

ESCA PRESIDENT'S MESSAGE

On behalf of the European Speech Communication Association (ESCA), I would like to welcome you to the beautiful city of Budapest and to the 6th European Conference on Speech Communication and Technology - EUROSPEECH'99.

Thinking back, it hardly seems possible that two years have passed since we all met together on the sunny island of Rhodes for EUROSPEECH'97. Yet, it has been an eventful time, both in the world at large and for the Association. For example, over ten very successful 'ESCA Tutorial and Research Workshops' have taken place in different parts of the world covering such diverse topics as the "Sound Patterns of Spontaneous Speech" (Aix-en-Provence, France), "Audio-Visual Speech Processing" (Terrigal, Australia) and "Method and Tool Innovations for Speech Science Education" (London, UK). Also, 'Special Interest Groups' have been established in the areas of "Speech Synthesis" (SynSIG), "Audio Visual Speech" (AVISA), "Speech and Language Technology for Minority Languages" (SALTMIL) and the "Groupe Francophone de la Communication Parlée" (GFCP). In parallel, ESCA has set down some general principles for the establishment and support of more regional-based activities, should this be of particular interest to any geographically localised group of members.

Information about these, and the wide range of other ESCA activities, can be found on our newly designed website at <http://www.esca-speech.org/>.

The last two years have also not been without tragedy. As many of you know, early in 1998 the ESCA Secretary - Christian Benoît - passed away suddenly at a very young age, much to the shock of his family, his colleagues at ICP in Grenoble and to the many people around the world who had known and worked with him. This sad event prompted the Association to establish the "Christian Benoît Mentoring Scheme" as a permanent and lasting tribute, and I am pleased to say that this voluntary self-help scheme has already been able to assist several young scientists in preparation of their material for events such as EUROSPEECH.

Turning back to the conference, over the years EUROSPEECH has grown to become a major international event. Yet, it is not a team of functionaries who have toiled away for the last four years to bring us here this week. Rather, it is your Hungarian colleagues - your fellow scientists - who, in the interests of the wider international community, have dedicated huge quantities of their personal time and effort towards creating the opportunities we now have in front of us. It is now our turn to repay this debt by using this time productively for the maximum possible scientific exchange, collaboration and advancement. So, on your behalf, I would like to offer a huge thank you to the EUROSPEECH'99 General Chairman Géza Gordos and his wonderful team of local organisers for their tireless efforts in creating another significant milestone in the annals of European speech science and technology. Also, we should extend our thanks to the International Scientific Committee for diligently executing the mammoth task of reviewing and adjudicating well over 1000 submissions. Well done to everyone involved.

During the conference, ESCA has great pleasure in presenting two major awards this year. I am pleased to be able to reveal that the '1999 ESCA Medal for Scientific Achievement' will be presented to Fred Jelinek, of Johns Hopkins University, for his outstanding contributions to the development of automatic speech recognition. In addition, I am proud to be able to announce that ESCA is to award a unique 'Special Service Medal' to Joseph Mariani, of LIMSI, for his key role as first President of the Association and for the establishment of the EUROSPEECH series of conferences.

Looking to the future, it is likely that EUROSPEECH'99 will provide the stage for some exciting changes to ESCA itself. Since its foundation, the Association has gradually expanded and consolidated its activities; it has offered an increasing range of services and benefits to you its members, and it has put its financial and

administrative functions on a firm professional footing. Indeed, over the past ten years, ESCA has evolved from a small EEC-supported European organisation to a fully-independent and self-supporting European-based international association. The time has now come where the Association is ready to take the next step - to truly 'internationalise' itself. This means opening up the Board to members from any country from around the world and changing the name to reflect its wider responsibilities, perhaps to the "International Speech Communication Association" - ISCA. These important matters will be decided at the General Assembly of the Association that will be held in the evening of Tuesday 7th September. All members are invited to attend and to contribute to this potentially historic occasion.

Also looking to the future, I am pleased to be able to announce that EUROSPEECH'01 (or will it be INTERSPEECH'01) will take place in Aalborg Denmark over the period 3rd to the 8th of September 2001. Plans are already well under way and I can reveal that, in recognition of the continuing growth in submissions and attendance, you can look forward to some significant and exciting changes in format and style. Not only is the organisation a collaboration between the different Scandinavian countries, but we also hope to encourage new types of events and to be able to allow our Special Interest Groups to take a leading role in key aspects of the programme. If you have any imaginative ideas yourself which you feel could shape future conferences in Speech Communication and Technology, then please contact the ESCA Board and let us know.

I wish you all a successful conference, an enjoyable time in the beautiful city of Budapest and a memorable visit to Central Europe and to Hungary.

Jó utat.

Prof. Dr. Roger K. Moore
ESCA President

GENERAL CHAIRMAN'S MESSAGE

I am extremely privileged to have the honour and pleasure to welcome you, on behalf of the Organizing Committee, to Eurospeech '99, the sixth biennial conference of the European Speech Communication Association (ESCA) on Speech Communication and Technology.

You and Eurospeech '99 are hosted in a country that has particularly old traditions in speech technology. To our best knowledge it was a Hungarian, W. v. Kempelen who after extensively studying the human speech production at a truly scientific level for the first time in history created a device that was able to "utter" speech sounds, words and even series of words. His book reporting about the details of the speaking machine was published in 1791. This really old tradition was significantly reinforced in 1961 when another born Hungarian, G. v. Békésy received the Nobel prize for his findings concerning the human hearing mechanism and particularly the cochlea. It is a nice coincidence that 1999 is the year when the scientific world celebrates the 100th anniversary of Békésy's birth.

Hungary is fortunate to celebrate another anniversary in 1999. Together with you we will celebrate the 10th anniversary of Eurospeech in Budapest. Born in 1989 in Paris Eurospeech has continuously grown in size and professional richness and has attracted a steadily increasing attendance to Genoa (1991), Berlin (1993), Madrid (1995) and Rhodes (1997).

It was a pleasure for the international and local organizers to receive nearly 1100 abstracts from all over the world. I would like to thank the authors of all the abstracts for submitting their intended contributions to

Eurospeech '99. This year has a very busy and competitive conference calendar of the related scientific fields in the time period concerned. So those, who chose Eurospeech '99 from the big choice of other conferences really deserve those sincere thanks. The geographical distribution of the origin of the proposed papers clearly shows that the tendency of Eurospeech becoming more and more a truly international as opposed to mainly European event is continuing.

It was a pleasure to receive that many proposals but it was a difficult job, too, for the International Scientific Committee (ISC) to make the inevitable paper selection. The ISC has finally accepted for presentation 751 abstracts of high academic/technical standard, at a rejection rate of approximately 30%. Thanks are due to the ISC, too, for their time consuming and very delicate work.

When mentioning the ISC we should remember Christian Benoît. This highly respected person, a true member of the world's "speech family" started to work for Eurospeech '99 as the Secretary of ESCA but to the greatest sorrow of all of us he passed away. We keep his memory and we feel his encouragement for advancing further speech science and technology.

The technical program consists of 38 oral and 39 poster sessions as well as one panel discussion and includes 5 keynotes by distinguished members of the "speech community". Three oral and three poster sessions will run in parallel. The number of presentations will be 5 per oral and 8 to 20 per poster sessions adding up to 723 papers altogether. The topic of the panel discussion is open software.

Having seen the papers we believe that inviting only one submission by a first author, an innovation in the Call for Papers of Eurospeech '99 has successfully contributed to further assure quality of the technical program.

According to the traditions, just after the opening ceremony on Monday (the 6th) the ESCA medalist for scientific achievement, F. Jelinek is the co-author (together with C.Chelba) of the first keynote: "Putting Language into Language Modelling". The ESCA medalist for services, Joseph Mariani will also briefly address the audience. On Tuesday (the 7th) the day starts with M. Gósy's keynote: "The Controversial Connection Between Speech Production and Perception: Theories vs. Facts". Wednesday (the 8th) will be kicked-off by M.T. Maybury's keynote: "Multimedia Interaction for the New Millennium". The technical program on Thursday (the 9th) will start with the keynote by B. Lindblom: "How Speech Works: Questions and Some Preliminary Answers " and will finish with a summing-up keynote by H. Ney with the probable title "Perspectives of Speech Technology Research Highlighted in Eurospeech '99". With this summarizing keynote Eurospeech '99 tries to maintain something that was first applied at Eurospeech '97 and which could become a tradition in the future, too.

Parallel to the technical program on Tuesday (the 7th), in the afternoon, an Education Arena coordinated by Gerrit Bloothoofth will take place. There you will find demonstrations of educational tools, "meet the authors"-corner, job market, presentations of industry, speakers corner, etc. concerning speech AND language. The technical program will be strengthened by an exhibition running from Sunday (the 5th) through Thursday (the 9th).

Please, note that the very interesting event "European Union Activities in Human Language Technologies" will take place on Sunday (the 5th), one day before the technical program starts. This satellite event runs under the auspices of the EUROMAP project and is a spiritual heir of the EU Speech Projects Day. Other satellite events are the ESCA Tutorial and Research Workshop on Dialogue and Prosody just before (September 1-3) and the ESCA-NATO Workshop on Multilingual Interoperability in Speech Technology right after Eurospeech '99 (September 13-14), both to be held in the Netherlands. The conference site will host the ESCA Special Interest Group meetings and the COCODA meeting.

It is a valuable recognition of the importance of speech communication and technology that the main patron of Eurospeech '99 is Mr. Viktor Orbán, Prime Minister of Hungary. János Martonyi, Minister of Foreign

Affairs will address the conference at the Opening Ceremony on Monday (the 6th). On the same day in the evening Ákos Detrekői, Rector of the Technical University of Budapest is the host at the welcome reception.

The Student Prizes by ESCA, ELSNET and ELRA for

- the best student paper addressing original speech communication topics
- the best student paper addressing integration of language and speech
- the best student paper addressing issues related to speech and natural language resources (corpora, lexica, etc.)

will be handed over at the Closing Ceremony on Thursday (the 9th).

Apart from the scientific/technical program and issues closely related to it I would like to mention a couple of things with which the organizers try to increase the satisfaction and comfort of the participants:

- forty three grants (from ESCA and the local organizers) to assist the participation of students and young scientists,
- an artistic performance at the Opening Ceremony on Monday (the 6th),
- the choice of three excursions on Wednesday afternoon (on the 8th) ,
- a Hungarian Special Event with dinner on Wednesday evening (on the 8th),
- lunches on the spot (free for full registrants)
- a weekly pass on the excellent Budapest public transportation system helping all participants to explore this beautiful city,
- a choice of two full-day and two half-day post conference tours on Friday (the 10th).

My message would not be complete without saying "thank you" on behalf of the Organizing Committee to all who have helped and are helping in the conference arrangements. The authors of the abstracts and papers as well as the International Scientific Committee have already been mentioned but they deserve to be mentioned here, too.

From among the numerous Hungarian organisations and companies that have extended their support and/or sponsorship to this conference I would like to mention only three academic institutions, the Eötvös Loránd University of Sciences, the Technical University of Budapest and the Linguistic Institute of the Hungarian Academy of Sciences.

Many thanks also to ESCA and its Board Members. The local organizers got tremendous help from ESCA's past and present Presidents, Louis Pols and Roger Moore and from George Kokkinakis, the General Chairman of Eurospeech '97.

Let me express my gratitude to all members of the Organizing Committee. If Eurospeech '99 will be successful it will be largely the result of their devoted activity.

Once again, most cordially welcoming all of you, participants and guests of Eurospeech '99, I wish you an enjoyable and fruitful conference and a very pleasant stay in the host city and country of the conference, Budapest and Hungary.

Prof. Dr. Géza Gordos
General Chairman

LOCAL ORGANIZING COMMITTEE

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EUROSPEECH '99 INTERNATIONAL SCIENTIFIC COMMITTEE

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Billi, R. (I), CSELT	Mangold, H. (D), DBAG
Bloothoof, G. (NL), Uni. Utrecht	Mariani, J. (F), LIMSI
Boulevard, H. (CH), IDIAP	Moore, R. (UK), DERA
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Keller, E. (CH), Uni. Lausanne	Uhlir, J. (CZ), TU Prague
Kokkinakis, G. (GR), Univ. Patras	Vicsi, K. (H), TU Budapest

CONFERENCE INFORMATION

Conference date:

September 5-9, 1999

Conference Venue

The EUROSPEECH '99 conference and exhibition will be held between September 5-9, in ELTE TTK, Chemistry Building (Eötvös Loránd University, Faculty of Natural Sciences).

The address of the conference venue:

H-1117 Budapest,
Pázmány Péter sétány 2.
Hungary

ELTE TTK, Chemistry Building is located on the Buda bank of the Danube, between the bridges Petőfi and Lágymányosi. It is easily accessible by public transport or by car. Trams no. 4 and 6 provide the most convenient connections to other parts of the city. (See attached maps about part of Budapest and the building of the Conference and Exhibition.)

Language

The official language of EUROSPEECH '99 is English.

Opening Ceremony

The Opening Ceremony will take place on Monday, September 6, at the conference venue, in the Large Hall at 9.00.

Prof. Géza Gordos, General Chairman, János Martonyi, Minister of Foreign Affairs and Prof. Roger Moore, ESCA President will give addresses. Before the presentation of ESCA Medals a short artistic performance will greet the participants.

Welcome Reception

On Monday September 6, registered participants will be offered a Welcome Reception from 18.30 at the conference venue in the Pyramid Hall. Additional invitations for the Welcome Reception can be purchased for accompanying persons and other guests at the registration desk of the conference.

Hungarian Special Event

The official dinner of the conference is included in the full registration fee. It will take place on Wednesday September 8, 20.00-23.00 on the Margaret Island. There will be a boat transfer to the island. Meeting point for boarding the boat is at the main entrance of the conference building. Program: pálinka-tasting, unlimited wine consumption, traditional folk music, Hungarian dance show and feast with dancing on stage, Hungarian dinner. Additional invitations for the Hungarian Special Event can be purchased by participant paying limited or student registration fee and for accompanying persons and guests at the registration desk of the conference. (Please note that the Hungarian Special Event will take place in a garden with tent-like roof. Warm clothing is recommended.)

Lunches

Lunches are included in the full registration fee. Lunches will be offered on Monday, Tuesday, Wednesday and Thursday between 13.00-15.00 at the venue of the conference. Lunch tickets can be purchased on the spot.

Half Day Excursion

The half day excursion will be organized on Wednesday, September 8 from 15.00-18.00. It is included in the full registration fee. There are three types of short excursions to select from:

1. [Sightseeing Tour in Budapest](#)

During a 3 hour tour by coach you will visit the most important sights of our capital (Heroes Square, Castle Hill, Opera etc.)

2. [Rendezvous with the Danube](#)

A short guided tour by boat on the Danube, showing the most attractive sights of the city from the river.

3. [Memorial Statues Park](#)

Open air exhibition of statues of the past communist system (so-called "socialist realist" direction of art e.g. huge statues of Lenin, Marx, etc.) collected from public sites of Budapest and displayed as a memory of the years between 1948-1989.

Speakers' Meeting

The Speakers' Meeting will take place on Monday, Tuesday, Wednesday and Thursday from 8.15 to 8.45 in the building of the conference (Lunch Hall).

Both, oral and poster presenters as well as chairpersons of the day are kindly requested to participate at the Speakers' Meeting.

Publications

The Conference Proceedings in printed form (six volumes, unless the volumes have been posted earlier to the participant upon his/her request), CD-ROM and the Abstract Volume of the presentations will be handed over to delegates at the conference according to the registration rules. The Final Program completes the set of publications.

Plenary Sessions

There will be five plenary sessions in which five distinguished scientists will give keynote speeches: Monday after the opening ceremony (the 6th) the ESCA medalist for scientific achievement, Frederic Jelinek is the co-author (together with C.Chelba) of the first keynote: "Putting Language into Language Modelling". The ESCA medalist for services, J. Mariani will also briefly address the audience. On Tuesday (the 7th) the day starts with Mária Gósy's keynote: "The Controversial Connection Between Speech Production and Perception: Theories vs. Facts". Wednesday (the 8th) will be kicked-off by Mark T. Maybury's keynote: "Multimedia Interaction for the New Millennium". The program on Thursday (the 9th) will start with the keynote by Björn Lindblom: "How Speech Works: Questions and Some Preliminary Answers" and will finish with a summing-up keynote by Hermann Ney with the probable title "Perspectives of Speech Technology Research Highlighted in Eurospeech '99".

Oral and Poster Sessions

The program consists of 38 oral and 39 poster sessions as well as one panel discussion. Three oral and three poster sessions will run in parallel. The number of presentations will be 5 per oral and 8 to 20 per poster sessions adding up to 723 papers altogether.

The authors of the poster sessions are kindly requested to stay by their poster during the session and stay in the same poster area for all the morning or all the afternoon.

Special Sessions

Parallel to the scientific program on Tuesday (the 7th), in the afternoon an Education Arena coordinated by Gerrit Bloothoofst will take place. There you will find demonstrations of educational tools, "meet the authors"-corner, job market, presentations of industry, speakers corner, etc. concerning speech AND language.

A satellite event "European Union Activities in Human Language Technologies" will take place on Sunday (the 5th), one day before the scientific program starts. This event runs under the auspices of the EUROMAP project and is a spiritual heir of the EU Speech Projects Day. The conference site will host the ESCA Special Interest Group meetings and the COCOSDA meeting. Other satellite events are the ESCA Tutorial and Research Workshop on Dialogue and Prosody just before (September 1-3) and the ESCA-NATO Workshop on Multilingual Interoperability in Speech Technology right after Eurospeech '99 (September 13-14), both to be held in the Netherlands.

Session/Presentation Identifiers

See [ABOUT THE PROGRAM STRUCTURE](#) below.

Maps and Directions

To see the maps click on the following icon!



Internet Access

Eurospeech'99 will provide several terminals for conference participants to access the Internet and electronic e-mail. Access to the terminals will be possible during the conference hours.

Exhibition

A scientific and industrial exhibition will be held during Eurospeech'99. Companies, publishers, research institutes, universities and consortia of EU-supported projects will show their products and research result. Detailed information about the exhibition can be reached on the web site of the conference. The exhibition will take place in the building of the conference from Sunday, September 5, to Thursday, September 9. The stands will be open as follows:

Saturday, September 5	17.00 - 18.00
Monday, September 6	9.00 - 18.00
Tuesday, September 7	9.00 - 18.00
Wednesday, September 8	9.00 - 13.00
Thursday, September 9	9.00 - 18.00

Exhibitors which confirmed their participation at press time include:

Conexor Oy, Finland
 DRAGON SYSTEMS, INC, USA
 ELAN Informatique, France
 ESCA
 EU-project EUROMAP, Denmark

Kluwer Academic Publishers, The Netherlands
MEDAV Digitale Signalverarbeitung GmbH, Germany
MINDMAKER Kft., Hungary
MorphoLogic, Hungary
Nuance Communications, France
PanTel Rt., Hungary
Siemens AG, Germany
Technical University of Budapest, Hungary
University of Szeged, Hungary

Satellite events

COCOSDA Meeting

It will be held on Friday, September 10 in the Informatics building of the ELTE and TUB.

Address: H-1117 Budapest

Pázmány Péter sétány 1/d

(This site is two minutes walking distance from the venue of EUROSPEECH '99)

September 1-3, 1999, Eindhoven, The Netherlands

ESCA Tutorial and Research Workshop on Dialogue and Prosody

<http://www.tue.nl/ipo/sli/etw.html>

September 13-14, 1999, Leusden, The Netherlands

ESCA-NATO Workshop

MIST: Multi-lingual Interoperability in Speech Technology

<http://iris1.let.kun.nl/mist>

September 5, 1999, Budapest, Hungary

European Union Activities in Human Language Technologies

As in previous years, there will be a Eurospeech satellite event devoted to providing an EU perspective on language technologies. This year the event, which will take place on Sunday, September 5 from 14.00 to 17.00 at the Eurospeech'99 conference venue, Medium Hall, is organised under the auspices of EUROMAP. Participation is free of charge and all interested Eurospeech participants are welcome to attend.

A multimedia information package on EU sponsored R&D will be available for the participants.

<http://www.linglink.lu/hlt/events/eurospeech99/eurospeech-agenda.asp>

Eurospeech '99 Satellite Event

Organised under the auspices of EUROMAP

European Union Activities in Human Language Technologies

September 5, 1999 (Sunday), Eurospeech '99 Conference Venue, Medium Hall

Program

14.00 Welcome

Prof. Géza Gordos, Eurospeech '99 General Chairman
 Prof. Roger Moore, ESCA President

14.10 A regional perspective in speech and language technologies

Dr. Géza Németh, Technical University of Budapest
 Dr. Gábor Prószéky, MorphoLogic, CEO

14.30 Panel: Speech technologies at the turn of the Millenium: where do we go from here?

Dr. Roberto Billi, CSELT, Audio Speech Technology and Services, Director
 Dr. Bert van Coile, Lernout&Hauspie, VP for R&D
 Dr. Christian Dugast, Nuance Europe, Director
 Prof. Joseph Mariani, LIMSI-CNRS, Director
 Prof. Alex Waibel, University of Karlsruhe and Carnegie Mellon University

15.20 Discussion

15.40 Coffee Break

16.00 Human Language Technologies in 1999-2002

G. B. Varile, European Commission, Human Language Technologies, Deputy Head

16.30 Discussion

16.45 Conclusions and Close

17.00 Opening and visit of the Exhibition of Eurospeech '99

[EUROSPEECH 2001](#)

EUROSPEECH ' 2001 will be held in Aalborg, Denmark between September 5-8.

General Chair:	Paul Dalsgaard Center for PersonKommunikation, Aalborg University, Denmark
Co-Chair:	Björn Graström Center for Speech Technology, KTH, Stockholm, Sweden
Local Organisation:	Borge Lindberg & Henrik Benner Center for PersonKommunikation
Secretary & Publications:	Ib Thomsen and Paul Dalsgaard Center for PersonKommunikation
Web Master:	Henrik Benner, CPK, Denmark
Technical Committee:	Torbjörn Svensen, NTNU, Trondheim, Norway Matti Karjalainen, HUT, Helsinki, Finland Rolf Carlson, KTH, Stockholm, Sweden Gösta Bruce, University of Lund, Sweden Borge Lindberg, CPK, Denmark

	Björn Granström, KTH, Sweden Paul Dalsgaard, CPK, Denmark
Organiser:	Center for PersonKommunikation Aalborg University, 9220 Aalborg Denmark Phone: +45 96 35 86 42 Fax: +45 98 15 15 83 e-mail: eusp2001@cpk.auc.dk

ABOUT THE PROGRAM STRUCTURE

Please note that time intervals for the Sessions are called Slots

(Slot1 on Monday, 11.45 – 13.00 through Slot 13 on Friday, 16.45 – 18.00).

In each Slot there are, in parallel, 3 Oral Sessions (Oral 1, 2 and 3) and 3 Poster Sessions (Poster 1, 2 and 3).

In the Session Identifier Code (eg. S3.PO2)

- the time interval is indicated by the Slot number (eg. Slot3=S3=Monday, 16.45-18.00)
- type of presentation is indicated by OR (=Oral) or PO (=Poster)
- place of presentation is indicated by a number following OR/PO
(in case of ORal sessions: 1=Large Hall, 2=Medium Hall, 3=Small Hall;
in case of POster sessions: see map)

In the Presentation Identifier Code (eg. S3.PO2.3) the number following the dot after the Session Code indicates the serial number of that presentation in the Session.

The geographical areas of the poster sessions are also distinguishable by a colour code (see eg. [Scientific Program at a Glance](#) and [Maps and Directions](#) above.).

Opening and Closing Ceremonies, Keynotes take place in the Large Hall. The place of the Welcome Reception, Education Arena and refreshments is the Pyramid Hall.

PROGRAM HIGHLIGHTS

Outstanding Events	
Opening Ceremony <i>Monday 6, 9.00</i>	Plenary event on the conference venue (Large Hall) with welcome addresses, ESCA Medal Awards and artistic performance
Welcome Reception <i>Monday 6, 18.30</i>	Will be held at the conference venue

Half Day Excursion <i>Wednesday 8, 15.00 – 18.00</i>	The excursion chosen (Coach, Boat or Memorial Statues Park)
Hungarian Special Event <i>Wednesday 8, 20.00</i>	Hungarian dinner with a performance of Hungarian folk music and also with dancing in the main entertainment center on the Margaret Island
Lunches <i>Monday 6, Tuesday 7, Wednesday 8, Thursday 9, 13.00-15.00</i>	Will be served in the building of the conference venue (free for full participants)
Closing Ceremony <i>Thursday 9, 19.00 – 19.30</i>	Plenary event on the conference venue (Large Hall) with the presentation of student prizes

(Tickets for the Half Day Excursion / Hungarian Special Event / Lunches are included in the full registration fee. Non full-participants can purchase tickets at the Registration Desk.)

Sessions

Plenary keynote sessions:	5
Open software panel discussion	1
Oral sessions:	38
Poster sessions:	39
Total:	83

Papers

Keynote papers:	5
Oral session papers:	190
Poster session papers:	528
Total:	723

Conference Publications

Final program:	One booklet
Abstracts:	One volume
Hard-copy proceedings:	Six volumes: Volume 1: (pp.KN 1 – 20 and 1 – 586) Monday (Slots 1, 2, 3) Volume 2: (pp. 587 – 1026) Tuesday Morning (Slots 4, 5) Volume 3: (pp. 1027 – 1498) Tuesday Afternoon (Slots 6, 7) Volume 4: (pp. 1499 – 1922) Wednesday Morning (Slots 8, 9) Volume 5: (pp. 1923 – 2414) Thursday Morning (Slots 10, 11) Volume 6: (pp. 2415 – 2884) Thursday Afternoon (Slots 12, 13)

CD-ROM proceedings: One CD-ROM

PROGRAM OVERVIEW

September 5, Sunday	September 6, Monday	September 7, Tuesday	September 8, Wednesday
Registration 12.00 - 18.30	Registration 7.30 - 18.00	Registration 7.30 - 18.00	Registration 7.30 - 15.00
	Speakers' Meeting 8.15	Speakers' Meeting 8.15	Speakers' Meeting 8.15
<p>European Union Activities in Human Language Technologies 14.00-17.00</p> <p>Welcome</p> <p>Prof. Géza Gordos</p> <p>Eurospeech'99 General Chairman Prof. Roger Moore ESCA President 14.00-14.10</p> <p>A regional perspective in speech and language technologies</p> <p>Dr. G. Németh, TU Budapest Dr. G. Prószéky, Morphologic, CEO 14.10-14.30</p> <p>Panel: Speech technologies at the turn of the Millenium: where do we go from here?</p> <p>Dr. R. Billi, CSELT, ASTS, Director Dr. B. van Coile, L&H, VP for R&D Dr. C. Dugast, Nuance Europe, Director Prof. J. Mariani, LIMSI, Director Prof. A. Waibel, Uni. Karlsruhe and CMU 14.30-15.20</p> <p>Discussion 15.20-15.40</p> <p>Human Language Technologies in 1999-2002</p> <p>G.B. Varile, EC HLT, Deputy Head 16.00-16.30</p>	<p>Opening Ceremony</p> <p>9.00-9.10 Prof. Géza Gordos General Chairman</p> <p>9.10-9.25 János Martonyi Minister of Foreign Affairs, Hungary</p> <p>9.25-9.35 Prof. Roger Moore ESCA President</p> <p>9.35-10.10 Artistic Performance</p> <p>Presentation of ESCA Medals 10.10-10.15</p> <p>Address by Joseph Mariani, LIMSI ESCA Medalist for Special Services</p> <p>10.15-10.25</p> <p>Keynote Speech 1 by Fred Jelinek, Johns Hopkins Uni. ESCA Medalist for Scientific Achievement</p> <p>10.25-11.15</p> <p>Coffee Break 11.15-11.45</p> <p>Slot 1 11.45-13.00</p> <p>Lunch break 13.00-15.00</p> <p>Slot 2 15.00-16.15</p> <p>Coffee break 16.15-16.45</p>	<p>Keynote Speech 2 by Mária Gósy Phonetics Lab., Linguistics Institute, Hung. Acad. of Scienc. 9.00-9.50</p> <p>Slot 4 10.00-11.15</p> <p>Coffee Break 11.15-11.45</p> <p>Slot 5 11.45-13.00</p> <p>Lunch break 13.00-15.00</p> <p>Slot 6 and "Education Arena" 15.00-16.15</p> <p>Coffee break 16.15-16.45</p>	<p>Keynote Speech by Mark T. Mayl Mitre Corp 9.00-9.50</p> <p>Slot 8 10.00-11.15</p> <p>Coffee Break 11.15-11.45</p> <p>Slot 9 11.45-13.00</p> <p>Lunch break 13.00-15.00</p> <p>Excursion 15.00-18.00 (included in full fee)</p>

Discussion 16.30-16.45	Slot 3 16.45-18.00	Slot 7 and "Education Arena" 16.45-18.00	
Conclusions and Close 16.45-17.00			
Opening and visit of the Eurospeech'99 Exhibition 17.00-18.00	Welcome reception 18.30 Synthesis SIG meeting 20.00-	ESCA General Assembly 18.30	Hungarian Speech Event with Dinner 20.00-23.00 (incl. in full reg)

SCIENTIFIC PROGRAM AT A GLANCE

Oral Sessions and Keynotes

<i>Monday September 6</i>	<i>Oral 1, Large Hall</i>	<i>Oral 2, Medium Hall</i>	<i>Oral 3, Small Hall</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
Opening Ceremony 9.00-10.25	<i>Large Hall</i> 9.00-9.10 Prof. G. Gordos, General Chairman 9.10-9.25 János Martonyi, Minister of Foreign Affairs, Hungary 9.25-9.35 Prof. R. Moore, ESCA President 9.35-10.10 Artistic Performance		
Keynote 1 10.25-11.15	<i>Large Hall</i> by ESCA Medalist for Scientific Achievements, Frederick Jelinek (Johns Hopkins University) Putting Language into Language Modeling		
Slot 1 11.45-13.00	<u>Speech Recognition</u> Adaptation-1	<u>Prosody</u> Prosodic features in dialogues	<u>Speech Recognition</u> Confidence measures
Slot 2 15.00-16.15	<u>Speech Recognition</u> Adaptation-2	<u>Prosody</u> Prosodic phrasing and interruptions	Assessment
Slot 3 16.45-18.00	<u>Speech Recognition</u> Speaking rate	<i>Open Software... Panel discussion</i>	Speech acoustics
Welcome Reception 18.30-			
<i>Tuesday September 7</i>	<i>Oral 1, Large Hall</i>	<i>Oral 2, Medium Hall</i>	<i>Oral 3, Small Hall</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			

Keynote 2 9.00-9.50	<i>Large Hall</i> Mária Gósy (Research Institute for Linguistics, Hungarian Academy of Sciences) The Controversial Connection Between Speech Production and Perception: Theories vs. Facts		
Slot 4 10.00-11.15	<u>Speech Recognition</u> Multi-stream ASR	<u>Speech generation/synthesis</u> Concatenation	Speech communication education
Slot 5 11.45-13.00	<u>Speech Recognition</u> Large Voc. Cont. Speech Rec. (LVCSR)	<u>Speech generation/synthesis</u> Systems and evaluation	Speech technology for language learning
Slot 6 with Education Arena 15.00-16.15	<u>Speech Recognition</u> Broadcast news	<u>Speech generation/synthesis</u> Acoustic synthesis	Disorders in speech production and/or speech perception
Slot 7 with Education Arena 16.45-18.00	<u>Speech Recognition</u> Search	Systems, architectures	Audio-visual speech
<i>Wednesday</i> <i>September 8</i>	<i>Oral 1, Large Hall</i>	<i>Oral 2, Medium Hall</i>	<i>Oral 3, Small Hall</i>
Registration 7.30 - 15.00 Speakers' Meeting 8.15			
Keynote 3 9.00-9.50	<i>Large Hall</i> Mark T. Maybury (MITRE Corp.): Multimedia Interaction for the New Millennium		
Slot 8 10.00-11.15	<u>Speech Recognition</u> Acoustic modelling-1	Dialogue	Wideband and perceptually based coding
Slot 9 11.45-13.00	<u>Speech Recognition</u> Acoustic modelling-2	Multimodal interaction	Joint source-channel coding
Excursion 15.00-18.00 Hungarian Special Event with Dinner 20.00-23.00			
<i>Thursday</i> <i>September 9</i>	<i>Oral 1, Large Hall</i>	<i>Oral 2, Medium Hall</i>	<i>Oral 3, Small Hall</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
Keynote 4 9.00-9.50	<i>Large Hall</i> Björn Lindblom, (Department of Linguistics, Stockholm University): How Speech Works: Questions and Some Preliminary Answers		
Slot 10 10.00-11.15	<u>Speech Recognition</u> Language modelling-1	Speech and noise	Text-dependent speaker verification
Slot 11 11.45-13.00	<u>Speech Recognition</u> Language modelling-2	Speech signal processing	Text-independent speaker verification and tracking

Slot 12 15.00-16.15	Speech Translation	Topic detection and tracking	Speech & the Internet
Slot 13 16.45-18.00	Spoken dialogue systems	Speech perception	Corpora
Closing Keynote 5 18.15-19.00	<i>Large Hall</i> Hermann Ney (RWTH Aachen): Perspectives of Speech Technologies Research Highlighted in Eurospeech'99		
19.00-19.30	<i>Large Hall</i> Closing Ceremony with presentation of student prizes		

Poster Sessions and Keynotes

<i>Poster 1</i>	<i>Poster 2</i>	<i>Poster 3</i>	<i>Monday September 6</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
10.00-10.25 Presentation of ESCA Medal for Scientific Achievement to Frederick Jelinek Special Service Medal to Joseph Mariani			Opening Ceremony 9.00-10.25
<i>Large Hall</i> by ESCA Medalist for Scientific Achievements, Frederick Jelinek (Johns Hopkins University): Putting Language into Language Modeling			Keynote 1 10.25-11.15
<u>Speech Recognition</u> Acoustic processing <i>Area: white</i>	Articulatory measurements and modelling <i>Area: blue</i>	First and second language learning <i>Area: yellow</i>	Slot 1 11.45-13.00
<u>Speech Recognition</u> Confidence measures <i>Area: white</i>	Speech analysis and tools <i>Area: blue</i>	Language identification <i>Area: yellow</i>	Slot 2 15.00-16.15
<u>Speech Recognition</u> Search and pronunciation modelling <i>Area: red</i>	<u>Prosody</u> Stress, accent and prominence phrasing <i>Area: green</i>	Speech disorders & speech for disabled <i>Area: black</i>	Slot 3 16.45-18.00
Welcome Reception 18.30-			
<i>Poster 1</i>	<i>Poster 2</i>	<i>Poster 3</i>	<i>Tuesday September 7</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
<i>Large Hall</i> Mária Gósy (Research Institute for Linguistics, Hungarian Academy of Sciences) The Controversial Connection Between Speech			Keynote 2 9.00-9.50

Production and Perception: Theories vs. Facts			
<u>Speech Recognition</u> Broadcast news <i>Area: white</i>	<u>Prosody</u> Temporal and/or intonational features <i>Area: blue</i>	<u>Speaker recognition</u> Acoustic features and robustness <i>Area: yellow</i>	Slot 4 10.00-11.15
<u>Speech Recognition</u> Multilinguality <i>Area: red</i>	Systems, architectures, interfaces <i>Area: green</i>	<u>Speaker recognition: scoring and decision</u> <i>Area: black</i>	Slot 5 11.45-13.00
<u>Speech Recognition</u> <u>Acoustic modelling-1</u> <i>Area: white</i>	Dialogue-1 <i>Area: blue</i>	Speaker recognition and topic detection <i>Area: yellow</i>	Slot 6 with Education Arena 15.00-16.15
<u>Speech Recognition</u> Acoustic modelling-2 <i>Area: red</i>	Dialogue-2 <i>Area: green</i>	Speech coding <i>Area: black</i>	Slot 7 with Education Arena 16.45-18.00
<i>Poster 1</i>	<i>Poster 2</i>	<i>Poster 3</i>	<i>Wednesday</i> <i>September 8</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
<i>Large Hall</i> Mark T. Maybury (MITRE Corp.): Multimedia Interaction for the New Millennium			Keynote 3 9.00-9.50
<u>Speech Recognition</u> Language modelling-1 <i>Area: white</i>	<u>Prosody</u> Study of prosody for speech synthesis <i>Area: blue</i>	Speech perception-1 <i>Area: yellow</i>	Slot 8 10.00-11.15
<u>Speech Recognition</u> Language modelling-2 <i>Area: red</i>	<u>Speech generation/synthesis</u> Prosody <i>Area: green</i>	Speech perception-2 <i>Area: black</i>	Slot 9 11.45-13.00
Excursion 15.00-18.00 Hungarian Special Event with Dinner 20.00-23.00			
<i>Poster 1</i>	<i>Poster 2</i>	<i>Poster 3</i>	<i>Thursday</i> <i>September 9</i>
Registration 7.30 - 18.00 Speakers' Meeting 8.15			
<i>Large Hall</i> Björn Lindblom, (Department of Linguistics, Stockholm University): How Speech Works: Questions and Some Preliminary Answers			Keynote 4 9.00-9.50

Speech understanding- Miscellaneous topics <i>Area: white</i>	<u>Speech generation/synthesis</u> Systems, linguistic processing <i>Area: blue</i>	Speech & the Internet <i>Area: yellow</i>	Slot 10 10.00-11.15
Corpora <i>Area: red</i>	<u>Speech generation/synthesis</u> Acoustic synthesis & units <i>Area: green</i>	Speech and noise-1 <i>Area: black</i>	Slot 11 11.45-13.00
<u>Speech Recognition</u> Adaptation <i>Area: white</i>	Enhancements, echo cancellation and quality measures <i>Area: blue</i>	Speech and noise-2 <i>Area: yellow</i>	Slot 12 15.00-16.15
<u>Speech Recognition</u> Training <i>Area: red</i>	Speech analysis and segmentation <i>Area: green</i>	Speech and noise-3 <i>Area: black</i>	Slot 13 16.45-18.00
<i>Large Hall</i> Hermann Ney (RWTH Aachen): in Perspectives of Speech Technologies Research Highlighted Eurospeech'99			Closing Keynote 5 18.15-19.00
<i>Large Hall</i> Closing Ceremony with presentation of student prizes			19.00-19.30

EDUCATION ARENA

See: <http://www.ling.umu.se/arena>

USEFUL INFORMATION

Related links

- [Welcome to Budapest](#)
- [Budapest related links](#)
- [Hungarian tourism Web site](#)

Travel Information

Participants travelling to Budapest by air will arrive at [airport Ferihegy](#) Terminal 2A (Hungarian Airline, [MALEV](#)) or 2B (other airlines); they are near to each other.

From the airport - since taxis are expensive and their price is not controlled - we suggest you to use the LRI Minibus Service (from house to house = from the airport to the hotel and vica versa). Information desk (operator) of the Minibus Service can be found in the centre of the arrival lobby of the airport. The price of it is approximately HUF 1200 (about Euro 5) one way.

Back to the airport you can order this service at your hotel one day before your departure.

Public transportation is extensive, reliable and cheap. Fares can not be paid on board and there are fines for travelling without a validated ticket. Tickets are valid for one ride only. A new ticket must be used every time you change lines. Tickets can be purchased at metro stations, hotels and tobacco shops (one ticket is HUF 90, about 0.4 Euro).

The Local Organising Committee would like to draw your kind attention to the fact, that all registered participants of the Conference will receive a one week pass in the registration package. This pass is included in the registration fee and it is valid for all kinds of public transport within the area of whole Budapest. The registration package will be handed over to all participants at the registration desk.

Insurance

All kinds of insurance, including medical coverage, is left to your responsibility. We recommend that you discuss insurance coverage with your travel agent.

Visa

Some foreign nationals may need an entry visa to Hungary. Please check this matter with the Hungarian Embassy in your country. They will help you complete the necessary entry formalities. If it is necessary, the Conference Administrative Secretariat will send an invitation letter (in case of an accepted paper, the letter about the acceptance can serve for it).

Please inquire in time, the process may take several weeks!

Foreign Exchange

It is recommended that participants buy Hungarian Forint (HUF) at the airport after arrival in Budapest or in the hotels.

Banks in Hungary are open 9:00 - 15:00 from Monday to Friday.

As of March 1999, the approximate exchange rates in Hungarian Forint (HUF) are:

1 DM = 133 HUF, 1 USD = 239 HUF, 1 Euro = 260 HUF

Credit cards

Most shops, hotels and restaurants accept VISA, Diners Club and American Express credit cards as well as Eurocheques and Eurocards.

Climate

The climate in Hungary is continental. The weather is quite variable and frequently rainy in September. The average daytime temperature in September is around 15-18° C. A coat and an umbrella can be useful.

Telephones

Telephone calls from the hotels are more expensive than public telephones, as usual.

Useful phone numbers:

Country code (Hungary): 36

Area code (Budapest): 1

Ferihegy Airport Terminal 2A:

Arrival 296 8000

Departure 296 7000

Police: 107

Ambulance: 104

Fire Service: 105

Electricity

Electricity is provided through rounded pin sockets (220 V, 50 Hz).

OPTIONAL PROGRAMMES

Application for the optional programmes should be made on the Registration Form for Accommodation and Programmes and should be forwarded to CONTOURS.

Sightseeing tour in Budapest

(September 6 or 8, Monday or Wednesday) - Euro 13 / person





During the 3-hour-long guided tour by coach you will visit the most important sights of our capital.

Rendez-vous with the Danube

(September 7 or 8, Tuesday or Wednesday) - Euro 25 / person



Guided 1-hour-long tour by boat on the Danube, showing the most attractive sights of the city. Lunch and shuttle included.

Visiting the world famous Synagoge

(September 7, Tuesday) - Euro 25 / person



With this programme you can get acquainted with the Jewish heritage in Budapest. The guided tour is by coach, lunch in a cosy restaurant.

Memorial Statues Park

(September 8, Wednesday) - Euro 20 / person



Statues of the so-called "socialist realist" direction of art (e.g. huge statues of Lenin, Marx, etc.) collected from public sites of Budapest and displayed as a memory of the communist system.

Visiting the Museum of Fine Arts and the City Park with lunch

(September 9, Thursday) - Euro 25 / person



Visiting the National Museum and the Market Place

(September 9, Thursday) - Euro 13 / pers.



In the National Museum you will visit the Hungarian Crown Jewellery. After that you will have the opportunity to get acquainted with the biggest and nicest market place of the town.

Excursion by coach to Szentendre

(September 10, Friday) - Euro 30 / person



Szentendre is a small town with picturesque old streets, 18th century houses and churches. As an artist settlement Szentendre houses interesting museums. You will visit the unique Kovacs Margit Museum of Ceramics. Dinner in a familiar restaurant.

Traditional folklore program with dinner in Tök

(September 10, Friday) - Euro 37 / person (full day)



During the program in a real "Csarda" you taste real Hungarian food and wine, and you can take part in a traditional Hungarian wedding-party.

Excursion to Tihany

(September 10, Friday) - Euro 42 / person (full day, lunch is included)



Tihany peninsula is one of the most beautiful summer resorts with a magnificent view of the Lake Balaton, the largest lake (about 600 sqkm) of Central Europe. The Abbey of Tihany was founded in 1055 and its foundation letter is the oldest relic of the Hungarian language.

Excursion to Diósd

(September 10, Friday) - Euro 30 / person (lunch is included)

The Hungarian Radio Museum located here includes an exhibition room dedicated to Gy. Békésy who won his Nobel prize for his research on the human auditory system.

SPONSORS

EUROSPEECH '99 has been sponsored and supported by the following companies and authorities:

SPONSORS

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Eötvös Loránd University (ELTE), Hungary

EU-project EUROMAP, Denmark

MorphoLogic, Hungary

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National Committee for Technological Development (OMFB), Hungary

PanTel Rt., Hungary

Siemens, Hungary

Technical University of Budapest, Hungary

Westel 900 GSM Rt., Hungary

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Telecom-Fort Ltd, Hungary

PRIZES

Student prizes

ESCA, ELSNET and ELRA wish to stimulate high-quality EUROSPEECH '99 contributions from students. Therefore, the organisations offer prizes for

- * the best student paper addressing original speech communication topics
- * the best student paper addressing integration of language and speech
- * the best student paper addressing issues related to speech and natural language resources corpora, lexica, etc.)

The winners of student prizes will be known at the Closing Ceremony on Thursday (the 9th).

ESCA European Speech Communication Association

ESCA is a non-profit organisation, whose objective is to promote speech communication science and technology in a European context. If you are interested in joining ESCA or need information about the

association, please contact:

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