

# **Computational Phonology**

**First Meeting of the  
ACL Special Interest Group in  
Computational Phonology**

**Proceedings of the Workshop**

**1 July 1994  
New Mexico State University  
Las Cruces, New Mexico, USA**



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## PREFACE

This volume contains the papers prepared for the First Meeting of the ACL Special Interest Group in Computational Phonology (SIGPHON), held on 1 July 1994 at New Mexico State University in Las Cruces, New Mexico, USA. The meeting was sponsored by the ACL and by the European Network in Language and Speech (ELSNET).

The purpose of SIGPHON is to provide a forum for the interchange of research results, chiefly by organising conferences and workshops. In particular, its goals are to place computational phonology firmly on the research agenda in computational linguistics, to develop links between researchers in computational phonology, and to facilitate the dissemination of research results and software. SIGPHON provides an FTP server for papers, implementations, back-issues of the quarterly newsletter, and a membership directory which lists the research interests of more than 100 people working in the field. The location of the FTP server is `ftp.cogsci.ed.ac.uk`, and the materials can be found under `/pub/phonology`. A representative sample of full-length papers and an extended introduction to the field may be found in *Computational Linguistics*, Volume 20 Number 3, the Special Issue on Computational Phonology.

The program committee was delighted with the quality of papers that were received and we are greatly encouraged that the inaugural event has set a high standard for the subsequent events which we hope will follow. Special thanks go to our invited speaker, Ron Kaplan, from the *Xerox Palo Alto Research Center*, for his presentation entitled: *A brief history of regular phonology*. The committee is also thankful to the sponsors of the meeting; the ACL provided a generous subsidy and ELSNET gave valuable administrative assistance by making Leeann Jackson-Eve available, and we are grateful for her diligence in undertaking the work.

Finally, as program chair I wish to thank my fellow program committee members for their efforts in reviewing the submitted papers to a tight time-schedule: John Coleman, *Oxford University*; Mark Ellison, *Edinburgh University*; Michael Gasser, *Indiana University*; and Richard Sproat, *AT&T Bell Laboratories*.

Steven Bird, *University of Edinburgh*  
Chair, Program Committee

## WORKSHOP PROGRAM

- 8:30        **Registration**
- 9:00        **Opening Remarks and Announcements**
- 9:15        **Invited Speaker: Ronald M. Kaplan**  
*A brief history of regular phonology*
- 10:15       **Tea/Coffee**
- 10:30       **Session 1**  
**Chair: Richard Sproat**
- Segmenting speech without a lexicon: the roles of phonotactics and speech source*  
Timothy Cartwright and Michael Brent
- Constraints, exceptions and representations*  
T. Mark Ellison
- Lexical Phonology and speech style: using a model to test a theory*  
Sheila Williams
- Automated tone transcription*  
Steven Bird
- 12:30       **Lunch**
- 2:00        **Session 2**  
**Chair: Michael Gasser**
- Default finite state machines and finite state phonology*  
Gerald Penn and Richmond Thomason
- Qualitative and quantitative dynamics of vowels*  
Thomas C. Bourgeois and Richard T. Oehrle
- Constraint-based morpho-phonology*  
Michael Mastroianni and Bob Carpenter
- Parsing using linearly ordered phonological rules*  
Michael Maxwell
- 4:00        **Tea/Coffee, followed by informal discussion**

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