THE 3RD HKBU INTERNATIONAL CONFERENCE ON INTERPRETING

THEME

INTERPRETING AND TECHNOLOGY: INTERPLAY AND TRANSFORMATION

7-9/12/2022

Hong Kong Baptist University
Hong Kong
WLB109 and Online via Zoom

PROGRAMME HANDBOOK

Organizers

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TABLE OF CONTENTS

ABOUT THE CONFERENCE

The field of interpreting is facing a moment of great transformation not witnessed since the advent of simultaneous interpreting. The development of the technology for remote interpreting (including remote simultaneous interpreting, RSI, and video remote interpreting, VRI), computer-aided interpreting (CAI) and machine interpreting (MI) has the potential of forever changing the practice and the profession of interpreting. While technology is reshaping how interpreters work, new demands on the work of interpreters and interpreter-mediated events are also spurring new developments in technology. This interplay between technology and interpreting has impacted and enriched the field not only in the practice of interpreting, but has also inspired new research topics. Riding on this exciting new wave and continuing our tradition of having a targeted theme, we aspire to use the "Third Hong Kong Baptist University International Conference on Interpreting" to bring together scholars, practitioners and technology developers to discuss the impact of and the promise brought by technology.

The programme of the two full-day conference will include plenary speeches, presentations, as well as a Roundtable in which a group of researchers, interpreters, trainers, representatives from the industry or employers discuss the topic of interpreting and technology and how their roles and work have been shaped by technology.

A pre-conference Workshop in which the technology of RSI, presented by selected platform developers, will be discussed and demonstrated.

Dates
7-9 December 2022

Format
In hybrid mode (online and onsite at Hong Kong Baptist University)

Organizers
Centre for Translation (Hong Kong Baptist University)
Department of Translation, Interpreting and Intercultural Studies (Hong Kong Baptist University)

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Franz PÖCHHACKER
University of Vienna

PROGRAMME SCHEDULE

8 December 2022 (Thursday)

13:45-14:00 OPENING CEREMONY
Guest: Stuart Christie (Acting Dean of Faculty of Arts, Hong Kong Baptist University)

14:00-15:30 KEYNOTE SPEECH 1
Moderator: Min-hua LIU

14:00 (06:00, United Kingdom)
Research on Distance Interpreting: Past, Present, Future
Sabine BRAUN (University of Surrey, United Kingdom)

15:45-17:15 SESSION 1: Emerging Applications of Interpreting Technology
Moderator: Kayo MATSUSHITA

15:45 (10:45, Qatar; 08:45 Belgium)
Working from Home in the Covid-19 Pandemic: The Impact of Technologies on Interpreters' Practice and Narratives
Julie BOÉRI (Hamad Bin Khalifa University, Qatar)
Deborah GIUSTINI (KU Leuven, Belgium)

16:15 (09:15, Austria)
Remote Sign Language Interpreting – The Concepts of Space, Body and Presence as Analytical Tools in Empirical Research
Tiana JERKOVIC (University of Graz, Austria)

16:45, Hong Kong
The Use of Interpreting Technology in Hong Kong's International Aid Sector
Marija TODOROVA (Hong Kong Baptist University, Hong Kong SAR)

17:15-18:45 SESSION 2: Technology and Interpreter Experience
Moderator: Franz PÖCHHACKER

17:15, Hong Kong
How Multiple Visual Input Affects Interpreting Performance in Remote Simultaneous Interpreting (RSI): An Experimental Study
Kayo MATSUSHITA (Rikkyo University, Japan)
Masaru YAMADA (Rikkyo University, Japan)
Hiroyuki ISHIZUKA (Hiroshima Shudo University, Japan)

17:45 (10:45, Italy & Poland)
Co-located or Virtual – The Impact of Boothmate Presence on Performance and Subjective Experience in Remote Simultaneous Interpreting
Nicoletta SPINOLO (University of Bologna, Italy)
Agnieszka CHMIEL (Adam Mickiewicz University, Poland)
Serena GHISELLI (University of Bologna, Italy)
Marta KAJZER-WIETRZNY (Adam Mickiewicz University, Poland)
Paweł KORPAL (Adam Mickiewicz University, Poland)
Christian OLALLA-SOLER (University of Bologna, Italy)

18:15 (11:15, Switzerland)
Audio Quality in Remote Interpreting
Kilian SEEBER (University of Geneva, Switzerland)
Dongpeng PAN (University of Geneva, Switzerland)

19:00-21:00 SESSION 3: Interpreter-machine Interaction in Different Settings
Moderator: Sabine BRAUN

19:00 (12:00, Belgium)
Impact of COVID-19 Health Measures on Working Conditions of Public Service Interpreters: The Case of Flanders
Esther DE BOE (University of Antwerp, Belgium)

19:30 (19:30, PRC)
International Survey of Healthcare Interpreters Working in Remote Modalities
Wei ZHANG (University of Surrey, United Kingdom)
Sabine BRAUN (University of Surrey, United Kingdom)
Elena DAVITTI (University of Surrey, United Kingdom)

20:00 (12:00, United Kingdom)
Visual Needs of Interpreters: A Look into User Centric Interface Design of Simultaneous Interpreting Delivery Platforms
Muhammad Ahmed SAEED (University of Surrey, United Kingdom)

20:30 (12:30, United Kingdom)
How Court Interpreters Manage the Different Demands of Video Mediated Interpreting: The Role of Emotional Intelligence
Diana SINGUREANU (University of Surrey, United Kingdom)

9 December 2022 (Friday)

12:00-13:30 SESSION 4: Integration of Automatic Speech Recognition in Interpreting
Moderator: Nan ZHAO

12:00 (12:00, PRC)
Intralingual Processing during Respeaking in Computer-assisted Consecutive Interpreting
Sijia CHEN (Southwest University, PRC)

12:30 (12:30, PRC)
An Empirical Study on the Effectiveness of Speech Recognition Technology in Assisting Consecutive Interpreting between English and Chinese
Xin LIU (Dalian University of Technology, PRC)
Hanyu DONG (Beijing Foreign Studies University, PRC)

13:00 (13:00, PRC)
English-Chinese Simultaneous Consecutive Interpreting: Implications for the Use of Computer-Assisted Technology among Trainee Interpreters
Tongjia LIAO (Baicizhan, PRC)
Ran XU (China Foreign Affairs University, PRC)

13:45-15:45 SESSION 5: Computer-assisted Interpreting and Interpreting Quality
Moderator: Bart DEFRANCQ

13:45 (06:45, Spain & Italy)
University of La Laguna Students' Use of SmarTerp-CAI: A Study of Users' Perception
Susana RODRÍGUEZ (Independent researcher, Spain)
Marco GAIDO (Fondazione Bruno Kessler, Italy)
Michelle Renee HOF (University of La Laguna, Spain)
María Magdalena Fernández PÉREZ (University of La Laguna, Spain)
Carmen Toledando BUENDÍA (University of La Laguna, Spain)
Irene Hernández CABRERA (University of La Laguna, Spain)

14:15 (07:15, United Kingdom & France)
To CAI or Not to CAI? — Professional Spanish Conference Interpreters' Use of ASR/CAI Tools during Simultaneous Interpreting
Francesca Maria FRITTELLA (University of Surrey, United Kingdom)
Alicja OKONIEWSKA (ISIT Paris, France)

14:45 (06:45, United Kingdom)
Chinese interpreting Trainees' Documentation Behavior and Results Using a CAI Tool: A Pilot Test of the Use of a CAI-tool in Remote Simultaneous Interpreting
Zhiqiang DU (University of Bologna, Italy)

15:15 (07:15, United Kingdom)
Investigating the Impact of Automatic Speech Recognition on Remote Simultaneous Interpreting Using the NTR Model as a Tool to Measure Interpreting Quality: Preliminary Findings of an Experimental Study
Eloy Rodriguez GONZALEZ (University of Surrey, United Kingdom)

16:00-18:00 ROUNDTABLE ON TECHNOLOGY-POWERED INTERPRETING
Moderator: Leo LIU

Sabine BRAUN (University of Surrey, United Kingdom)
Bart DEFRANCQ (Ghent University, Belgium)
Claudio FANTINUOLI (University of Mainz, Germany)
Barry OLSEN (KUDO)
Uroš PETERC (Interactio)

18:15-20:15 SESSION 6: New Concepts in Interpreting-related Technology
Moderator: Claudio FANTINUOLI

18:15 (18:15, PRC)
Using Automated Machine-translation Evaluation Metrics to Assess Spoken-language Interpreting: A Multi-phase Investigation
Chao HAN (Xiamen University, PRC)
Xiaolei LU (Xiamen University, PRC)
Weiwei WANG (Guangdong University of Foreign Studies, PRC)

18:45 (11:45, Switzerland)
The Augmented Interpreter – A Pilot Study on the Usability of Augmented Reality for the Translation of Technical Terms in Interpreting
Anne Catherine GIESHOFF (Zurich University of Applied Sciences, Switzerland)
Martin SCHULER (Zurich University of Applied Sciences, Switzerland)

19:15 (06:15, New York)
Embedding, Extending, and Distributing Interpreter Cognition with Technology
Christopher MELLINGER (UNC Charlotte, USA)

19:45 (12:45, Austria)
Adopting a 4E2A Approach to Studying Cognition in Computer-assisted Simultaneous Interpreting
Bianca PRANDI (University of Innsbruck, Austria)

20:30-21:30 KEYNOTE SPEECH 2
Moderator: Min-hua LIU

20:30 (13:30, Germany)
From Assistive Tools to Full Automation: What Digital Technologies Mean for Interpretation
Claudio FANTINUOLI (University of Mainz, Germany)

21:30-21:40 CLOSING REMARKS
Guest: Mark SHUTTLEWORTH (Head of Department of Translation, Interpreting and Intercultural Studies, Hong Kong Baptist University)

Workshop

WORKSHOP ON RSI SOLUTIONS

In this workshop you will meet the representatives of three prominent RSI platforms. In addition to showcasing their systems and describing what makes their technology unique, they will also discuss the different approaches they take in addressing the challenges of RSI and how they envision the development of RSI in the future. Workshop participants will not only develop a good understanding of the featured platforms but will also be taken on a journey to the future mapped out by RSI experts.

Date: 7 December 2022 (Wednesday)
Time: 16:00-18:30

Presenters (in the order by last name):
Mr. Barry S. OLSEN
Vice President of Communications, KUDO

Mr. Uroš PETERC
Vice President of RSI, Interactio

Dr. Bernard SONG
Chief Executive Officer, Green Terp

Moderator:
Dr. Nan ZHAO
Assistant Professor, Hong Kong Baptist University

Keynote Speech

KEYNOTE ABSTRACTS

Keynote Speech 1

Research on Distance Interpreting: Past, Present, Future

Sabine BRAUN University of Surrey, UK

The Covid-19 pandemic has caused a 'seismic' shift in the world of professional interpreting. As part of the global move towards remote working, a large proportion of interpreting assignments has been—and continues to be—delivered online. This has not only accelerated the evolution of distance interpreting (DI), which had hitherto been a much debated yet marginal practice; it has also extended the scope of DI from interpreting 'offsite' for individual clients or selected events to interpreting in fully virtual and complex hybrid event configurations. Whilst DI can yield several practical benefits, research has highlighted the challenges it entails for interpreters, including sub-optimal working conditions and increased fatigue, sometimes marked by a decline in interpreting quality, as well as changes in the interactional dynamics and in the rapport with clients that have yet to be fully analysed. Similarly, although the broader implications that DI may have, for example, for providing linguistic-minority populations with equitable access to justice, healthcare and other public services, are not well understood, the pandemic has created or promoted new and potentially even more challenging configurations of DI, such as working fully online for prolonged periods of time, using cloud-based/software-based interpreting platforms, and combining multiple modes (audio-only/video) and/or devices to connect to clients and fellow interpreters. At the same time, increased exposure to DI has enabled interpreters to develop new competencies, especially in interacting with technology and with their clients, and has begun to change perceptions of DI. It is thus fair to say that DI has reached a crossroads at which fresh thinking is required to shape its future uses, its position in the interpreting ecosystem and its future development. Against this backdrop, I will review previous research on DI across different settings and discuss key findings in light of their relevance for examining, understanding and shaping current and future approaches to DI.

About the Speaker :

Dr. Sabine BRAUN is Professor of Translation Studies and Director of the Centre for Translation Studies at the University of Surrey in the UK. She is also currently serving as Co-Director of the Surrey Institute for People-Centred Artificial Intelligence. Her research explores the integration and interaction of human and machine in language translation and interpreting, for example to improve access to critical information, media content and vital public services such as healthcare and justice for linguistic-minority populations and other groups/people in need of communication support. Her overarching interest lies in the notions of fairness, trust, transparency, and quality in relation to technology use in these contexts.

Keynote Speech

Keynote Speech 2

From Assistive Tools to Full Automation: What Digital Technologies Mean for Interpretation

Claudio FANTINUOLI University of Mainz, Germany

Technology, especially artificial intelligence, is considered one of the most important drivers of change in society. One of the most prominent branches of AI, natural language processing impacts the everyday lives of millions of users as well as the practices of many language professionals. Interpreting, too, has gone through a phase of technologization, driven primarily by the widespread adoption of the remote work paradigm and by the use of assistive language technologies, such as computer-assisted interpreting tools. In near future, AI-powered machine interpretation will add a new element of transformation to what most stakeholders already perceive as a rapidly changing multilingual landscape.

In this context, the increasing technologization of professional life is challenging long-standing assumptions about multilingual communication in society and the role human interpreters will play in it. The changes that lie ahead are supposed to be profound, directly impacting how multilingual spoken communication is performed as well as it is consumed by its users. On the one hand, the modern paradigm of automation may lead to a greater use of supportive tools as a means of improving the quality and increasing the productivity of human interpreters, possibly leading to new professional profiles and activities. On the other hand, fully automated spoken language translation will become part of the game with its promise of democratizing multilingual accessibility and making audio and video content ubiquitously accessible to a larger number of people. By impacting the traditional equilibrium between human and machine generated services, these changes are leading to an undeniable degree of uncertainty among practitioners, scholars, and trainers alike.

In my talk, I will put this technologization phase into perspective, providing preliminary answers to questions such as the potentials and limitations of augmented and machine interpretation; the tension between the peculiar features of human-mediated communication and the promises of language automation; the most encouraging uses that interpreters can make of these technological advances; the areas of work that will be negatively impacted by technologization, the ones that will be immune, and the ones that will profit from it. The ethical questions arising from the widespread application of AI to the field of language human interpretation and automatized language access will conclude the lecture.

About the Speaker :

Dr. Claudio FANTINUOLI is researcher and lecturer at the Mainz University/Germany and Head of Innovation at KUDO Inc. He conducts research in the field of Natural Language Processing applied to computer-assisted interpreting and automatic speech translation. He also teaches conference interpreting. In the past, he taught Technology and Interpreting at the University of Innsbruck and at the Postgraduate Center of the University of Vienna. He is the founder of InterpretBank.

Session 1:
Emerging Applications of Interpreting Technology

SESSION PRESENTATION ABSTRACTS *(In the order of presentations)*

Working from Home in the Covid-19 Pandemic: The Impact of Technologies on Interpreters' Practice and Narratives

Julie BOÉRI Hamad Bin Khalifa University, Qatar
Deborah GIUSTINI KU Leuven, Belgium

The Covid-19 pandemic disrupted people's professional and personal life in unprecedented ways across the globe. Interpreters stand as no exceptions in this regard. While the development of interpreting as a profession has historically been tied to technological developments, the recent and ongoing Covid-19 pandemic meant that interpreters, most of whom had never worked remotely before, were obliged to interpret from home, either via telephone, video calls and other technological means.

In this presentation, we aim to examine the impact of this radical change on interpreters' role boundaries, affect, economic opportunities, working conditions and wellbeing. To do so, we integrate narrative and practice theories which equip us to account for the socio-material ways in which technologies mediate interpreters' practice and retelling of practice at the height of the first wave of the Covid-19 pandemic.

We will present the findings of a case study conducted with interpreters based in Qatar. The primary data consists of qualitative, semi-structured, face-to-face interviews with active interpreters across settings and levels of expertise in the Qatar interpreting industry. Focusing on Qatar is particularly interesting given the high diversity of the interpreters' pool and the thriving (but scarcely explored) context of its local interpreting market.

14 interpreters (8 female and 6 male) were interviewed between February and March 2021. All participants were aged 26 to 64 (median 41 years), from countries including Syria, the Netherlands, Lebanon, Iraq, Sudan, Jordan, Kuwait, Tunisia and Russia. They were all full-time interpreters with varying employment status: 10 in-house employees, 2 self-employed freelancers, and 5 who combined self-employment with payroll. The participants worked with language combinations that systematically included Arabic and English. However, they also presented more tailored profiles, including languages such as Arabic sign language, Russian, Chinese, French, and Spanish. All respondents had formally trained as interpreters, except two who were self-trained. The average time in the profession was 14 years, ranging from 3 to 25 years.

This sample allowed us to collect rich stories of interpreters' experiences over the span of a year (March 2020-March 2021), coinciding in Qatar with the first lockdown and the subsequent easing of restrictions with the establishment of precautionary measures. The findings show that interpreters' narratives of their professional practice are very valuable a) to understand the ways in which technology affected the reconfiguration of their work environment, and in turn impinged on their working conditions, habits and role; b) to grasp which values and beliefs interpreters hold on to within this changing social and material environment; and c) to capture variation across work setting, employment status, language, culture and gender.

The critical-empirical data analysis contributes to understanding how technologies feature in the 'sayings' and the 'doings' of interpreters as they radically adapt to a global crisis like the Covid-19 pandemic. Furthermore, our narrative-practice approach contributes a theoretical and methodological framework that allows us to get closer to interpreters' storied practice and practiced stories of technologies in situations of crises, in and beyond Qatar.

Keywords:
COVID-19, narrative, practice, Qatar interpreting industry, technologies

About the Presenters:

Julie BOÉRI holds a PhD in Translation and intercultural Studies from the University of Manchester. She is Associate Professor in Translation and Interpreting Studies at Hamad Bin Khalifa University. Her work focuses on the ethics and politics of translation and interpreting. She is vice-president of IATIS (the International Association of Translation and Intercultural Studies).

Deborah GIUSTINI holds a PhD in Sociology from the University of Manchester. She is Postdoctoral Fellow in Japanese Studies at KU Leuven. Her work focuses on employment and digitalization issues of freelance work in Europe and Japan. She is an executive council member of IATIS (the International Association of Translation and Intercultural Studies).

Session 1:
Emerging Applications of Interpreting Technology

Remote Sign Language Interpreting – The Concepts of Space, Body and Presence as Analytical Tools in Empirical Research

Tiana JERKOVIC University of Graz, Austria

Before the COVID-19 pandemic, remote interpreting had been the exception, practiced only by a small percentage of interpreters and was usually preserved for usage in specific settings such as conference interpreting, legal interpreting and video relay services for the Deaf. Early research projects focusing on these settings already showed that while remote interpreting may be sufficient for information transfer on a basic level, certain nuances regarding human factors of interpreting are lost in the interaction (Moser-Mercer 2003; Mouzourakis 2006; Napier/Skinner&Turner 2017; Braun 2020;). Interpreters working in remote settings report feelings of alienation and dehuminisation and because of the use of technology and the nature of interactions in digital spaces, interpreters are sometimes seen and treated more as mere "tools" instead of human contributors to the interaction. Working in digital spaces means a shift from a three-dimensional physical space to a two-dimensional digital space where the body is only partly visible. With regard to sign language interpreting, this changes the perception of the signed space in front of and including the upper body, making grammatical indicators and non-verbal cues harder to detect. Even when trying to counter this effect as much as possible by using a high-end technological setup with big screens and flawless graphics etc., feelings of alienation still remain.

By referring to analytical concepts of space (Lefebvre 1991; Goffman 1976; Rolshoven 2012) from the social sciences and presence theory from media studies (Short et al. 1959), these aspects can be investigated under a new light. This presentation explores the possibilities opened up when applying these theoretical underpinnings to technology-mediated interactions that involve sign language interpreting. While the interpreter's body needs to be seen by the deaf client, the interpreter themselves might not see all other interlocutors on their screen. If no one else is visible, the interpreters might feel like interpreting "into a void", with no backchanneling and no sense of presence in the digital space. During this presentation, various forms of remote interpreting and the different outlines of the digital spaces will be discussed. The aim is to illustrate these variants and determine the implications of the visibility of the bodies involved and how this effects the feeling of presence on behalf of the interpreters. Additionally, newest technological advances, for example in the fields of Augmented Reality (AR) and Virtual Reality (VR) will be taken into consideration. The feeling of presence in an immersive virtual 3D-environment combined with hand-tracking and face-tracking technology open up new possibilities and might revolutionize remote sign language interpreting in the future. These developments will be included in the presentation and the implications for the future of the interpreting profession will be discussed.

Keywords:
remote interpreting, sign language interpreting, digital spaces, body, presence

About the Presenter :

Tiana JERKOVIC finished her Master's studies in Interpreting (German, English and Austrian Sign Language) at the Department of Translation Studies in Graz. After working for two years as a sign language interpreter in a Deaf association, she got employed at the Department as a research assistant and started developing her PhD project. Because of the rapid change of the working environment for interpreters due to the pandemic, she decided to devote her research project to sign language remote interpreting. Her research focuses on interpreting technologies and the importance of human factors in digital spaces.

Session 1:
Emerging Applications of Interpreting Technology

The Use of Interpreting Technology in Hong Kong's International Aid Sector

Marija TODOROVA Hong Kong Baptist University, Hong Kong SAR

Linguistic inclusion in the context of international aid means the provision of translation and interpreting services between local languages and the aid organization's main operating language(s). Recent research on international organizations has shown that the way in which translation affects the inclusion of local communities does not tend to be given prominent attention in the aid sector; translation and interpreting needs of local communities are often neglected when delivering emergency and development aid; and development aid organizations do not collect data on the languages and literacy of local communities, relying on aid workers who are often not trained in translation and interpreting. On the other hand, donors do not tend to ask implementing organizations to include translation in their project management and reporting.

In recent years, scholars in translation studies have started shifting their attention to large international organisations, such as Amnesty International (Schäffner, Tcaciuc, & Tesseur, 2014; Tesseur, 2014, 2017) and Oxfam (Footitt, 2017; Sanz Martins, 2018), alongside theoretical and prescriptive attempts to examine how communication needs are addressed within these international organisations (Madon, 1999). Even so, as Tesseur has recently noted, there is still "little understanding in Translation Studies (TS) at the moment of translation and interpreting policies and practices in international organisations and a lack of in-depth case studies on how specific organisations may deal with their language needs" (2018, p. 4).

Some examples of the use of interpreting in humanitarian organisations can be seen in the recent activity of Translators without Borders (TWB) and KoBo Inc. They are developing an automatic speech recognition technology to help humanitarians better collect data from speakers of marginalized languages in low-literacy contexts and to provide accessible yet powerful tools for humanitarian data collection and management.

In order to examine language use in the aid sector in Hong Kong, this study will directly engage with aid organizations providing relief internationally, including Oxfam Hong Kong, Amity Foundation, Hong Kong, Plan International Hong Kong, World Vision Hong Kong, and others. These organizations have been the users of the Disaster Relief Fund (DRF) by the Government of the Hong Kong Special Administrative Region, providing grants for emergency relief to the victims of disasters that occurred outside Hong Kong.

The study will be based on survey data aimed to investigate the use of technology in interpreting a tool for equal, two-way communication between Hong Kong development aid organizations and the communities they serve internationally. The goal is to identify the possibilities and challenges of the use of technology in this sector.

Keywords:
interpreter mediated dialogue interpreting, intercultural communication featuring both Chinese and English speakers, ELF communication in community interpreting

About the Presenter :

Marija TODOROVA is a Research Assistant Professor at the Department of Translation, Interpreting and Intercultural Studies at Hong Kong Baptist University. She has authored Translation of Violence in Children's Literature (Routledge 2022) and co-edited Interpreting Conflict (Springer 2021). She is editor of New Voices in Translation Studies.

Session 2:
Technology and Interpreter Experience

How Multiple Visual Input Affects Interpreting Performance in Remote Simultaneous Interpreting (RSI): An Experimental Study

Kayo MATSUSHITA Rikkyo University, Japan
Masaru YAMADA Rikkyo University, Japan
Hiroyuki ISHIZUKA Hiroshima Shudo University, Japan

The COVID-19 pandemic has drastically changed the way interpreters work, most notably in the introduction and global proliferation of remote simultaneous interpreting (RSI). Several surveys have been conducted to explore the impact this new form of interpreting has on the interpreters themselves and their performances. A global survey of professional interpreters in 19 countries revealed that 50% of the respondents (n=857) think they perform worse in RSI than onsite interpreting and 83% consider RSI more difficult (Collard & Buján, 2021). A similar survey conducted in Japan found that interpreters are feeling increased physical stress during RSI assignments, with one-third of the respondents with RSI experience (n=102) suffering from "eye fatigue and other eye-related symptoms" (Matsushita, 2020).

Against this backdrop, this study aims to explore how multiple visual inputs in a typical RSI setting (using two computers each connected to Zoom) affects the cognitive effort required of simultaneous interpreters by collecting their performance data in a lab experiment. The dataset, consisting of the audio recordings of the interpreters' renderings in English and Japanese along with the video recordings of the interpreters' body movements and eye-tracking data, is analysed in comparison to authentic interpreting data obtained from the JNPC Corpus (Matsushita, Yamada, & Ishizuka, 2020).

A small-scale pilot study conducted in August 2021 (Matsushita & Yamada, 2021) showed that the high dependence on visual input during RSI (e.g., constantly checking the mic button and language selection bar, reading texts that appear in the chat box while also monitoring the virtual booth partner's activities) caused frequent delays, pauses and decreased output when compared to performances recorded in actual booths. Through additional quantitative and qualitative analyses using recorded RSI performances by twelve professional interpreters, this paper further explores this relationship between visual input and interpreting performance by using observable indicators of interpreting quality devised by the authors.

Keywords:
remote simultaneous interpreting (RSI), press conference, Japanese, eye-tracking, quality assessment

About the Presenters :

Kayo MATSUSHITA is a Professor at the College/Graduate School of Intercultural Communication at Rikkyo University. Based on her experiences as a conference interpreter, her research addresses the issues which interpreters face today including those related to technological advancements. She also serves as the Head of the Kanto Chapter of The Japan Association for Interpreting and Translation Studies (JAITS).

Masaru YAMADA is a Professor at the College/Graduate School of Intercultural Communication at Rikkyo University. Drawing on insights from his experiences as a linguist and project manager in the translation industry, his current research explores translation processes, translation technologies (including CAT, MT, and PE), and TILT (Translation in Language Teaching).

Hiroyuki ISHIZUKA is a Professor at the Faculty of Humanities and Human Sciences and its Graduate School at Hiroshima Shudo University, specialises in interpreting and translation studies. His research interests lies in modelling cognitive process of simultaneous interpreting drawing on cognitive linguistics and cognitive psychology.

Session 2:
Technology and Interpreter Experience

Co-located or Virtual – The Impact of Boothmate Presence on Performance and Subjective Experience in Remote Simultaneous Interpreting

Nicoletta SPINOLO — University of Bologna, Italy
Agnieszka CHMIEL — Adam Mickiewicz University, Poland
Serena GHISELLI — University of Bologna, Italy
Marta KAJZER-WIETRZNY — Adam Mickiewicz University, Poland
Paweł KORPAL — Adam Mickiewicz University, Poland
Christian OLALLA-SOLER — University of Bologna, Italy

The global pandemic has accelerated the development of remote interpreting practice and brought about various settings with simultaneous interpreting boothmates co-located in a hub or working from their separate home offices. The latter setting requires further technological support to enable smooth communication and cooperation between not co-located boothmates. This is frequently done via chat on a separate device or application, which might prove challenging and increase the number of information input channels the interpreter has to monitor and process.

The aim of the present study was to test the impact of various remote interpreting settings and boothmate physical or virtual presence on remote simultaneous interpreting (RSI); in this presentation, we will show preliminary results, focusing on performance and self-reported data.

Professional interpreters were asked to perform remote simultaneous interpreting in three conditions: with a co-located boothmate, with a not co-located boothmate that would communicate with the active interpreter through a chat, and with a not co-located boothmate in a virtual booth. A virtual booth is understood here as a backchannel set up on the same device for communication between boothmates who can see and hear each other, communicate with each other in an oral or written form and easily achieve a successful handover. Remote simultaneous interpreting was performed via Zoom, which is the most frequently used platform for RSI assignments. The virtual booth was set up through GT Booth. The experiment was planned as a staged experiment with a confederate, i.e. a research actor who played the part of the boothmate and offered assistance as instructed.

Each experimental condition involved interpreting of a text with four different types of input: audio and video of the speaker (AV condition); audio and video of the speaker and slides (AV-slides condition); text input in the chat section (chat condition); audio input from the floor (audio condition). The texts included a similar number of evenly distributed problem triggers, such as numbers, proper names and low-frequency words. These have been found to increase cognitive load (Gile, 2009) and are frequently subject to boothmate assistance (Chmiel, 2008).

We collected process and product data, including eye movement, audio and video recordings, as well as subjective data from a battery of questionnaires. In this presentation, we focus on accuracy data as an index of interpreting performance and questionnaire data as indices of subjective experience in RSI. We assessed accuracy of interpreting by looking at problem triggers and subjective experience by analysing responses to the User Experience Questionnaire (Laugwitz et al. 2008) to tap into interpreters' perception of technological solutions, the State-Trait Anxiety Inventory (Spielberger et al. 1983) to investigate anxiety, the NASA-TLX questionnaire (Hart & Staveland 1988) to measure subjective mental load and the ITC-SOPI questionnaire (Lessiter et al. 2001) to evaluate sense of presence.

The study results will contribute to our understanding of how various remote interpreting settings influence interpreters' subjective experience and objective performance.

Keywords:
RSI, remote interpreting, simultaneous interpreting, boothmate, boothmate interaction

Session 2:
Technology and Interpreter Experience

About the Presenters :

Nicoletta SPINOLO is an assistant professor at the Department of Interpreting and Translation of the University of Bologna, where she is a member of the Laboratory for Multilectal Mediated Communication and Cognition (MC2Lab). Her academic activity focuses on interpreting between Italian and Spanish, and in particular on the management of figurative language in interpreting, on technologies and methods for remote interpreting and interpreter training. She is a co-investigator in the AIIC-funded project on the impact of remote interpreting settings on interpreter experience and performance.

Agnieszka CHMIEL is University Professor and Head of the Department of Translation Studies at the Faculty of English, Adam Mickiewicz University in Poznań, Poland. Her research interests include conference interpreting, audio description and audiovisual translation. She currently leads an interdisciplinary research team that examines bilingual control mechanisms in conference interpreting and develops PINC, the Polish Interpreting Corpus. She is also a co-investigator in the AIIC-funded project on the impact of remote interpreting settings on interpreter experience and performance.

Serena GHISELLI holds a PhD in Interpreting studies from the Department of Interpreting and Translation (DIT) of the University of Bologna (Forlì campus). The topic of her PhD was an interdisciplinary study on memory, attention and executive function in interpreting. She is a post-doctoral researcher at the same Department, where she is working on a psychometric framework to test working memory, focused attention and split attention in interpreting-specific tasks.

Marta KAJZER-WIETRZNY is an assistant professor in the Department of Translation Studies at the Faculty of English, Adam Mickiewicz University in Poznań. Following her PhD dissertation on Interpreting universals and interpreting style (2012) she continues with empirical investigations of interpreted, translated and non-native language use e.g. within the TRINFO project carried out in part during a research stay at the University of Bologna in 2018-2019. She participated in two corpus-compilation initiatives making use of the European Parliament data: EPTIC (European Translation and Interpreting Corpus) and PINC (Polish Interpreting Corpus). At times she attempts to combine corpus methods with process research such as key-logging and eye-tracking.

Paweł KORPAL is an assistant professor at the Faculty of English of Adam Mickiewicz University, Poznań, a psychologist, and a practising translator and interpreter. He is involved in interdisciplinary research combining interpreting studies and psychology. His research interests include: stress and emotion in conference and community interpreting, cognitive processing in simultaneous interpreting, the use of eye-tracking in translation and interpreting studies, as well as psychophysiological measures of emotional language processing.

Christian OLALLA-SOLER works as a post-doc researcher at the Department of Interpreting and Translation of the University of Bologna, where he is a member of the Laboratory for Multilectal Mediated Communication & Cognition (MC2 Lab). He completed a PhD in Translation and Intercultural Studies at the Universitat Autònoma de Barcelona, Spain. Dr Olalla-Soler is a member of the MC2 Lab and of the international network Translation, Research, Empiricism, Cognition (TREC).

Session 2:
Technology and Interpreter Experience

Audio Quality in Remote Interpreting

Kilian SEEBER University of Geneva, Switzerland
Dongpeng PAN University of Geneva, Switzerland

In this presentation we report the findings of a study designed to measure, using a multimethod approach, how audio quality affects simultaneous interpreters' load and fatigue during Audio and Video Remote Interpreting. For this purpose, 45 French-native speaking professional conference interpreters interpreted four different 10- minute scenes. During each scene, interpreters' electrodermal and physical responses were measured in real time. After each scene, interpreters filled in a subjective, multidimensional assessment tool to report perceived workload. After the experiment, independent judges provided a blind evaluation of random samples taken from all participants across all conditions. The triangulation of the results indicates that low-quality sound generates more perceived load among conference interpreters working in ARI as well as in VRI. While in the case of ARI electrodermal measures seem to reflect increased cognitive engagement during low-quality sound, in VRI electrodermal measures could be driven by other components of the construct. We further found that low-quality sound generates lower quality output among conference interpreters working in ARI as well as in VRI. When slides are used in ARI, a modality in which interpreters don't have any visual input, segments where slides are referred to show significantly lower output quality with low-quality sound than with high quality sound. Conversely, when slides are used in VRI, a modality where interpreters have access to both audio and visual input, output quality during segments when slides are referred to with high-quality sound is significantly higher than during low quality sound. Finally, we found that several of the measured parameters vary as a function of time on task.

Keywords:
audio quality, audio remote interpreting, video remote interpreting, cognitive load, cognitive fatigue

About the Presenters :

Kilian G. SEEBER is Associate Professor at the Faculty of Translation and Interpreting of the University of Geneva in Switzerland, where he is the Director of the Interpreting Department and the Program Director of the MA in Conference Interpreting as well as the Masters of Advanced Studies in Interpreter Training. Kilian is Principal Investigator at LaborInt, a laboratory dedicated to cognitive research into multilingualism and interpreting, as well as InTTech, a research laboratory dedicated to repurposing existing or developing new technologies for interpreter training and practice. His main research interests include cognitive load and integration during multilingual and multimodal language processing.

Dongpeng PAN is a research assistant and PhD student at the FTI's interpreting department. His research focuses on visual input processing during simultaneous interpreting, and he aims to explore the impact of the interaction between visual and auditory verbal information on simultaneous interpreters' attentional resources and cognitive load. Dongpeng holds an MA in Foreign Linguistics and Applied Linguistics from China Foreign Affairs University, and an MA in Translation and Bilingual Communication (with Distinction) from Hong Kong Baptist University. He has been teaching Chinese-English translation and interpreting since 2014 and has been working as a conference interpreter since 2015.

Session 3:
Interpreter-machine Interaction in Different Settings

Impact of COVID-19 Health Measures on Working Conditions of Public Service Interpreters: The Case of Flanders

Esther DE BOE University of Antwerp, Belgium

This paper investigates spoken language public service interpreters' experiences with (partly) novel working conditions during the pandemic. Like in many other regions across the world, interpreters working in public service interpreting (PSI) settings in the region of Flanders (Belgium) were confronted with unprecedented working conditions due to the COVID-19 health crisis. This not only implied that they had to resort to remote interpreting (RI) assignments more frequently, but also that, when working onsite, the communication took place with participants wearing a facial mask. This paper presents the results of an online survey carried out in 2021 among 52 public service interpreters in Flanders. It aimed to elicit what types of RI (telephone interpreting, TI/video interpreting, VI) interpreters most frequently used, their preferences for RI, the perceived effect of the RI methods on the use of multimodal resources, as well as of the obligation of wearing a face mask. The survey's results indicate that most interpreters (71%) experienced an increase in RI assignments during the pandemic, most of them by means of TI (38%), whereas 31% of the interpreters worked mostly by VI and another 31% indicated to work equally often with both types of RI. When the interpreters had to indicate their preferences for TI, VI and face-to-face interpreting (F2FI) with a face mask, TI was by far the least popular type (12%), whereas 42% of the interpreters preferred VI and 46% preferred F2FI, even with a face mask. Although 67% of the interpreters agreed that the lack of visual input in RI complicates their task, a majority of them (54%) responded that they did not think that the use of RI impacted on the use of non-verbal communication. Yet, the responses to the qualitative question inviting the interpreters to elaborate on their perceived impact of the novel working conditions due to the health measures on non-verbal aspects of communication demonstrate that, in PSI settings, RI continues to pose numerous challenges to interpreters. In particular, technological issues were mentioned (connectivity, reduced visibility and audibility), as well as coordination issues, especially when the communication involves more than two interlocutors, even more so when they wear face masks. The research confirms that RI conditions in PSI settings are far from ideal and calls for further research into its specific challenges and potential solutions.

Keywords:
COVID-19, public service interpreting, remote interpreting, telephone interpreting, video interpreting

About the Presenter :

Esther DE BOE is a post-doctoral research fellow at the University of Antwerp, Belgium. She holds a PhD in Translation Studies, as well as a MA in conference interpreting (EMCI), in Translation and in Liberal Arts. Her research interests are interpreting & technology, in both dialogue and conference interpreting. At the University of Antwerp, she teaches interpreting studies, remote interpreting, consecutive & simultaneous interpreting and interpreting skills (French-Dutch). Esther de Boe is a board member of the European Network for Public Service Interpreting and Translation (ENPSIT) and previously worked as a sworn interpreter in the Netherlands.

Session 3:
Interpreter-machine Interaction in Different Settings

International Survey of Healthcare Interpreters Working in Remote Modalities

Wei ZHANG University of Surrey, United Kingdom
Sabine BRAUN University of Surrey, United Kingdom
Elena DAVITTI University of Surrey, United Kingdom

This presentation will be based on findings from a PhD study investigating the status of research and practice of remote medical interpreting (RMI), i.e., remote interpreting (RI) conducted in healthcare settings, including telephone interpreting (TI) and video-mediated interpreting (VI). This mixed-methods study addressed three of the sub-topics of this conference: RI in healthcare, the impacts of technology on the health interpreting profession, and the impacts of technology on interpreter-mediated health provider-patient communicative interaction. Whilst the study consists of a first stage in-depth critical review of past RMI literature, and a second stage survey of interpreters' perceptions on the current status of RMI practice (2020-2021), the survey results will constitute the core of this presentation. Given the survey timeline, it also included specific questions that captured potential impacts of the COVID-19 global pandemic on RMI pertinent to the above three topics.

The presentation will report the key findings of the international survey, which was conducted among healthcare interpreters who have worked in the TI and/or VI modality during health provider-patient communicative interactions. The survey aimed to obtain a panorama of the status quo of RMI practice without language or geographic restrictions. The survey comprised a questionnaire (N=57) and follow-up interviews (N=16). The 57 samples were obtained across various geographic regions including 15 countries, and involved 28 working languages, with the most reported regions being Canada-USA, Germany-Austria, and the UK, and the most reported working languages being English, German, Spanish and French.

Concerning the conference sub-topic RI, this presentation will report the findings of the study's comprehensive investigation of the major RMI configurations encountered by interpreters, in terms of the medium of communication (telephone, video), mode of interpreting (consecutive, simultaneous), interlocutor distributions (location of provider, patient, interpreter), and technology use (e.g., device used for communication, equipment for listening and speaking, internet connection types). Concerning the second sub-topic of technology impacts on the profession, key findings of the thematic analysis of all survey qualitative data will be reported. This analysis has contributed rich informative results disclosing the real-life challenges and benefits encountered by healthcare interpreters working in remote modalities, highlighting a range of impacts of using remote technology to conduct healthcare interpreting. More specifically, technology impacts on interpreters' working conditions or status will be illustrated by four of the key themes emerging from the analysis, namely 'Working conditions', 'Clients level/lack of education in relation to TI/VI', 'Remote working', and 'Logistical issues'. Concerning the third sub-topic, technology impacts on the interpreter-mediated provider-patient communicative interactions will be demonstrated by drawing on results relating to interpreters' perceptions of various input/output processes.

The presentation will conclude with a briefed outlook on the perceived recent changes and developments in RMI practice.

Keywords:
remote interpreting, healthcare, interpreter-mediated medical communication, VRI, post-COVID-19

About the Presenters :

Wei (Angela) ZHANG is a PhD researcher studying healthcare interpreting at the Centre for Translation Studies, University of Surrey. She holds an MA in Translation and Interpreting, an MRes in Biomedicine, and a BSc in Biotechnology. She is a CATTI certified translator who has worked as a freelance interpreter/translator for exhibition events, education, and public services including healthcare and immigration in the UK and China.

As a postgraduate researcher and a past medical interpreter for the NHS, Angela is particularly interested in investigating various modalities of healthcare interpreting. In her PhD thesis she conducted a mixed-methods study including an in-depth critical review and a survey of remote medical interpreting via telephone and video link.

Session 3:
Interpreter-machine Interaction in Different Settings

Sabine BRAUN is Professor of Translation Studies, Director of the Centre for Translation Studies at the University of Surrey, and a Co-Director of Surrey's Institute for People-Centred AI. Her research explores human-machine interaction and integration in translation and interpreting, especially to improve access to critical information, media content and vital public services. For over 10 years, she has led a research programme that investigates the delivery of interpreting services via video link to improve language access in the public sector. In addition, she is investigating the feasibility of semi-automating audio description (video-to-text translation) to improve media access for diverse audiences.

Elena DAVITTI is an Associate Professor of Translation Studies at the Centre for Translation Studies (CTS), University of Surrey, with expertise in interpreting, both conference and dialogue. She holds a PhD in Translation and Intercultural Studies (University of Manchester) and an MA in Conference Interpreting (University of Bologna at Forlì). Her research interests revolve around technology-enabled methods, modalities and practices of multilingual spoken communication. She is currently Principal Investigator of the EPSRC-funded SMART project (Shaping Multilingual Access through Respeaking Technology), which focuses on interlingual respeaking. Dr Davitti is Programme Leader of the MA Interpreting (Multilingual pathway) and MA Translation and Interpreting offered by CTS.

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Session 3:
Interpreter-machine Interaction in Different Settings

Visual Needs of Interpreters: A Look into User Centric Interface Design of Simultaneous Interpreting Delivery Platforms

Muhammad Ahmed SAEED University of Surrey, United Kingdom
Sabine BRAUN University of Surrey, United Kingdom
Elena DAVITTI University of Surrey, United Kingdom
Tomasz KORYBSKI University of Surrey, United Kingdom
Eloy Rodriguez GONZÁLEZ University of Surrey, United Kingdom

Simultaneous interpreting has always been considered a complex and cognitively challenging task, with Remote Simultaneous Interpreting (RSI) being one of the most challenging threads within this debate. The shift towards virtual events during the Covid-19 pandemic has rapidly increased demand for RSI and has accelerated the development of Simultaneous Interpreting Delivery Platforms (SIDPs). However, although initial evaluations of SIDPs were conducted before the pandemic (e.g., DG SCIC, 2019), research on RSI (both booth-based and software-based) has generally remained limited. Pre-pandemic research shows that RSI is demanding in terms of information processing and mental modelling (Braun, 2007; Moser-Mercer, 2005), and suggests that the limited visual input available in RSI, where the interpreters see the speakers and audiences only on a screen, constitutes a particular problem (Mouzourakis, 2006; Seeber et al. 2019). Initial explorations of cloud-based solutions for RSI suggest that there is room for improving the visual interfaces of many widely used SIDPs (Collard & Buján, 2021; DG SCIC, 2019).

Effective and user-friendly software interfaces are likely to be instrumental for cloud-based RSI. As they add a new dimension not only to simultaneous interpreting but also to RSI, gaining a better understanding of their role in the interpreting process is a crucial task for new RSI research. As part of this, questions about visual aspects of the interface are as important as explorations of support technologies that can be integrated in the interface as a way of supporting interpreters in RSI to optimise their performance, and to improve their user experience (UX) and overall wellbeing.

Drawing on methods from user experience research/human-computer interaction, this study investigates what visual information is best suited to support the interpreting process and the interpreter-machine interaction (IMI). In this presentation, we report insights gathered from an online experimental study conducted during the covid-19 pandemic involving 30 professional interpreters. The results we present include a mixture of initial observations and statistical analysis performed on the pre- and post-study questionnaires filled in by the study participants. The presentation will also highlight key relationships found between the individual participant profiles and their user experience ratings and discuss how solution providers can improve current platform interfaces to better suit the work demands of the interpreters.

Keywords:
Remote Simultaneous Interpreting (RSI), Simultaneous Interpreting Delivery Platforms (SIDP), User experience (UX), Human-Computer Interaction (HCI), Interpreter-Machine Interaction (IMI)

About the Presenter :

Muhammad Ahmed SAEED is an engineer by background and a PhD student at the University of Surrey. Having conducted quantitative research on the impact of HMI design on chemical engineers, he is currently looking into the visual needs of interpreters. His research interests include human-machine interaction (HMI), the use of information and communication technologies, and human performance analysis tools such as eye tracking, ECG, and wearables.

Session 3:
Interpreter-machine Interaction in Different Settings

How Court Interpreters Manage the Different Demands of Video Mediated Interpreting: The Role of Emotional Intelligence

Diana SINGUREANU University of Surrey, United Kingdom
Graham HIEKE University of Surrey, United Kingdom
Joanna GOUGH University of Surrey, United Kingdom
Sabine BRAUN University of Surrey, United Kingdom

This presentation investigates some of the main challenges encountered by UK court interpreters when working in court-prison video links at a busy court complex in London, the interpreters' attitudes towards these challenges as well as the coping strategies they apply. Using a mixed method research design, we employ qualitative methods to elicit and analyse the challenges, attitudes and coping strategies, and draw on the psychological construct of Emotional Intelligence (EI) to explore the impact of court interpreters' individual traits on their varied perspectives on video-mediated interpreting (VMI) and their coping strategies in VMI.

We focus on one particular configuration of VMI in court-prison video links whereby the defendant takes part remotely from prison whilst the interpreter remains co-located with the other court actors. Our study confirms some of the inherent VMI challenges already established in existing literature in terms of difficulties with the interpreting modes (Licoppe and Veyrier, 2020) and the remote defendants' reduced sense of presence (Fowler, 2018; Davitti and Braun, 2020). Notably, the analysis of the rich qualitative data obtained through courtroom observations and interviews with interpreters revealed that interpreters in our study modify existing strategies in response to these problematic aspects and, under challenging circumstances, they sometimes reluctantly compromise in order to balance the seemingly conflicting needs of the remote defendant and of the court under time pressure. Furthermore, having also found variations in interpreters' attitudes towards VMI challenges in line with existing literature (Devaux, 2016; Braun, Davitti and Dicerto, 2018) we have particularly explored potential links between interpreters' positive or critical attitudes towards these challenges and their individual differences, established through their EI profile.

Thus, our cross-analysis between the qualitative data consisting of interviews and observations and the quantitative data, i.e. interpreters' scores in the EI questionnaire administered, showed relationships between interpreters' EI profiles and the way they respond to VMI challenges. For example, the choice of interpreting mode appears to be a matter of skill as well as being influenced by the interpreters' EI profile in the way they adjust the mode of interpretation in response to the needs of the court and of the remote defendant. More assertive interpreters were more comfortable and confident with verbal interventions to manage the pace of the court hearing, and interpreters with higher levels of adaptability were more likely to monitor the screen strategically.

The presentation will begin by reporting these findings in more detail, highlighting the EI areas that are pertinent to VMI. We will then discuss how these findings can help enhance existing VMI training as part of court interpreters' professional development and how they could be fed into best-practice guidelines for VMI so that VMI can be used more effectively enabling a better experience for all parties involved.

Keywords:
video-mediated interpreting, court interpreting, interpreting strategies, Emotional Intelligence, individual differences

About the Presenter :

Diana SINGUREANU is a PhD candidate at University of Surrey, and she is also an experienced UK based court and conference interpreter. She holds a Masters in Translation Studies and a second Masters in Conference Interpreting from a UK University. She is also an experienced court interpreting trainer having a fellowship in Higher Education. As a researcher, Diana is interested in Video Mediated Interpreting and the impact of emotional intelligence on interpreters' performance and its implication for end-users.

Session 4:
Integration of Automatic Speech Recognition in Interpreting

Intralingual Processing during Respeaking in Computer-assisted Consecutive Interpreting

Sijia CHEN Southwest University, PRC

This study investigates intralingual processing during respeaking in a computer-assisted consecutive interpreting (CACI) mode. In phase 1 of CACI, the interpreter listens to the source speech and respeaks it in the same language into speech recognition (SR) software. In phase 2, the interpreter produces a target speech supported by the SR text and its machine translation (MT) output.

CACI has recently been evaluated in three studies. Chen and Kruger (under review-a) trained a group of students on CACI and found initial evidence for improved interpreting quality and reduced cognitive load compared to the conventional mode. Chen and Kruger (under review-b) replicated most of those findings with a larger sample and confirmed that the effectiveness of CACI was modulated by directionality. The study also found that there is a positive correlation between respeaking quality and interpreting quality. In Chen and Kruger (under review-c), a group of trained students performed CACI with their eye movements tracked. It was found that during respeaking, very limited attention was distributed to the SR text, presumably to avoid distraction. In the L1–L2 direction, the respeaking quality was higher than in the other direction, resulting in more useful SR and MT texts, more in-depth processing on the MT text, as well as better interpreting quality downstream.

The findings point to the importance of respeaking in CACI. This study, therefore, sets out to examine the respeaking phase in greater detail and the focus is put on the language processing aspect. Similar respeaking in live-subtitling (Romero-Fresco, 2009), interpreters can choose to repeat the source speech verbatim, but the high speech rates of some speakers and the need to facilitate machine processing in SR and MT mean that interpreters often need to perform "paraphrasing" (Chmiel et al, 2018) or "rephrasing" (Pražák et al, 2020) rather than simply repeating or shadowing the original speech.

This on-line within-language processing can be informed by literature in the fields of interpreting, respeaking for live-subtitling, and Controlled Language in natural language processing (NLP) and computer-assisted translation (CAT). Paraphrasing in interpreting (e.g., Russo, 2014) often resorts to synonym replacement, register shift, tightening paraphrase (for loose, redundant texts), and loosening paraphrase (for dense or formal texts). Respeaking in live-subtitling stresses the importance of condensation by omitting discourse markers, intensifiers, and repetitions (Pražák et al, 2020). Controlled Language uses various lexical, syntactic, and textual rules (O'Brien, 2003) to improve human comprehension and/or machine translatability (Doherty, 2012).

Building on literature in those relevant fields, this study examines the empirical data collected during respeaking in CACI to identify possible patterns of intralingual processing. It will compare the transcripts of the source and the respoken speech, as well as the SR text. It will try to identify the rules of intralingual processing applied, investigate their categories and goals, and examine whether they are successful in ensuring the quality of SR and MT, and ultimately, the interpreting product. The findings can inform future human-machine interaction in the field of interpreting and beyond.

Keywords:
consecutive interpreting, computer-assisted, respeaking, intralingual processing

About the Presenter:

Sijia CHEN is an associate professor in the College of International Studies at Southwest University and an Honorary Research Fellow at Macquarie University. Her main research interests include cognitive translation and interpreting studies, interpreting technology, and audiovisual translation. She investigates the cognitive aspects of translation and interpreting using pen recording, eye tracking, think-aloud protocols, and psychometrics.

Session 4:
Integration of Automatic Speech Recognition in Interpreting

An Empirical Study on the Effectiveness of Speech Recognition Technology in Assisting Consecutive Interpreting between English and Chinese

Xin LIU Dalian University of Technology, PRC
Hanyu DONG Beijing Foreign Studies University, PRC

Since the outbreak of COVID-19, the number of online international conferences and events has been skyrocketing. Automatic Speech Recognition (ASR) and Computer-Assisted Interpreting (CAI) have been increasingly used in smart conferencing systems and the language service industry. However, most of the existing studies on this front are descriptive and there has been a lack of empirical studies assessing the impact of CAI, especially ASR, on consecutive interpreting between Chinese and English. This study aims to analyze and compare the quality of interpretation with and without the aid of ASR technology, and to investigate how ASR technology may impact the process of consecutive interpreting between Chinese and English.

This study adopts a 2 by 2 experimental approach in which 19 junior T&I students, randomly assigned into two groups, interpreted diplomatic speeches with and without the ASR tool "iflyrec" and in both directions. Two raters evaluated students' interpretation largely following the interpreting testing and assessment tools proposed by Yang (2005) and Han (2022). The experiment results were then analyzed with the assistance of SPSS and triangulated with a post-interpreting questionnaire and semi-structured interviews with participants. Qualitative data were scrutinized under the guidance of Gile's Effort Model for consecutive interpreting.

It was found that the ASR technology is conducive to the quality of consecutive English-Chinese interpretation in both directions. It helps improve the overall quality of student interpreters' interpretation by assisting their memory and relieving anxiety, especially when interpreting information-intensive materials. The positive impact of ASR technology is greater in English-Chinese interpreting than in the opposite direction, however, the difference is not statistically significant. Additionally, since the outcome of ASR technology fails to be 100 percent accurate, it may have negatively affected interpreters' effort allocation in the process of interpreting. These preliminary findings suggest that it is worthy to conduct experimental research studies on a larger scale to further evaluate the impact of ASR on the process and product of consecutive interpreting. Interpreter training programs may also consider including technology in the pedagogy to better prepare future professional interpreters in the post-pandemic era.

Keywords:
computer-aided interpreting, automatic speech recognition, consecutive interpreting, quality of interpretation

About the Presenters :

Xin (Lucy) LIU is an Associate Professor and course convener of the MTI program at Dalian University of Technology, China. She obtained her PhD in humanities and languages from the University of New South Wales, Australia. Her research interests include legal and court interpreting, interpreting and technology, and interpreter training. She is the author of the monograph Talking like a Lawyer: Interpreting Cross-examination Questions into Chinese. Her recent papers appeared in journals and edited volumes such as Interpreting, Interpreter and Translator Trainer, Journal of Specialised Translation, and The Routledge Handbook of Translation and Education.

Hanyu DONG received her B.A. degree in English Translation and Interpreting from Dalian University of Technology. Her undergraduate thesis on CAI won the University Excellent Thesis Award. She is now a postgraduate student in English Interpreting at Beijing Foreign Studies University. She is also a CATTI-accredited English-Chinese interpreter and translator (level 2).

Session 4:
Integration of Automatic Speech Recognition in Interpreting

English-Chinese Simultaneous Consecutive Interpreting: Implications for the Use of Computer-Assisted Technology among Trainee Interpreters

Tongjia LIAO Baicizhan, PRC
Ran XU China Foreign Affairs University, PRC

Simultaneous Consecutive interpreting, also known as SimConsec, is a technology-assisted hybrid mode of interpreting, in which a consecutive rendering is produced by an interpreter in simultaneous mode (Pöchhacker, 2016). Different from traditional interpreting modes, SimConsec uses a tablet, a stylus which has recording function, and together with headphones to facilitate interpreters' work. Several studies have looked into the use of SimConsec among professional interpreters in the combination of Indo-European languages, i.e. English/Spanish, Spanish/Italian, French/German, and English/German. However, the application of SimConsec in English/Chinese interpreting has not yet been discussed.

In order to test the feasibility of this technology-assisted interpreting mode in English-Chinese interpreting among trainee interpreters, this study designed an experiment to find out whether trainee interpreters have better E-C interpreting performance in SimConsec mode than in conventional CI mode. 16 MTI students from a university in Beijing were invited to participate in two interpreting tasks from English into Chinese. Group A interpreted speech 1 in CI mode and speech 2inSimConsec mode, and for Group B, vice versa. The results of the two interpreting tasks help cross-verify the research findings. After the experiment, the trainee interpreters were also invited to fill in a questionnaire to examine whether they feel more or less effortful with SimConsec during interpreting.

The results showed that there was no significant difference in information completeness, accuracy, target language quality and fluency in delivery between the two groups working in SimConsec mode and conventional CI mode. In other words, SimConsec mode did not significantly improve trainee interpreters' overall performance which was controversial to the findings in the previous studies. Nevertheless, when asked about the prospects of the technology, half of the participants still recognized the merits of SimConsec and said they could have better performance through more SI practice so that the potential of this technology-assisted mode of interpreting could be fully unleashed to facilitate their work.

Several implications can be drawn from the above research findings. First, the technologies suitable for professionals are not necessarily suitable for beginner interpreters, mostly due to their lack of proficient CI and SI skills; and thus, it may not benefit trainee interpreters if they are introduced to such technology at the early stage of their interpreting training, since the use of the technology may increase the required cognitive load rather than reducing it. After all, solid interpretation skills are indispensable and irreplaceable for beginner interpreters. Technology if not used appropriately or at the right time cannot guarantee good interpretation for trainee interpreters. In a larger sense, despite the theoretical merits that Computer-Assisted Interpreting (CAI) has brought to interpreters, technology should be interpreter-centered, aiming to help them reduce their cognitive load rather than using technology for the sake of technology.

Keywords:
simultaneous consecutive interpreting, computer-assisted interpreting (CAI), interpreting quality, cognitive load

About the Presenters :

Tongjia LIAO is currently working at Baicizhan, an online education technology company in China. She is mainly responsible for the research and development of English curriculum for English learners. She holds a Master Degree of Translation and interpreting from China Foreign Affairs University (2021). Her main research interests lie in the use of technology in interpreting.

Ran XU is Associate Professor at the Department of English and International Studies, China Foreign Affairs University. She holds a PhD in Translation & Interpreting Studies from the University of Leeds, UK (2015). Her main research interests lie in the acquisition of interpreting skills, empirical research methods in interpreting studies and the use of technology in interpreting training, practice and research. She teaches courses at both undergraduate and postgraduate levels, including Consecutive Interpreting and Introduction to Interpreting Studies and Research Methods in Interpreting.

Session 5:
Computer-assisted Interpreting and Interpreting Quality

University of La Laguna Students' Use of SmarTerp-CAI: A Study of Users' Perception

Susana RODRÍGUEZ	Independent researcher, Spain
Marco GAIDO	Fondazione Bruno Kessler, Italy
Michelle Renee HOF	University of La Laguna, Spain
María Magdalena Fernández PÉREZ	University of La Laguna, Spain
Carmen Toledando BUENDÍA	University of La Laguna, Spain
Irene Hernández CABRERA	University of La Laguna, Spain

From its on-set, SmarTerp Computer-Assisted Interpreting (CAI) tool has been developed collaboratively with interpreting practitioners through focus group discussions, participation in conferences, dialogue with professional associations and user research, a key component of SmarTerp to ensure its continuous improvement in line with interpreters' requirements. Meanwhile, the tool has been used in academic research projects at several universities, such as the Open University of Catalonia (UOC) and the Universities of Bologna (Unibo), Salamanca (USal), Alicante (UA) and La Laguna (ULL) to inform its further development.

This presentation focuses on the perception of students in the EMCI program Masters in Conference Interpreting (MIC) at the University of La Laguna and will describe the usability testing of the CAI tool embedded in SmarTerp performed with ULL Masters' students, to gather data on the effectiveness, efficiency and satisfaction of its functionalities and design principles and inform its further development towards an interpreter-centred solution. The evidence collected has contributed to refine the design and development of the tool, with a view to improving its usability.

The usability study was conducted with the ULL MIC students in the Spring of 2022 using the 4th generation version of the Computer-Assisted Interpreting tool SmarTerp-CAI, developed in 2021 and 2022 through the collaboration of several universities and research institutes (Technical University of Madrid – UPM, Fondazione Bruno Kessler – FBK, University of Bologna – UniBo) and with the support of EIT Digital (European Institute of Technology) and CDTI (Spanish Centre for Industrial Technology Development). The SmarTerp-CAI tested with the ULL students is a 4th generation in-booth CAI tool which makes use of Direct Speech Translation and AI technology to recognise problem triggers in the source speech and display them in real time on the interpreter's interface.

The validation of the SmarTerp-CAI tool concept took place through focus group discussions in 2020. As a result of the focus group discussions, a user requirements report was drafted. The user requirements derived from the focus group discussions, along with relevant previous research and the knowledge of the HCID experts within the project led the team to formulate assumptions on the fundamental design features that the tool should have to achieve the desired impact on users. Soft Visual Aids (as researchers at the University of Surrey call them) were divided into three separate columns, called "modules": Numerals, Terms and Named Entities.

Effectiveness, efficiency, and satisfaction were the pragmatic usability qualities that represent the cornerstones of the evaluation of ULL students' use of our 4th generation SmarTerp-CAI tool:

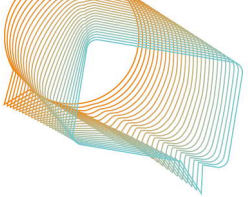
1. Effectiveness: to what extent can users make use of ST-CAI in an effective way?
2. Efficiency: to what extent is the interpreter-CAI interaction efficient? Are there aspects of ST-CAI which may be optimised?
3. Satisfaction: to what extent are users satisfied with the support provided by ST-CAI? What factors influence interpreters' satisfaction?

Establishing the extent to which SmarTerp adds value to conference interpreters requires data related to users' perception. Perception was explored qualitatively depending on the research questions guiding the study and the state of the art of research on the topic. Our study presents qualitative data to answer why questions and unveil deeper reasons behind users' observable behaviour and reported perceptions.

Keywords:
CAI, ASR, AI, usability

About the Presenters :

Susana RODRÍGUEZ is a conference interpreter with a track record of successfully leading



innovative projects related to interpreting technologies. Susana seized the opportunity offered by the European Institute of Innovation & Technology EIT to bring together specialists in conference interpreting, NLP, AI applied to language technology, human-computer interaction, and user experience and user interface design, with the aim to develop SmarTerp, a truly interpreter-centred solution, developed by interpreters for interpreters with interpreters, to provide them with optimal support to the challenging task of remote simultaneous interpreting (RSI) and empower them to be a relevant player in the global interpreting market.

Marco GAIDO is researching end-to-end speech-to-text translation systems as part of his PhD at the University of Trento, Italy. He obtained an MS in computer engineering from the Politecnico di Torino with a thesis on text clustering. Before starting his PhD, he worked in big data computing, becoming an Apache Spark contributor and Apache Livy PPMC member. His research interests are artificial intelligence and NLP.

Michelle HOF is a conference interpreter and trainer at the master's program of the University of La Laguna (Spain) and the Glendon MCI in Toronto (Canada). She is a frequent contributor to panels on interpreting technology, having spoken at industry events in Berlin, Ottawa, Geneva, Brussels and elsewhere. She also offers short courses and workshops for interpreters and trainers through AIIC and other partners. As Coordinator of AIIC Training and Professional Development, she fosters training opportunities for interpreters worldwide. Michelle speaks English, French, German, Dutch, Spanish and Portuguese. Originally from Canada, she now calls the beautiful island of Tenerife home.

María Magdalena Fernández PÉREZ is the Academic Coordinator of the Masters in Conference Interpreting at the University of La Laguna (Tenerife, Spain). She has been an interpreter trainer and a professional conference interpreter since 2006. Her main research interests lie in the didactics of Remote Interpreting and specifically Telephone Interpreting.

Carmen Toledando BUENDÍA is an Associate Professor at the Department of English and German Studies at the Universidad de La Laguna (ULL) (Tenerife, Spain). She has extensive experience teaching conference and public service interpreting and in the design and management of specialised courses on interpreting. She is currently the director of the EMCI programme Masters in Conference Interpreting at the ULL.

Irene Hernández CABRERA is Associate Lecturer of French Studies within the Classical, French, Arabic and Romance Studies Department at the University of La Laguna ULL (Tenerife, Spain). She is a practising conference interpreter in the private market, being specialised in West Africa, as well as an interpreter trainer at the Masters in Conference Interpreting, also at the ULL. She is a sworn translator (French and Spanish), accredited by the Spanish Foreign Office. She has participated in international conferences in Poland, Greece, and Spain and has completed several research stays in Senegal.

Session 5:
Computer-assisted Interpreting and Interpreting Quality

To CAI or Not to CAI? — Professional Spanish Conference Interpreters' Use of ASR/CAI Tools during Simultaneous Interpreting

Francesca Maria FRITTELLA University of Surrey, United Kingdom
Alicja OKONIEWSKA ISIT Paris, France

Computer-assisted interpreting (CAI) tools powered by automatic speech recognition (ASR) and artificial intelligence (AI) are increasingly being introduced into the (virtual or physical) booth to support simultaneous interpreters in the rendition of common "problem triggers" (Gile 2009) — numbers, specialised terms, and acronyms. Such tools are one of the novel technologies that have the potential to shape the way interpreting is performed (cf. Fantinuoli 2018).

Despite their potential to enhance interpreters' performance, previous research has shown that errors may occur when CAI tools are used in the booth without previous training (e.g., Frittella 2022). However, given the dearth of studies on in-booth CAI tool use, our understanding of this complex task and the extent to which CAI tools may support or inhibit interpreting is still limited.

In our contribution, we will present a study we conducted to gain insight into the inner workings of CAI and the extent to which they may represent a valid aid to simultaneous interpreters. We collected data in April-May 2022 with 8 experienced English (B/C) into Spanish (A) conference interpreters, who volunteered for the study. Our study has a repeated-measures within-subject design. Participants interpreted two speeches simultaneously from English into Spanish, one with and one without the ASR/CAI tool SmarTerp. The speeches were designed to be comparable. Both the order of presentation of speeches and the assignment of each speech to the with or without CAI-tool condition were randomised. After the test, participants were interviewed based on a semi-structured protocol and using the speech transcript to aid recall of critical incidents. Data analysis followed a 'communicative approach' (Frittella 2022) that focused not just on interpreted problem triggers but also accounted for the broader impact of CAI on the delivery.

In our presentation, we will discuss the study design and method and share some preliminary results addressing the questions: do ASR/CAI tools improve or impair interpreters' performance? In what ways?

Keywords:
computer-assisted interpreting, technology, automatic speech recognition, simultaneous interpreting

About the Presenters :

Francesca Maria FRITTELLA is a PhD student at the University of Surrey and visiting researcher at the University of Twente. She is the co-founder of the conference interpreting training platform Interpremy and eLearning specialist at the University of Twente. Her doctoral research focuses on the development of research-based training on CAI.

Alicja M. OKONIEWSKA Ph.D. is Associate Member of ISIT Lab at the Institute of Intercultural Communication and Management (ISIT) in Paris. Her research interests focus on computer-assisted conference interpreting, pedagogy of conference interpreting and multilingual political discourse analysis in institutional settings. She is a member of the International Association of Conference Interpreters (AIIC), former Academic Director of Conference Interpreting at ISIT and EU-accredited conference interpreter and trainer. Finally, Alicja is a Policy Analyst at the European Commission (EC). The views expressed are purely her own and may not in any circumstances be regarded as stating an official position of the EC.

Session 5:
Computer-assisted Interpreting and Interpreting Quality

Chinese interpreting Trainees' Documentation Behavior and Results Using a CAI Tool: A Pilot Test of the Use of a CAI-tool in Remote Simultaneous Interpreting

Zhiqiang DU University of Bologna, Italy

Digitalization and technologization have gained significant attention in the literature because of their potential impact on SI quality and interpreters' cognitive load (Chen, 2017; Mellinger, 2019; Gaber et al., 2020). However, little is known about how computer-assisted interpreting (CAI) tools are used in interpreter training involving Chinese. CAI tools like InterpretBank are argued to offer effective support for interpreters to prepare glossaries before SI. They are also contended to improve the retrieval of terms and other potential problem triggers during SI, thereby decreasing potentially high cognitive demands (Fantinuoli 2016; Prandi 2018; Fantinuoli & Prandi 2021). Furthermore, there may be a missing link between glossary-building and glossary-use in the booth. New ways of information retrieval may affect strategies of preparation for assignments and term retrieval in SI delivery. This and the choice of tools may have a bearing on interpreting (product) quality. To investigate the impact of CAI on Chinese interpreting trainees' documentation behavior, we designed a classical intra-subject quasi-experiment to test the hypotheses.

The research design comprises pretest-posttest measures in one baseline cycle (cycle 1), and two identical test cycles (cycles 2&3). Each cycle comprises the study of documentation behavior with or without CAI tools at two points: at glossary building and at the booth (glossary use). The informants' documentation and SI behavior and output will be screen-recorded with TechSmith Capture, keylogged with RUI, and recorded through Rebooth. Their log files will be synchronized through their respective timestamps and manual tagging. To the best of my knowledge, no research project has used keylogging in interpreting studies yet.

I will be present the design and results of a pilot test. Several ad hoc constructs (mainly, term extraction efficiency, term reaction time & term reaction time) will be measured, later cross-referenced with holistic SI quality evaluation. The results are intended to provide new insights into high-quality interpretation with computer-assisted tools. The analyses of my preliminary data from the pilot test include variables and indicators that hint at potential problem triggers and areas in SI documentation. There is a vast unexploited potential for research in Chinese interpreting trainees' information-seeking behavior.

Keywords:
remote simultaneous interpreting, computer-assisted interpreting tool, cognitive effort, documentation behavior, Chinese interpreting trainees

About the Presenter :

Zhiqiang DU is a PhD student at the Mc2 Lab at the University of Bologna, supervised by Profs. Ricardo Muñoz (University of Bologna) and Victoria Lei (University of Macau). The ongoing PhD Project focuses on the impact of CAI tools on Chinese interpreting trainees' documentation behavior from the perspective of cognitive effort through repeated measures.

Session 5:
Computer-assisted Interpreting and Interpreting Quality

Investigating the Impact of Automatic Speech Recognition on Remote Simultaneous Interpreting Using the NTR Model as a Tool to Measure Interpreting Quality: Preliminary Findings of an Experimental Study

Eloy Rodriguez GONZÁLEZ University of Surrey, United Kingdom
Braun University of Surrey, United Kingdom
Elena Davitti University of Surrey, United Kingdom
Tomasz Korybski University of Surrey, United Kingdom

Over the past few years, remote simultaneous interpreting (RSI), which was traditionally performed from an interpreting booth located in a conference venue or in an interpreting hub, has undergone an evolutionary process. Accelerated by the Covid-19 pandemic (Buján and Collard, 2021; Przepiórkowska, 2021), the practice of RSI has shifted towards cloud-based environments and into the interpreters' home (Collard & Bujan, 2021). This has had a significant impact on interpreters' lives and working conditions, posing new challenges and questions.

Previous research on booth-based RSI has found that this modality of interpreting is more tiring and perceived as being more stressful than conventional simultaneous interpreting (e.g., Moser-Mercer, 2003; Roziner & Shlesinger, 2010). However, whilst previous RSI research has focused on identifying problems and their sources, one question that has become pressing in the shift towards online working is how problems can be mitigated and how interpreters can be supported in their performance of RSI jobs.

The project I present addresses this issue by investigating one aspect that is likely to play a key role in the further development of interpreter working environments, namely the integration of (AI-based) supporting technologies such as automatic speech recognition (ASR).

Initial investigations of the use of ASR as a supporting tool in computer-assisted interpreting (CAI) have been conducted in relation to both traditional conference interpreting settings (Fantinuoli, 2017; Desmet et al., 2018; Cheung and Tianyun, 2018) and, to a lesser extent, RSI (Fantinuoli et al., 2022; Rodriguez et al., 2021). Those studies have focused on the potential of ASR to support interpreters when dealing with specific problem triggers in simultaneous interpreting such as technical terminology, accents and numbers (Mankauskienė, 2016). The studies suggest that this use of ASR in traditional conference interpreting settings is promising (Desmet et al., 2018; Cheung and Tianyun, 2018). However, very little is known about other uses of ASR in booth-based simultaneous interpreting and about the integration of ASR in RSI.

Using a mixed-methods approach, the experimental project I present specifically examines the integration of ASR-generated live transcripts of the source speech in the remote interpreting workflow. Based on a within-subject design, the project has collected data from professional interpreters (N=30) performing RSI assignments with and without ASR support using a mock RSI interface. The analysis focuses on the impact of ASR as an additional linguistic and visual input source on the interpreters' output and user experience.

In the presentation, I will first outline, and reflect upon, the research design, and then report initial quantitative and qualitative findings from the experimental study, with a specific focus on the use of the NTR Model (Romero-Fresco and Pöchhacker, 2017) as a tool for analysing and assessing interpreting quality. While the NTR Model was introduced to address accuracy assessment in subtitles produced through interlingual respeaking, it has been successfully applied to measure accuracy of interpreters' output (Korybski et al., 2022), and its use in the present study is particularly suitable due to its error classification and numerical scoring.

Keywords:
remote simultaneous interpreting (RSI), simultaneous interpreting delivery platforms (SIDPs), automatic speech recognition (ASR), the NTR Model, quality in interpreting

About the Presenter :

Eloy Rodríguez GONZÁLEZ is a conference interpreter, a conference interpreting trainer and a PhD student at the University of Surrey whose research interests are remote simultaneous interpreting, the interpreter-machine interaction and the use of technology and AI in interpreter-mediated environments. He is accredited as an interpreter and a translator by the Spanish Ministry for Foreign Affairs, European Union and Cooperation.

Session 6:
New Concepts in Interpreting-related Technology

Using Automated Machine-translation Evaluation Metrics to Assess Spoken-language Interpreting: A Multi-phase Investigation

Chao HAN Xiamen University, PRC
Xiaolei LU Xiamen University, PRC
Weiwei WANG Guangdong University of Foreign Studies, PRC

Automated metrics for machine translation (MT) such as BLEU are customarily used because they are quick to compute and sufficiently valid to be useful in MT assessment. Whereas the instantaneity and reliability of such metrics are made possible by automatic computation based on predetermined algorithms, their validity is primarily dependent on a strong correlation with human assessments. Despite the popularity of such metrics in MT, little research has been conducted to explore their usefulness in the automatic assessment of human translation and interpreting. In this presentation, we describe an on-going, multi-phase project in which we investigated the possibility of using automated MT evaluation metrics to assess spoken-language interpreting.

In Phase I, we selected five metrics – BLEU, NIST, METEOR, TER and BERT – to evaluate 56 bidirectional consecutive English–Chinese interpretations produced by 28 student interpreters of varying abilities. We correlated the automated metric scores with the scores assigned by a total of 67 raters of different types (i.e., experienced versus novice raters and Chinese-A versus English-A raters) using three scoring methods (i.e., analytic rubric scoring, holistic rubric scoring and comparative judgment). We found that BLEU, NIST, and METEOR had moderate-to-strong correlations with the human-assigned scores across the different assessment scenarios, especially for the English-to-Chinese direction.

In Phase II, we further examined how the magnitude of metric – human score correlations would vary as a function of specific adjustments to the automatic MT score computation and to the human scoring. In particular, we investigated three assessment scenarios concerning English-to-Chinese interpreting: a) computing MT metrics (i.e., BLEU, NIST, METEOR and TER) based on the sentence versus the text level; b) computing MT metrics using one versus multiple reference interpretations, and c) comparing human fidelity scores, derived from the use of the source- and target-language references, with MT metrics computed on the basis of target-language references. We found that the overall correlations between the MT metric scores and the human scores were relatively high, with the METEOR scores registering the highest correlation, averaged at around r = .880.

In Phase III, we are currently working with a larger and more diverse sample of students (n > 500) who performed Chinese-to-English consecutive interpreting on a variety of topics. These interpretations were assessed by a total of 25 experienced raters, using analytic rubric scoring and according to a partially-connected scoring design. We intend to compute a total of seven MT metrics, including BLEU, NIST, METEOR, TER, BERT, TransQuest and COMET, based on the sentence and the text levels as well as using one versus multiple reference interpretations. We plan to investigate the correlational patterns between MT metrics and human assessments, and to conduct a meta-analysis of all correlation coefficients reported in the project.

It is expected that research results from the three phases of our empirical investigation would be able to provide a preliminary yet useful insight into the utility of MT metrics in automatic assessment of spoken-language interpreting. This multiphase project also serves as a springboard, motivating us to statistically model automatically engineered linguistic, paralinguistic and non-linguistic (surface) features as potential predictors of interpreting quality.

Keywords:
automatic assessment, human assessment, evaluation metrics, machine translation, spoken-language interpreting

About the Presenters :

Dr. Chao HAN is interested in testing and assessment in language mediation, particularly translation and interpreting (T&I) and meta-research in T&I studies. His recent publications have appeared in journals such as Interpreting, The Translator, Language Testing, Language Assessment Quarterly, and Assessment and Evaluation in Higher Education.

Dr. Xiaolei LU's research interests include corpus processing, translation technology and automated translation assessment. Her articles have appeared in peer-reviewed journals such as Computer Assisted Language Learning, Natural Language Engineering and Journal of Chinese Information Processing.

Dr. Weiwei WANG is an Associate Professor in the School of Interpreting and Translation Studies, Guangdong University of Foreign Studies. Her research has focused on training and assessment of interpreting, in which she has published over 15 articles in refereed CSSCI/Core and SSCI journals. Her research has been funded by the China Ministry of Education Research Grant for Humanities and Social Sciences and China's National Social Science Fund.

Session 6:
New Concepts in Interpreting-related Technology

The Augmented Interpreter – A Pilot Study on the Usability of Augmented Reality for the Translation of Technical Terms in Interpreting

Anne Catherine GIESHOFF Zurich University of Applied Sciences, Switzerland
Martin SCHULER Zurich University of Applied Sciences, Switzerland

Simultaneous interpreters' primary concern is providing a high-quality target language rendition that accurately reflects source language speech in content including subtle nuances, terminology or register. Managing visual input feeds into this cognitively demanding process with interpreters taking cues from speakers' facial expressions and body language, interspeaker dynamics and audience response, as well as consulting any projected visuals, texts or presentations they have before them in the booth, and also glossaries. To date, interpreters have used on-screen, printed glossaries or specific applications (Jiang 2013), requiring them to interrupt their visual information processing to look up technical terms. This interruption may momentarily increase the interpreters' cognitive load. This is anecdotally evidenced by the fact that it is good practice for interpreters to help each other out in the booth by pointing to or writing down the term in question. A similar issue may also concern CAI-tools: first studies suggest that the question of how to display the output of a CAI-tool is not a trivial one (Defrancq and Fantinuoli 2021; Desmet, Vandierendonck, and Defrancq 2018). A solution to improve the interpreters' cognitive ergonomics when looking up terms may be augmented reality (AR) (see also Ziegler and Gigliobianco 2018). This technology allows a seamless integration of auditory and visual information by displaying the translations of technical terms on augmented reality glasses in direct view of the interpreters whenever they would usually consult their glossary.

To address this question, we are in the process of conducting a pilot study with ten professional interpreters. They are asked to interpret two highly technical conference talks of 10 minutes each: the first one with a conventional glossary on a laptop and the second one with augmented reality glasses. In both conditions, interpreters receive a copy of the corresponding presentation slides that they can consult during the interpretation. In the AR condition, translations of terms are displayed on the glasses whenever the interpreter looks at a slide and the corresponding term or whenever the speaker pronounces the term. In the conventional glossary condition, interpreters receive a word list that contains the same terms as those that would be displayed on the AR glasses. The glossary is presented as a word document table on a laptop to mimic a realistic situation, because word files are still commonly used as a glossary in the booth. Interpreters' renditions are assessed with regard to general sense consistency and use of terminology, as well as disfluencies preceding the technical term in the rendition.

After the interpreting task, interpreters fill out the NASA-Taskload Index (Hart and Staveland 1988) and the system usability scale (Brooke 1996) to evaluate their perceived cognitive load during both conditions and the usability of both presentation modes, AR and word glossary. In order to obtain further insights on how interpreters experienced both conditions, we conduct semi-structured interviews with the participants at the end of the session. In our presentation, we will report on preliminary results and discuss the use of AR in interpreting.

Keywords:
simultaneous interpreting, technical terms, augmented reality, glossary

About the Presenters :

Anne Catherine GIESHOFF received her PhD in interpreting studies from the University of Mainz and currently holds a post-doc position at ZHAW Zurich University of Applied Sciences in the interdisciplinary SNSF Synergia project *CLINT – Cognitive load in Interpreting and Translating*, where she has been collecting first-hand experience in employing quantitative and psychophysiological methods in interpreting studies. She is a member of IATIS, EST and the network Translation, Research, Empiricism and Cognition (TREC). Her research focuses on cognitive load, visual input, technology in interpreting.

Martin SCHULER is Head of the Usability Lab at the Zurich University for Applied Sciences. His research focuses on human-machine interaction, user-centered design and usability testing of technologies and interfaces in technical communication. He is a member of the Swiss network of user experience (UX Schweiz) and the Swiss federation for technical communication (Tecom Schweiz). Martin Schuler teaches technical communication and information design at the BA-level.

Session 6:
New Concepts in Interpreting-related Technology

Embedding, Extending, and Distributing Interpreter Cognition with Technology

Christopher MELLINGER UNC Charlotte, USA

Interpreters work in increasingly technologized environments, with a range of tools and configurations that can support an interpreter's work at different points during the interpreting task. For instance, software and hardware have been developed specifically to aid interpreters in their preparation for assignments and to facilitate the compilation and storage of terminological resources and associated references. These resources can be used prior to and during the interpreting event, allowing interpreters to leverage previously-collected material in support of their work during various modes of interpreting. In a similar vein, technological developments related to automated speech recognition, digital recording devices, and digital pens facilitate new working configurations of interpreters, allowing for new and hybrid modes of interpreting and enabling new means by which interpreters interact with spoken or signed language input from interlocuters. These tools have also been used to enhance the interpreter's ability to process information by means of automated transcriptions of elements of a speech or utterance as well as real-time multilingual support in various working languages. Still other tools facilitate cross-language communication in real time across distances, creating virtual booths and workstations that integrate into various video and remote communication platforms.

The increased presence and augmented nature of the interpreting task ultimately changes the way in which interpreters work and behave, particularly with respect to the cognitive processes involved when interpreting. The embedded nature of the interpreting task in these technological environments is indicative of a complex, dynamic interplay between interpreter, technology, and task. Moreover, the increasingly commonplace integration of technology and related resources changes the nature of what constitutes interpreting in many settings, challenging previous understandings of interpreter cognition in light of the technological addition to the interpreter's work environment.

Taking a 4EA approach to cognition, this paper adopts a socio-cognitive perspective with respect to interpreting to examine the interplay and interaction of technology and interpreter cognition. The related, yet distinct concepts of embedded and embodied cognition, extended cognition, and distributed cognition are presented as potential means by which cognition and interpreting can be investigated, particularly when looking at the influence of technology in the interpreting task. These cognitive frameworks provide a means by which researchers can contextualize and situate interpreting with respect to the technologies used to enable, augment, and facilitate their work. Particular emphasis will be placed on how current research on interpreting technologies can be integrated into a process-oriented, cognitive perspective on interpreting, while identifying potential avenues for future research on the interaction between the interpreter's mind, body, and the environment.

Keywords:
extended cognition; embedded cognition; distributed cognition; situated cognition; interpreting technologies

About the Presenter :

Christopher D. MELLINGER is Associate Professor in the Department of Languages and Culture Studies at The University of North Carolina at Charlotte. He is the co-editor of the journal Translation and Interpreting Studies, co-author of Quantitative Research Methods in Translation and Interpreting Studies (Routledge), co-editor of Translating Texts: An Introductory Coursebook on Translation and Text Formation, and editor of the Routledge Handbook of Interpreting and Cognition. He has co-edited special issues on community interpreting and technology (Translation and Interpreting Studies, 2018) and on translation process research (Translation & Interpreting, 2015).

Session 6:
New Concepts in Interpreting-related Technology

Adopting a 4E2A Approach to Studying Cognition in Computer-assisted Simultaneous Interpreting

Bianca PRANDI University of Innsbruck, Austria

Computer-assisted interpreting (CAI) tools are bespoke technologies for interpreters which aim to support various phases of the interpreting workflow. When used during simultaneous interpreting (SI), for instance, these tools might alleviate the interpreter's cognitive effort by automatically providing suggestions for specialised terms, numbers or named entities thanks to speech recognition (SR). The rapid evolution of NLP techniques and AI technologies and their integration into CAI tools bear the potential not only to extend the interpreters' toolkit, but also to augment their cognitive resources and abilities (e.g., Fantinuoli & Dastyar, 2022).

Due to CAI tools' potential to positively impact interpreters' cognitive processing during SI, these solutions are receiving increasing attention from the scholarly community. Regrettably, even though the relevance of these technologies for the interpreting process has been recognised at an early stage (see e.g., Tripepi-Winteringham, 2010), studies addressing how CAI tools affect interpreters' cognition are still scarce.

One exception is the author's doctoral thesis, which represents an exploration of cognitive load (CL) in computer-assisted simultaneous interpreting (CASI). In her research, the author operationalised CL as interference between sub-tasks, adapting Seeber's cognitive load model (CLM) of SI (Seeber, 2007, 2012, 2017) to CASI. However, the data collected and the observations performed on the study informants, together with the findings from recent research addressing CAI from a human-computer interaction and usability standpoint (e.g. Frittella, 2022), highlight the need for a theoretical framework going beyond a micro-cognitive approach and capable of better capturing the complexity of the CASI process.

A useful frame of reference may be identified in 4EA cognition (e.g., Wheeler, 2005), which has inspired the cognitive translatology paradigm (e.g., Muñoz, 2010). If expanded to include "augmented cognition" in addition to the extended, embedded, enactive, embodied, and affective dimensions (i.e., through a 4E2A approach), this framework may capture the complex nature of cognition in CASI. Adopting such a multi-faceted approach appears essential, as cognition in CASI does not occur in a vacuum. Rather, it is strictly intertwined with interpreters' interaction with their tools, which may facilitate but also hamper processing, augment interpreters' cognitive abilities, direct their attentional mechanisms, and influence their decision-making. In turn, the interpreter's attitude towards CAI tools is bound to influence interpreter-machine interaction. These dimensions have not yet found their way into cognitive CAI research. Yet, they seem key for a deeper understanding of cognition in CASI, which may help design tools that are truly centred around their users.

Starting from a critical discussion of quantitative and qualitative findings of the study conducted by Prandi (2022), this contribution will discuss the benefits and the limitations of a cognitive/psychological approach to cognition in CAI and argue for the need to expand the focus of cognitive CAI research. Using 4E2A as a theoretical framework, this contribution will attempt to map the multiple dimensions of cognition in CASI. Particular attention will be devoted to the notions of "extended" and "augmented" cognition by discussing multimodal integration of visual- and auditory-verbal stimuli and attentional mechanisms in CASI.

Keywords:
cognition, computer-assisted interpreting, 4EA, multimodal integration, cognitive translatology

About the Presenter:

Bianca PRANDI is a postdoctoral researcher and lecturer in Interpreting Studies at the University of Innsbruck. She holds a PhD in Translation Studies from the University of Mainz. Her doctoral work explored the process of computer-assisted interpreting (CAI) through eyetracking and derived its methods from Translation Process Research. Her main research interests are translation and interpreting technologies, human-machine interaction in interpreting, and cognitive aspects of interpreting. She was a guest lecturer at the Postgraduate Center of the University of Vienna and has taught workshops and seminars on CAI tools for several professional associations and training institutions.

ROUNDTABLE

Join a group of interpreting practitioners, trainers, industry representatives and researchers discussing how their roles and work have been shaped by technology and how they envision a future of interpreting and technology.

Title: Roundtable on Technology-powered Interpreting

Date: 9 December 2022 (Friday)
Time: 16:00-18:00

Panelists (in the order by last name):
Prof. Dr. Sabine BRAUN
Professor, University of Surrey
Director, Centre for Translation Studies, University of Surrey
Co-Director, Surrey Institute for People-Centred Artificial Intelligence

Prof. Dr. Bart DEFRANCQ
Associate Professor, Ghent University
Head of interpreting training programmes, Ghent University
President, CIUTI

Dr. Claudio FANTINUOLI
Lecturer, University of Mainz
Head of Innovation, KUDO
Founder of InterpretBank

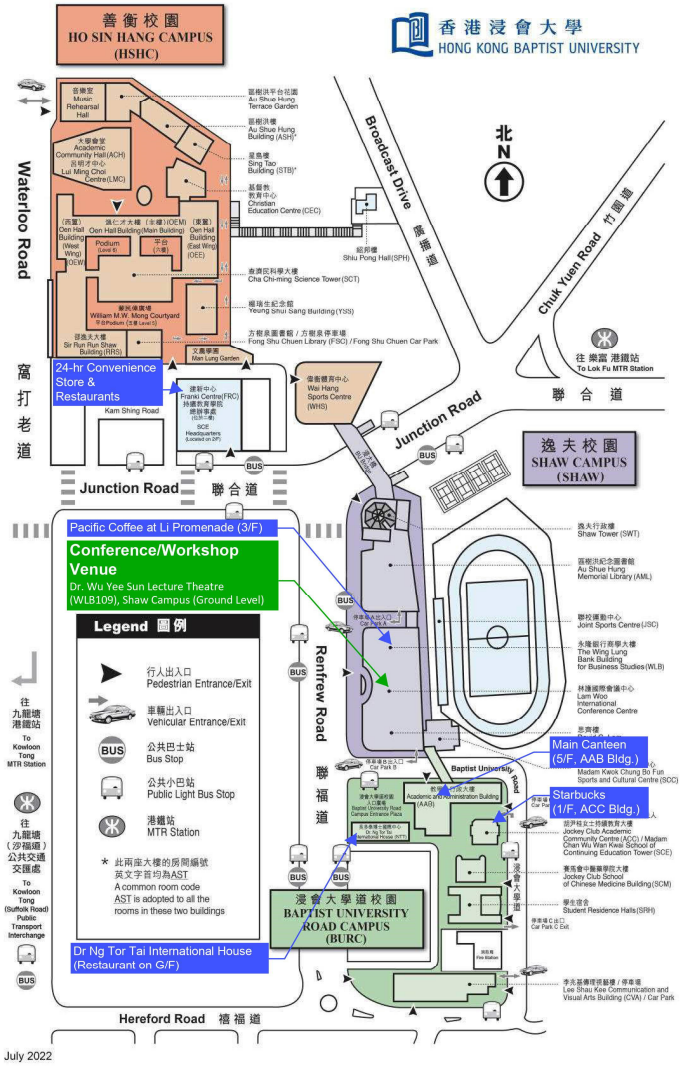
Mr. Barry S. OLSEN
Vice President of Communications, KUDO
Former Professor, Middlebury Institute of International Studies at Monterey
Conference interpreter, AIIC

Mr. Uroš PETERC
Vice President of RSI & Chief Interpreter, Interactio
Former President of AIIC

Moderator:
Mr. Leo LIU
Lecturer, Hong Kong Baptist University
Conference interpreter, AIIC

USEFUL INFORMATION

Campus map



Restaurants and coffee shops

Main Canteen	Level 5, Academic and Administration Building (AAB)	Mon to Fri: 07:30-19:30 Sat: 08:00-17:00 Sun & Public Holidays: Closed
Pacific Coffee	Level 3, The Wing Lung Bank for Business Studies (WLB), Shaw Campus (near Li Promenade)	Mon to Fri: 08:00-20:00 Sat: 08:00-18:00 Sun: 08:00-17:00 Public Holidays: Closed
Starbucks	1/F, Jockey Club Academic Community Centre (ACC), 9 Baptist University Road	Mon to Fri: 08:00-21:00 Sat: 08:00-19:00 Sun & Public Holidays: 10:00-19:00
Bistro NTT	G/F, Dr. Ng Tor Tai International House (NTT)	Mon to Sat: 08:00-22:00 Sun & Public Holidays: 12:00-22:00

Other facilities:

7-11 Convenience Store	Frankie Centre	24 hours a day, seven days a week
Bottled-water Filling Stations		

About the Centre for Translation, Hong Kong Baptist University

https://ctn.hkbu.edu.hk

The Centre for Translation was established in 1994 as a University research unit. Committed both to academic research and to fostering links with the translation profession and the community, the Centre aims to provide a focal point for research in Translation and Interpreting Studies and to promote knowledge transfer through a variety of consultancy projects.

The Centre's research activities include academic publishing, seminars and conferences, as well as research projects of its Fellows. Centre Research Fellows have a strong record of research grant success and have pursued research projects under the auspices of the Centre, covering areas such as Chinese and Western translation theories, museum translation, translation of Materia Medica, legal translation, literary translation, drama translation, and interpreting studies from a wide range of perspectives.

In 2001, the "Translation Seminar Series", online since 2020, was launched to provide a platform to facilitate a dialogue among scholars. Over 190 seminars have been organized with over 140 speakers. Throughout the years, the Centre has also held research summer schools and many international conferences, such as the 2018 IATIS Conference, and the International Conference "Understanding Wikipedia's Dark Matter" (2021). In 2017, the Centre launched the HKBU International Conference on Interpreting, dedicated solely to interpreting studies, and has held two conferences on the themes of "History and Interpreting" (2017) and "Cognitive Approaches" (2021).

The Centre is also dedicated to the translation profession and works in synergy with the Department of Translation, Interpreting and Intercultural Studies to offer students valuable experience in professional translation. The Centre has involved students in large scale translation projects, including the Chinese translation of The Oxford Children's Encyclopedia and the English translation of the subtitles of the "HKBU Chinese Medicine Online (《浸大中醫在線》)" for the YouTube channel "Embrace Health".

The Centre has actively engaged in public service, consultancy and collaborative work with the community to provide translation and editing services. The Centre served as partner to various local events, such as the Hong Kong International Poetry Festival, "Eye on Hong Kong", Asian Cultural Co-operation Forum, the Mediterranean Arts Festival, the Hong Kong Photo Festival, the "Hong Kong Memory" website, and Children's Council.

About the Department of Translation, Interpreting and Intercultural Studies, Hong Kong Baptist University

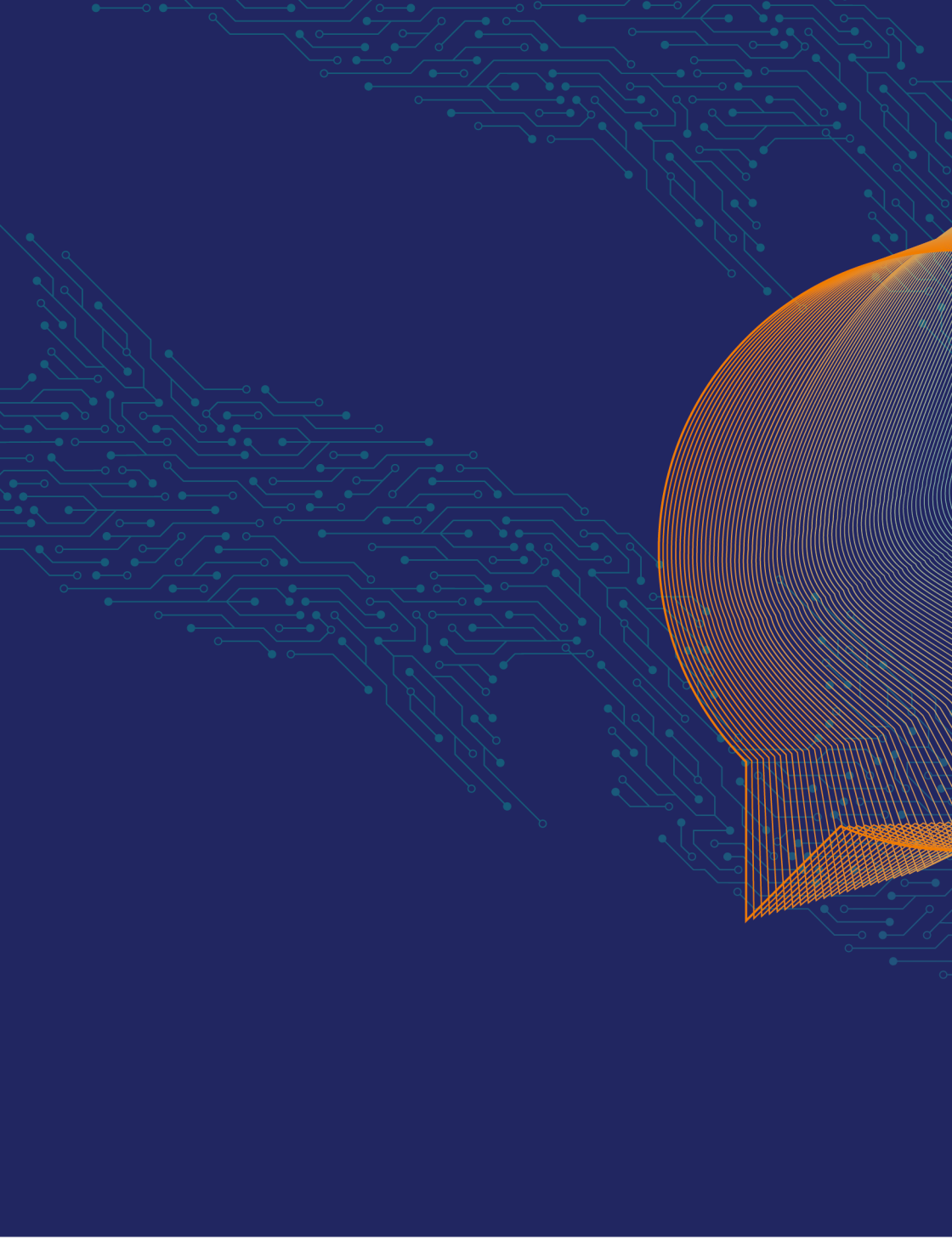
https://tiis.hkbu.edu.hk

The Department of Translation, Interpreting and Intercultural Studies was established in 1990 as the "Translation Programme" and was granted full departmental status in September 2019.

Since its inception, the Department has offered a B.A. (Hons.) in Translation and an M.Phil./Ph.D. postgraduate research programme in the field of translation studies. It also launched a self-funded taught M.A. Programme in Translation and Bilingual Communication in 2008, adding an Interpreting Stream in 2016 and a Technology Stream in 2021.

The Department's curriculum is designed to train bilingual and bicultural communicators to operate in local, national and international markets in the 21st century. The Department closely follows Hong Kong Baptist University's general mission of "commitment to academic excellence in teaching, research and service", and to the development of "whole person" education. More specifically, it is committed to providing professional training in translation and interpreting through a liberal arts university education.

The Department currently has thirteen academic staff members, whose research interests include, amongst others, translation and the Web, literary translation, interpreting, and minority regional languages and cultures such as Tibetan. Teachers of the Department share with students their expertise in academic research, their experience in frontline fieldwork in interlingual and intercultural communication, and their pedagogic vision. Students are thus prepared to meet the cultural, socio-political and economic needs of the local community, as well as those of a rapidly developing China.



Conference Website
https://ctn.hkbu.edu.hk/interpreting_conf2022/

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