in touch with me during a year away in Australia and Costa Rica. I now have much unwanted experience on the relative virtues of nets, telex, phones and mail in a range of countries. Another especial personal word of thanks is due Don Walker, who was officially ACL liaison, but in fact much more.

I hope, then, that you will enjoy and profit from the programme and find the national, continental, linguistic and gender balance to your taste. If not, remember how little of it was really under our control. I hope, too, that the no-chair sessions will cause you no problems of novelty or insecurity. The method is now well established in the United States, and I think of it as just a form of self-organization and common sense.

Yorick Wilks

---

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Bernard Vauquois (chairman), David Hays (honorary member), Eva Hajicova, Brian Harris, Kolbjörn Heggstad, Martin Kay, Hans Karlgren, Olga Kulagina, Makoto Nagao, Guy Rondeau, Helmut Schnelle, Petr Sgall, Hiroshi Wada, Don Walker, Yorick Wilks, Antonio Zampolli

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*User Models in Dialog Systems*  
Wolfgang Wahlster

(D)

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### I. Machine Translation

*Multilingual Text-Processing in a Two-Byte Code: Current Issues*  
Lloyd B. Anderson

(US)

### II. Generation

*Conveying Implicit Content in Narrative Summaries*  
Malcom E. Cook, Wendy G. Lehnert, & David D. McDonald

(US)

### III. Natural Language Interface

*Transforming English Interfaces to Other Natural Languages:  
an Experiment with Portuguese*  
Gabriel Pereira Lopes

(P)

### IV. Discourse

*Un Outil Multidimensionnel de l'Analyse du Discours*  
J. Chauché

(F)

### V. Parsing

*A Stochastic Approach to Sentence Parsing*  
Tetsunosuke Fujisaki

(J)

## 1400-1530 Panel Discussion and Short Papers

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*Questions in Quantitative Linguistics*  
Hans Karlgren (chair)

### II. Parsing and Linguistic Theory

*Bounded Context Parsing and Easy Learnability*  
Robert C. Berwick

(US)

*The Representation of Constituent Structures for Finite-State Parsing*  
D. Terence Langendoen & Yedidyah Langsam

(US)

*Features and Values*  
Lauri Karttunen

(US)

### III. Lexicography and the Lexicon

*Applications of a Lexicographical Data Base for German*  
Wolfgang Teubert

(D)

*Denormalisation and Cross Referencing in Theoretical Lexicography*  
Joseph E. Grimes

(US)

*Lexicon Features for Japanese Syntactic Analysis in Mu-Project-JE*  
Yoshiyuki Sakamoto, Masayuki Satoh, & Tetsuya Ishikawa

(J)

### IV. Natural Language Interface

*Toward a Redefinition of Yes/No Questions*  
Julia Hirschberg

(US)

*The Syntax and Semantics of User-Defined Modifiers in a  
Transportable Natural Language Processor*  
Bruce W. Ballard

(US)

*Interaction of Knowledge Sources in a Portable Natural Language  
Interface*  
Carole D. Hafner

(US)

### V. Semantic Networks

*Uses of C-Graphs in a Prototype for Automatic Translation*  
Marco A. Clemente-Salazar

(M)

*Quasi-Indexical Reference in Propositional Semantic Networks*  
William J. Rapaport & Stuart C. Shapiro

(US)

*The Costs of Inheritance in Semantic Networks*  
Robert F. Simmons

(US)

## 1530-1600 Coffee

## 1600-1700 Long and Short Papers

### I. Machine Translation

*Functional Unification Grammar: A Formalism for Machine  
Translation*  
Martin Kay

(US)

### II. Speech

*Computer Simulation of Spontaneous Speech Production*  
Bengt Sigurd

(S)

### III. Language and Teaching

*Limited Domain Systems for Language Teaching*  
S. G. Pulman

(GB)

*GTT: A General Transducer for Teaching Computational Linguistics*  
P. Shann & J. L. Cochard

(CH)

### IV. Parsing and Syntax

*A Parsing Architecture Based on Distributed Memory Machines*  
Jon M. Slack

(GB)

*Automated Determination of Sublanguage Syntactic Usage*  
Ralph Grishman, Ngo Thanh Nhan, Elaine Marsh &  
Lynette Hirschmann

(US)

### V. Semantics and Knowledge Representation

*Semantic Interpretation Using KL-ONE*  
Norman K. Sondheimer, Ralph M. Weischedel, & Robert J.  
Bobrow

(US)

*Two Theories for Computing the Logical Form of Mass Expressions*  
Francis Jeffrey Pelletier & Lenhart K. Schubert

(Ca)

## July 3

### 0900-1000 Invited Lecture

*Syntactic and Semantic Parsability*  
Geoffrey K. Pullum (US)

### 1000-1030 Coffee

### 1030-1200 Long and Short Papers

#### I. Parsing and Logic

*The Semantics of Grammar Formalisms Seen as Computer Languages*  
Fernando C. N. Pereira & Stuart M. Shieber (US)

*The Resolution of Quantificational Ambiguities in the TENDUM Computational Linguistics Research System*  
Harry Bunt (NL)

#### II. Inference

*Preventing False Inferences*  
Aravind Joshi, Bonnie Webber, & Ralph M. Weischedel (US)

*Problem Localization Strategies for Pragmatics Processing in Natural Language Front Ends*  
Lance A. Ramshaw & Ralph M. Weischedel (US)

#### III. Hardware Considerations

*A Connectionist Model of Some Aspects of Anaphor Resolution*  
Ronan Reilly (Ir)

*Concurrent Parsing in Programmable Logic Array (PLA-) Nets—Proposals and Problems*  
Helmut Schnelle (D)

#### IV. Machine Translation

*A Case Analysis Method Cooperating with ATNG and its Application to Machine Translation*  
Hitoshi Iida, Kentaro Ogura, & Hirosato Nomura (J)

*A Proper Treatment of Syntax and Semantics in Machine Translation*  
Yoshihiko Nitta, Atsushi Okajima, Hiroyuki Kaji, & Youichi Hidano (J)

*A Consideration on the Concepts Structure and Language in Relation to Selections of Translation Equivalents of Verbs in Machine Translation Systems*  
Sho Yoshida (J)

#### V. Morphology and the Lexicon

*Detecting Patterns in a Lexical Data Base*  
Nicoletta Calzolari (I)

*Linguistic Problems in Multilingual Morphological Decomposition*  
G. Thurmair (D)

*A General Computational Model for Word-Form Recognition and Production*  
Kimmo Koskenniemi (Fi)

### 1400-1530 Panel Discussion and Short Papers

#### I. Panel Discussion

*Natural Language and Databases. Again*  
Karen Sparck Jones (chair)  
Madeleine Bates, Jaime G. Carbonell, Dan Flickinger,  
Kathleen R. McKeown

#### II. Pragmatics

*Representing Knowledge about Knowledge and Mutual Knowledge*  
Said Soulhi (F)

*Understanding Pragmatically Ill-Formed Input*  
Sandra Carberry (US)

*Referring as Requesting*  
Philip R. Cohen (US)

### III. Parsing and Knowledge

*Entity-Oriented Parsing*  
Philip J. Hayes (US)

*Combining Functionality and Object-Orientedness for Natural Language Processing*  
Toyooki Nishida & Shuji Doshita (J)

*Use of Heuristic Knowledge in Chinese Language Analysis*  
Yiming Yang, Toyooki Nishida, & Shuji Doshita (J)

#### IV. Machine Translation

*The Design of the Kernel Architecture of the Eurotra System*  
R. L. Johnson, S. Krauwer, M. A. Rosner, and G. B. Varile (GB)

*Machine Translation. What Type of Post-Editing on What Type of Documents for What Type of Users*  
Anne-Marie Laurian (F)

#### V. Parsing and Syntax

*Simplifying Deterministic Parsing*  
Alan W. Carter and Michael J. Freiling (Ca)

*Dealing with Conjunction in a Machine Translation Environment*  
Xiuming Huang (GB)

*On Parsing Preferences*  
Lenhart K. Schubert (Ca)

### 1530-1600 Coffee

### 1600-1700

#### I. Pragmatics

*A Computational Theory of the Function of Clue Words in Argument Understanding*  
Robin Cohen (Ca)

#### II. Speech

*Control Structures and Theories of Interaction in Speech Understanding Systems*  
E. J. Briscoe & B. K. Boguraev (GB)

#### III. Machine Translation

*Analysis Grammar of Japanese in the Mu-Project—A Procedural Approach to Analysis Grammar*  
Jun-ichi Tsujii, Jun-ichi Nakamura, & Makoto Nagao (J)

#### IV. Parsing and Syntax

*Lexicon-Grammar and the Syntactic Analysis of French*  
Maurice Gross (F)

#### V. Data Bases and Retrieval

*Building a Large Knowledge Base for a Natural Language System*  
Jerry R. Hobbs (US)

*Linguistically Motivated Descriptive Term Selection*  
K. Sparck Jones & J. I. Tait (GB)

July 5

**0900- Invited Lecture**

*Computational Linguistics in Commerce*  
Gary G. Hendrix (US)

**1000-1030 Coffee**

**1030-1200 Long and Short Papers**

**I. Inference and Semantics**

*Inferencing on Linguistically Semantic Structures*  
Eva Hajičová & Milena Hnátková (Cz)

*Semantic Relevance and Aspect Dependency in a Given Subject Domain*  
Burghard B. Rieger (D)

**II. Pragmatics**

*A Plan Recognition Model for Clarification Subdialogues*  
Diane J. Litman & James F. Allen (US)

*A Computational Theory of Dispositions*  
Lotfi A. Zadeh (US)

**III. Generation**

*Using Focus to Generate Complex and Simple Sentences*  
Marcia A. Derr & Kathleen R. McKeown (US)

*A Rational Reconstruction of the PROTEUS Sentence Planner*  
Graeme Ritchie (GB)

**IV. Machine Translation**

*Software Tools for the Environment of a Computer Aided Translation System*  
Daniel Bachut & Nelson Verastegui (F)

*Design of a Machine Translation System for a Sublanguage*  
Beat Buchmann, Susan Warwick & Patrick Shann (CH)

*Grammar Writing System (GRADE) of Mu-Machine Translation Project and its Characteristics*  
Jun-ichi Nakamura, Jun-ichi Tsujii, & Makoto Nagao (J)

**V. Speech and Phonology**

*Automatic Generation of Intonation Contours for a Text-to-Speech System*  
Roger M. Meli & Frank Fallside (GB)

*A Discovery Algorithm for Certain Phonological Rules*  
Mark Johnson (US)

*What Not to Say*  
Jan Fornell (S)

**1400-1530 Panel Discussion and Short Papers**

**I. Panel Discussion**

*When Is the Next ALPAC Report Due?*  
Margaret King (chair)  
Alan Melby, Makoto Nagao, Sergei Perschke, Jonathan Slocum, Bernard Vauquois, Yorick Wilks

**II. Parsing and Programming Languages**

*LR Parsers for Natural Languages*  
Masaru Tomita (US)

*LFG System in Prolog*  
Hideki Yasukawa (J)

*The Design of a Computer Language for Linguistic Information*  
Stuart M. Shieber (US)

**III. Generation**

*Discourse Structures for Text Generation*  
William C. Mann (US)

*Semantic Rule Based Text Generation*  
Michael L. Mauldin (US)

*Controlling Lexical Substitution in Computer Text Generation*  
Robert Granville (US)

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*Understanding of Japanese in an Interactive Programming System*  
Kenji Sugiyama, Masayuki Kameda, Kouji Akiyama, & Akifumi Makinouchi (US)

*Two-Way Finite Automata Dependency Grammar: A Parsing Method for Inflectional Free Word Order Languages*  
Esa Nelimarkka, H. Jappinen, & A. Lehtola (Fi)

*Interruptable Transition Networks*  
Sergei Nirenburg (US)

**V. Discourse and Texts**

*Automatic Construction of Discourse Representation Structures*  
Franz Guenther & Hubert Lehmann (D)

*Textual Expertise in Word Experts: An Approach to Text Parsing Based on Topic/Comment Monitoring*  
Udo Hahn (D)

*Some Linguistic Aspects for Automatic Text Understanding*  
Yutaka Kusanagi (J)

**1530-1600 Coffee**

**1600-1700 Long and Short Papers**

**I. Discourse**

*A Syntactic Approach to Discourse Semantics*  
Livia Polanyi & Remko Scha (NL)

**II. Machine Translation**

*Dealing with Incompleteness of Linguistic Knowledge on Language Translation—Transfer and Generation Stage of a Mu Machine Translation Project*  
Makoto Nagao, Toyooki Nishida, & Jun-Ichi Tsujii (J)

**III. Natural Language Interface**

*Lexical Semantics in Human-Computer Communication*  
Jarrett Rosenberg (US)

*A Response to the Need for Summary Responses*  
J. K. Kalita, M. J. Colbourn, & G. I. McCalla (Ca)

**IV Flexible Parsing**

*Coping with Extragrammaticality*  
Jaime G. Carbonell & Philip J. Hayes (US)

*Correcting Object-Related Misconceptions: How Should the System Respond?*  
Kathleen F. McCoy (US)

**V. Cross-Linguistic Issues**

*An Algorithm for Identifying Cognates between Related Languages*  
J. B. M. Guy (Aus)

*From HOPE en l'ESPERANCE: On the Role of Computational Neurolinguistics in Cross-Language Studies*  
Helen M. Gigley (US)

## July 6

### 0900-1000 Invited Lecture

*What is Semantics Trying to Tell Us?*  
Brian C. Smith

(US)

### 1000-1030 Coffee

### 1030-1200 Panel Discussion and Short Papers

#### I. Panel Discussion

##### *Machine-Readable Dictionaries*

Donald E. Walker (chair)  
Robert A. Amsler, Nicoletta Calzolari, Martin Kay, George  
A. Miller, Howard R. Webber

#### II. Machine Translation

##### *Transfer in a Multilingual MT System*

Steven Krauwer & Louis des Tombe

(NL)

##### *Expert Systems and Other Techniques in MT Systems*

Christian Boitet & René Gerber

(F)

##### *Robust Processing in Machine Translation*

Doug Arnold & Rod Johnson

(GB)

#### III. Syntactic Analysis

##### *Disambiguating Grammatically Ambiguous Sentences by Asking*

Masaru Tomita

(US)

##### *Ambiguity Resolution in the Human Syntactic Parser:*

*An Experimental Study*

Howard S. Kurtzman

(US)

##### *Conceptual Analysis of Garden-Path Sentences*

Michael J. Pazzani

(US)

#### IV Generation

##### *Language Generation from Conceptual Structure: Synthesis of*

*German in a Japanese/German MT Project*

J. Laubsch, D. Roesner, K. Hanakata & A. Lesniewski

(D)

##### *Natural Language driven Image Generation*

Giovanni Adorni, Mauro Di Manzo & Fausto Giunchiglia

(I)

##### *Conceptual and Linguistic Decisions in Generation*

Laurence Danlos

(F)

#### V. Parsing and Semantics

##### *A Computational Analysis of Complex Noun Phrases in Navy*

*Messages*

Elaine Marsh

(US)

##### *Another Look at Nominal Compounds*

Pierre Isabelle

(Ca)

##### *Semantic Parsing as Graph Language Transformation:*

*A Multidimensional Approach to Parsing Highly*

*Inflectional Languages*

Eero Hyvönen

(Fi)

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#### I. Machine Translation

##### *Handling Syntactical Ambiguity in Machine Translation*

Vladimir Pericliev

(Bul)

#### II. Semantics

##### *Argumentation in Representation Semantics*

Pierre-Yves Raccah

(F)

#### III. Speech

##### *Voice Simulation: Factors Affecting Quality and Naturalness*

B. Yegnanarayana, J. M. Naik, & D. G. Childers

(Ind)

#### IV. Parsing and Semantics

##### *Interpreting Syntactically Ill-Formed Sentences*

Leonardo Lesmo & Pietro Torasso

(I)

## V. Computational Linguistics

### *An International Delphi Poll on Future Trends in Information*

*Linguistics*

Rainer Kuhlen

(D)

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*Machine Translation: Its History, Current Status and Future Prospects*

Jonathan Slocum

(US)

### 1530-1600 Coffee

### 1600-1700 Closing Session







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