

Processing of Dependency-Based Grammars

Proceedings of the Workshop

**Edited by
Alain Polguère
Sylvain Kahane**

**15th August 1998
Université de Montréal
Montreal, Quebec, Canada**

COLING-ACL'98

Processing of Dependency-Based Grammars

Proceedings of the Workshop

**Edited by
Alain Polguère
Sylvain Kahane**

**15th August 1998
Université de Montréal
Montreal, Quebec, Canada**

COLING-ACL '98

© 1998 Université de Montréal.

Additional copies of these proceedings may be ordered while stocks last
from:

Association for Computational Linguistics (ACL)
75 Paterson Street, Suite 9
New Brunswick, NJ 08901 USA
Tel: +1-732-342-9100
Fax: +1-732-873-0014
rasmusse@cs.rutgers.edu

Preface

We are very pleased to present to you the proceedings of the Workshop on Processing of Dependency-based Grammars.

Our aim in setting up this workshop was two-fold. Firstly, we wanted to create a forum for people working in frameworks related to dependency grammars, as it is our feeling that these researchers are somehow marginalized and do not necessarily have enough opportunities to publicize (and publish) their work. Secondly, we wanted to create an opportunity for people who are very well-versed in dependency grammars and those who are not to meet and exchange their views. This latter goal is primordial as it is becoming clearer and clearer that syntax has to do both with dependencies and phrase structures, and that both types of phenomena have to be accounted for in a satisfactory manner by formal models of natural languages.

At the time this preface is being written, it is too early to know whether the second goal of the workshop will be achieved. But it is already clear that the first one—giving researchers in dependency-based approaches a forum—has indeed been achieved. The initial call for papers received very good response and we had no problem selecting papers which, we believe, will interest both specialists and non-specialists in the field. In fact, it was rather difficult to reduce the initial set of submissions to just the number of papers that could be presented in a one-day workshop. This is the reason why we have decided to select, in addition to the nine papers presented orally during the workshop, four (shorter) papers which are included in the present proceedings.

We hope you will enjoy reading these proceedings and we would be happy to receive any feedback you may have.

Sylvain Kahane and Alain Polguère

Committee Members

ORGANIZING COMMITTEE:

Sylvain Kahane (TALANA Paris VII/Université Paris X)
Alain Polguère (OMTL Université de Montréal)

PROGRAM COMMITTEE:

Anne Abeillé (Université Paris VII)
Michael A. Covington (University of Georgia)
Michael Elhadad (Ben-Gurion University)
Sylvain Kahane (TALANA Université Paris VII/Université Paris X)
Dick Hudson (University College London)
Igor Mel'čuk (OMTL Université de Montréal)
Alexis Nasr (Université d'Avignon)
Alain Polguère (OMTL Université de Montréal)
Petr Sgall (Charles University)
Jacques Vergne (Université de Caen)

SPONSOR:

We wish to thank
Vice-décanat à la recherche
Faculté des Arts et des Sciences
Université de Montréal

for a generous grant that helped us organize this workshop.

Schedule

- 9:15–9:30 Opening address
- 9:30–10:00 Timo Järvinen and Pasi Tapanainen (University of Helsinki) *Towards an Implementable Dependency Grammar*
- 10:00–10:30 Vincenzo Lombardo and Leonardo Lesmo (Università di Torino) *Unit Coordination and Gapping in Dependency Theory*
- 10:30–11:00 Tomáš Holan, Vladislav Kuboň, Karel Oliva and Martin Plátek (Charles University, Prague and University of the Saarland) *Two Useful Measures of Word Order Complexity*
- 11:00–11:15 Coffee break
- 11:15–11:45 Norbert Bröker (Universität Stuttgart) *How to Define a Context-Free Backbone for DGs: Implementing a DG in the LFG Formalism*
- 11:45–12:15 Elke Teich (University of the Saarland) *Types of Syntagmatic Grammatical Relations and their Representation*
- 12:15–13:30 Lunch
- 13:30–14:00 Eva Hajičová (Charles University, Prague) *Movement Rules Revisited*
- 14:00–14:30 Cristina Barbero, Leonardo Lesmo, Vincenzo Lombardo and Paola Merlo (Università di Torino, Université de Genève and University of Pennsylvania) *Integration of Syntactic and Lexical Information in a Hierarchical Dependency Grammar*
- 14:30–14:45 Coffee break
- 14:45–15:15 Harri Arnola (Kielikone Oy and Helsinki University of Technology) *On Parsing Binary Dependency Structures Deterministically in Linear Time*
- 15:15–15:45 Wolfgang Menzel and Ingo Schröder (Universität Hamburg) *Decision Procedures for Dependency Parsing Using Graded Constraints*
- 15:45–16:00 Closing address

Short papers

- Marie Bourdon, Lyne Da Sylva, Michel Gagnon, Alma Kharrat, Sonja Knoll and Anna Maclachlan (Les Logiciels Machina Sapiens inc.) *A Case Study in Implementing Dependency-Based Grammars*
- Jacques Courtin and Damien Genthial (CLIPS - IMAG) *Parsing with Dependency Relations and Robust Parsing*
- Tom B.Y. Lai and Huang Changning (City University of Hong Kong and Tsinghua University) *Complements and Adjuncts in Dependency Grammar Parsing Emulated by a Constrained Context-Free Grammar*
- Yves Lepage, Ando Shin-Ichi, Akamine Susumu and Iida Hitoshi (ATR and NEC) *An Annotated Corpus in Japanese Using Tesnière's Structural Syntax*

Table of Contents

Preface	i
Schedule	ii
Table of Contents	iii
Author Index	iv

Workshop Papers

Timo Järvinen and Pasi Tapanainen	
<i>Towards an Implementable Dependency Grammar</i>	1
Vincenzo Lombardo and Leonardo Lesmo	
<i>Unit Coordination and Gapping in Dependency Theory</i>	11
Tomáš Holan, Vladislav Kuboň, Karel Oliva and Martin Plátek	
<i>Two Useful Measures of Word Order Complexity</i>	21
Norbert Bröker	
<i>How to Define a Context-Free Backbone for DGs: Implementing a DG in the LFG Formalism</i>	29
Elke Teich	
<i>Types of Syntagmatic Grammatical Relations and their Representation</i>	39
Eva Hajičová	
<i>Movement Rules Revisited</i>	49
Cristina Barbero, Leonardo Lesmo, Vincenzo Lombardo and Paola Merlo	
<i>Integration of Syntactic and Lexical Information in a Hierarchical Dependency Grammar</i>	58
Harri Arnola	
<i>On Parsing Binary Dependency Structures Deterministically in Linear Time</i>	68
Wolfgang Menzel and Ingo Schröder	
<i>Decision Procedures for Dependency Parsing Using Graded Constraints</i>	78
Marie Bourdon, Lyne Da Sylva, Michel Gagnon, Alma Kharrat, Sonja Knoll and Anna Maclachlan	
<i>A Case Study in Implementing Dependency-Based Grammars</i>	88
Jacques Courtin and Damien Genthial	
<i>Parsing with Dependency Relations and Robust Parsing</i>	95
Tom B.Y. Lai and Changning Huang	
<i>Complements and Adjuncts in Dependency Grammar Parsing Emulated by a Constrained Context-Free Grammar</i>	102
Yves Lepage, Shin-Ichi Ando, Susumu Akamine and Hitoshi Iida	
<i>An Annotated Corpus in Japanese Using Tesnière's Structural Syntax</i>	109

Author Index

Akamine S.	109
Ando S.-I.	109
Arnola, H.	68
Barbero, C.	58
Bourdon, M.	88
Bröker, N.	29
Courtin, J.	95
Da Sylva, L.	88
Gagnon, M.	88
Genthial, D.	95
Hajičová, E.	49
Holan, T.	21
Huang C.	102
Iida H.	109
Järvinen, T.	1
Kharrat, A.	88
Knoll, S.	88
Kuboň, V.	21
Lai, T.B.Y.	102
Lepage, Y.	109
Lesmo, L.	11, 58
Lombardo, V.	11, 58
Maclachlan, A.	88
Menzel, W.	78
Merlo, P.	58
Oliva, K.	21
Plátek, M.	21
Schröder, I.	78
Tapanainen, P.	1
Teich, E.	39