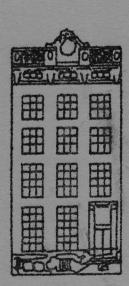
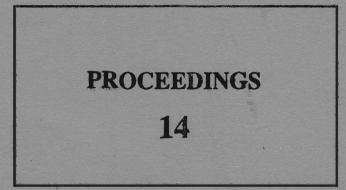
## **INSTITUTE OF PHONETIC SCIENCES UNIVERSITY OF AMSTERDAM**

1990





# P R O C E E D I N G S

FROM THE INSTITUTE OF PHONETIC SCIENCES OF THE UNIVERSITY OF AMSTERDAM

14

AMSTERDAM 1990

ISSN: 0167-5613

© Copyright reserved 1990 Published by the Institute of Phonetic Sciences University of Amsterdam Herengracht 338 1016 CG Amsterdam

### INTRODUCTION

The character of this Proceedings 14 of the Institute of Phonetic Sciences of the University of Amsterdam is different from the preceding volumes. We considered it desirable and informative to incorporate in this volume our "Institute's Profile" with up-to-date information about our institute and our research activities.

Apart from this "Institute's Profile", Proceedings 14 contains a number of contributions concerning current research projects. These papers represent our two main research fields:

- PERCEPTUAL AND PHYSICAL DESCRIPTION OF VARIATION AND INVARIANCE IN SPEECH
- SPEECH COMMUNICATION: DEVELOPMENT AND PATHOLOGY

For your information a list of personnel is included, as well as a list of our publications in 1989 and 1990.

All correspondence, including requests to be put on our mailing list, may be sent to:

Institute of Phonetic Sciences University of Amsterdam Herengracht 338 1016 CG Amsterdam The Netherlands tel.: + 31 20 5252183 fax: + 31 20 5252197

December, 1990.

Editors: F.J. Koopmans-van Beinum C.T.L. Kuijpers Technical realization: J. Bossema F.W. Eelzak D.T. Jaasma

#### LIST OF PERSONNEL

Scientific Staff

Prof. dr. ir. L.C.W. Pols

Ir. P. van Alphen Drs. D.R. van Bergem Dr. R.A.M.G. van Bezooijen Drs. P.P.G. Boersma Drs. L.F.M. ten Bosch Ir. D.G. Broeder Drs. L.W.M. Damen Drs. J.S.C. van Dijk Drs. L.W.A. van Herpt Dr. F.J. Koopmans-van Beinum Drs. C.T.L. Kuijpers Drs. G.P.M. Laan Drs. I.M. de Leeuw Drs. E. te Lindert Dr. E.A. den Os Drs. R.J.J.H. van Son Drs. J.M. van der Stelt Drs. M.T.J. Tielen Ing. J. Verhave Drs. D.J.M. Weenink Drs. A. van Wieringen

director of the Institute

on AIO<sup>1</sup> contract until 1-10-'90 on AIO<sup>1</sup> contract on SPIN-ASSP<sup>2</sup> contract on AIO<sup>1</sup> contract

guest researcher (SPIN-ASSP<sup>2</sup>) on SPIN-ASSP<sup>2</sup> contract

on AIO<sup>1</sup> contract on AIO<sup>1</sup> contract since 1-1-'91 on AIO<sup>1</sup> contract guest researcher (SPIN-ASSP<sup>2</sup>) since 1-1-'91 on NWO<sup>3</sup> contract on SPIN-ASSP<sup>2</sup> contract until 1-11-'90

on AIO<sup>1</sup> contract on ESPRIT<sup>4</sup> contract

on AIO<sup>1</sup> contract

Technical and Administrative Staff

J. Bossema F.W. Eelzak D.T. Jaasma E.M. Krikhaar A.W. van Maanen A.G. Wempe

on NWO<sup>3</sup> contract

<sup>&</sup>lt;sup>1</sup> Facultary position as post-graduate student

<sup>&</sup>lt;sup>2</sup> Dutch Speech Program for Promoting Information Technology Research

<sup>&</sup>lt;sup>3</sup> Netherlands Organization for Scientific Research

<sup>&</sup>lt;sup>4</sup> European Strategic Program for Research and Development of Information Technology

#### **CONTENTS**

PROFILE OF THE INSTITUTE OF F UNIVERSITY OF AMSTERDAM	PHONETIC SCIENCES i-x	xvii
<b>TRANSITION RATE-DEPENDENT P</b> <b>FORMANT SPEECH-LIKE STIMULI</b> Astrid van Wieringen and Louis C.W. Pols		1

PITCH PERIOD ESTIMATION BY FILTERING THE FUNDA-17 MENTAL FREQUENCY OUT OF THE SPEECH WAVEFORM Dick R. van Bergem

THE RELATION BETWEEN PERCEPTUAL AND CLINICAL 27 PARAMETERS OF VOICE QUALITY OF PATIENTS WITH EARLY GLOTTIC CANCER BEFORE AND AFTER RADIOTHERAPY AND NORMAL SPEAKERS Irma M. de Leeuw

DEVELOPMENT OF TEMPORAL PROPERTIES IN THE SPEECH 39 OF ONE CHILD BETWEEN ONE AND THREE YEARS OF AGE Els A. den Os

IN DEFENSE OF A PROBABILISTIC VIEW ON WORD	53
RECOGNITION	
Dick R. van Bergem	

LIST	OF	<b>PUBLICATIONS</b>	IN	1989	AND	1990	6	7
------	----	---------------------	----	------	-----	------	---	---

page