

Infocommunications Journal

HTE75
1949-2024

A PUBLICATION OF THE SCIENTIFIC ASSOCIATION FOR INFOCOMMUNICATIONS (HTE)

March 2024

Volume XVI

Number 1

ISSN 2061-2079

MESSAGE FROM THE EDITOR-IN-CHIEF

From PocketQube to Glucose Monitoring – in '24 *Pal Varga* 1

PAPERS FROM OPEN CALL

- Deep Learning based DDoS Attack Detection in Internet of Things:
An Optimized CNN-BiLSTM Architecture with Transfer Learning and
Regularization Techniques *Iqbal Jebri, M. Premkumar, Ghaida Muttashar Abdulsahib,
..... S. R. Ashokkumar, S. Dhanasekaran, Oshamah Ibrahim Khalaf, and Sameer Algburi* 2
- Secure post-processing for non-ideal photon arrival
time based quantum random number generator *Balázs Solymos, and László Bacszárdi* 12
- An Ordered QR Decomposition based Signal Detection Technique for Uplink
Massive MIMO System *Jyoti P. Patra, Bibhuti Bhusan Pradhan, and M. Rajendra Prasad* 20
- Resonant Radar Reflector On VHF / UHF Band Based on BPSK Modulation
at LEO Orbit by MRC-100 Satellite *Yasir Ahmed Idris Humad, and Levente Dudás* 26
- Advancements in Expressive Speech Synthesis:
a Review *Shaimaa Alwaisi and Géza Németh* 35
- Speech synthesis from intracranial stereotactic Electroencephalography
using a neural vocoder *Frigyes Viktor Arthur, and Tamás Gábor Csapó* 47
- On the Performance of Metamaterial based Printed Circuit Antenna for
Blood Glucose Level Sensing Applications: A Case Study *Taha A. Elwi,
..... Hayder H. Al-Khaylani, Wasan S. Rasheed, Sana A. Al-Salim, Mohammed H. Khalil,
..... Lubna Abbas Ali, Omar Almkhtar Tawfeeq, Saba T. Al-Hadeethi, Dhulfiqar Ali,
..... Zainab S. Muqdad, Serkan Özbay, and Marwah. M. Ismael* 56
- Enhancing Parkinson's Disease Recognition through Multimodal Analysis
of Archimedean Spiral Drawings *Attila Zoltán Jenei, Dávid Sztahó, and István Valálik* 64
- Farewell to Tamás Gábor Csapó 73
- ADDITIONAL**
- Guidelines for our Authors 72

Technically Co-Sponsored by



SCIENTIFIC ASSOCIATION FOR INFOCOMMUNICATIONS



Who we are

Founded in 1949, the Scientific Association for Infocommunications (formerly known as Scientific Society for Telecommunications) is a voluntary and autonomous professional society of engineers and economists, researchers and businessmen, managers and educational, regulatory and other professionals working in the fields of telecommunications, broadcasting, electronics, information and media technologies in Hungary.

Besides its 1000 individual members, the Scientific Association for Infocommunications (in Hungarian: HÍRKÖZLÉSI ÉS INFORMATIKAI TUDOMÁNYOS EGYESÜLET, HTE) has more than 60 corporate members as well. Among them there are large companies and small-and-medium enterprises with industrial, trade, service-providing, research and development activities, as well as educational institutions and research centers.

HTE is a Sister Society of the Institute of Electrical and Electronics Engineers, Inc. (IEEE) and the IEEE Communications Society.

What we do

HTE has a broad range of activities that aim to promote the convergence of information and communication technologies and the deployment of synergic applications and services, to broaden the knowledge and skills of our members, to facilitate the exchange of ideas and experiences, as well as to integrate and

harmonize the professional opinions and standpoints derived from various group interests and market dynamics.

To achieve these goals, we...

- contribute to the analysis of technical, economic, and social questions related to our field of competence, and forward the synthesized opinion of our experts to scientific, legislative, industrial and educational organizations and institutions;
- follow the national and international trends and results related to our field of competence, foster the professional and business relations between foreign and Hungarian companies and institutes;
- organize an extensive range of lectures, seminars, debates, conferences, exhibitions, company presentations, and club events in order to transfer and deploy scientific, technical and economic knowledge and skills;
- promote professional secondary and higher education and take active part in the development of professional education, teaching and training;
- establish and maintain relations with other domestic and foreign fellow associations, IEEE sister societies;
- award prizes for outstanding scientific, educational, managerial, commercial and/or societal activities and achievements in the fields of infocommunication.

Contact information

President: **FERENC VÁGUJHELYI** • elnok@hte.hu

Secretary-General: **GÁBOR KOLLÁTH** • kollath.gabor@hte.hu

Operations Director: **PÉTER NAGY** • nagy.peter@hte.hu

Address: H-1051 Budapest, Bajcsy-Zsilinszky str. 12, HUNGARY, Room: 502

Phone: +36 1 353 1027

E-mail: info@hte.hu, Web: www.hte.hu