



## CARE AND SUPPORT

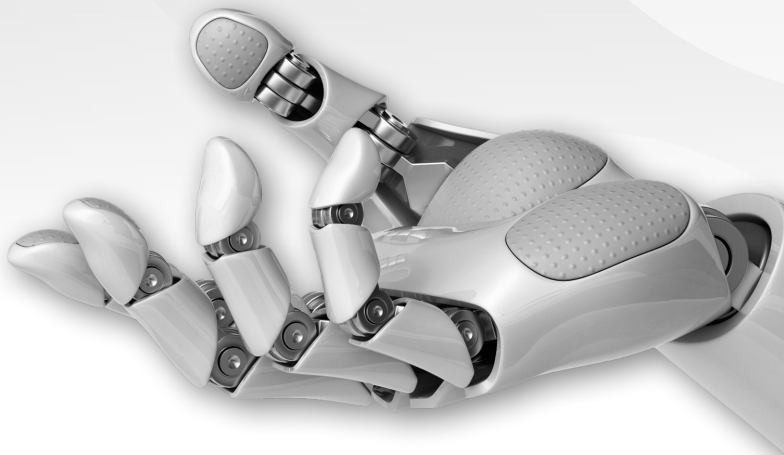
# APPLICATION OF ROBOTS AND ARTIFICIAL INTELLIGENCE (AI) IN ELDERLY CARE

Scientific Conference

Pázmány Péter Catholic University, Faculty of Humanities and Social Sciences

Budapest, May 27, 2025

## PROGRAMME BROCHURE



# TABLE OF CONTENTS

Preface .....	4
Program .....	5
Section I – Robots and artificial intelligence in elderly care .....	6
Section II – The challenges of social care in the digital age.....	7
Section III – Applications of artificial intelligence and robotics in social care.....	8
Section IV – Remaining human, the image of God in the helping vocation in the challenges of the age of AI and robotics. Self-awareness in the presence of God .....	9
Scientific Committee of the Conference .....	10
Organizing Committee.....	11



ABSTRACTS

# PREFACE

The Master's degree program in Care Policy Studies will be the first in Hungary to be offered at the Faculty of Humanities and Social Sciences of Pázmány Péter Catholic University from September 2024. The approach of the professionals graduating from the program places great emphasis on the principle of personality, that is, that we are responsible for each other and ourselves. This is where the concept of self-care and its possibilities come in. Due to the aging population of our country, elderly care poses one of the greatest challenges for future care policy experts and workers in the sectoral care system. The possibilities offered by modern technology, such as humanoid robots and artificial intelligence, can not only make work easier, but will presumably soon become part of everyday life in the fields of social intervention.

At this point, we must highlight the work of developers and research groups who are working for the effective application of robots, and increasingly artificial intelligence, in the field of care. At the Faculty of Information Technology and Bionics of Pázmány Péter Catholic University, specialists have long been making significant efforts towards this kind of usability of technology, specifically artificial intelligence. For example, in the world competition called Cybathlon, you can compete in eight topics with different developments that can make the everyday lives of people with disabilities easier. Our university's research group achieved excellent results in the competition held in the fall of 2024.

True to the Catholic spirit of our institution, this year we have also organized our faith life section within the framework of this conference, the main topic of which will now be how to remain human, the image of God, amidst the challenges of the era of AI and robots.

It can be said that the presentations given at our interdisciplinary scientific conference in 2025 will be presented from the intersection of the social sciences and the fields of information technology and technology.

*Prof. Dr. Nándor Birher  
dean*

*Pázmány Péter Catholic University  
Faculty of Humanities and Social Sciences*

*Dr. habil Tibor Tóth  
president, director general*

*Scientific Council for Care Policy  
of the Ministry of Interior*

*Margit Slachta National Institute of Social Policy*

# PROGRAM

## REGISTRATION: 9:00-10:00H

**Location: Location: Pázmány Péter Catholic University Faculty of Law and Political Sciences, Pope Saint John Paul II Ceremonial Hall**  
(28 Szentkirályi street, 1088 Budapest)

## OPENING CEREMONY: 10:00-11:00H

(language: Hungarian and English, with online streaming)

**Location: Pázmány Péter Catholic University Faculty of Law and Political Sciences, Pope Saint John Paul II Ceremonial Hall**  
(28 Szentkirályi street, 1088 Budapest)

**The Chair of the Section: Dr. Evelin Janó**

(PPCU- Faculty of Humanities and Social Sciences assistant lecturer, the conference program secretary)

## ADDRESS THE CONFERENCE:

Ft. Dr. habil. Gábor Németh Hungarian Catholic Bishops' Conference secretary

Attila Fülöp Ministry of Interior Secretary of State for Care Policy

Ft. Dr. habil. Krisztián Vincze PPCU Vice-Rector for Foreign Affairs and Scientific Organization

Dr. István Novák EKC general vice chancellor

Dr. Ágnes Pángyánszky EUT general vice chancellor

Prof. Dr. Nándor Birher PPCU- Faculty of Humanities and Social Sciences dean, university professor, Rector's Chief Advisor

Dr. habil. Tibor Tóth Margit Slachta National Institute of Social Policy director general, Scientific Council for Care Policy of the Ministry of Interior president, PPCU- Faculty of Humanities and Social Sciences Institute of care policy head of institute, university associate professor

## PLENARY SESSION: 11:00-11:30H

(language: English, with online streaming)

**Location: Pázmány Péter Catholic University Faculty of Law and Political Sciences, Pope Saint John Paul II Ceremonial Hall**  
(28 Szentkirályi street, 1088 Budapest)

Prof. Dr. Clemens Sedmak: director of the Nanovic Institute for European Studies at the Keough School of Global Affairs, University of Notre Dame

The title of the lecture: *A dignity-centered culture of care*

## COFFEE BREAK: 11:30-12:00H

## SECTION I

### ROBOTS AND ARTIFICIAL INTELLIGENCE IN ELDERLY CARE

(language: English, hybrid implementation: personal and online)

**Location:** Pázmány Péter Catholic University Faculty of Law and Political Sciences, Pope Saint John Paul II Ceremonial Hall (28 Szentkirályi street, 1088 Budapest)

**The Chair of the Section:** Prof. Dr. Clemens Sedmak

(director of the Nanovic Institute for European Studies at the Keough School of Global Affairs, University of Notre Dame)

**12:00h**

**Prof. Dr. Klaus Baumann** (University of Freiburg professor, theologian)

**Ms. Laura Daniela Londoño Quintero** (Robot Learning Lab researcher, University of Freiburg ethics master's student)

*(How) Can robots and AI facilitate and promote dignified elderly care? Basic assumptions, potential scenarios and their acceptance by clients and nurses*

**12:15h**

**Paula Zujic** (Catholic University of Croatia PhD student, teaching assistant)

**Prof. Dr. Jasna Ćurković Nimac** (Catholic University of Croatia vice-rector for international relations)

*Ageing in the Age of AI: How Will We Remember Elders, and How Will We Care for Them?*

**12:30h**

**Dr. Anamaria Malešević** (Digit-HeaL senior assistant, Catholic University of Croatia Postdoctoral researcher)

**Dr. Anto Čartolovni** (Digit-HeaL research group leader, Catholic University of Croatia university associate professor)

*From Fear to Trust: Why Digital Literacy Matters in Elderly Care*

**12:45h**

**Dr. Kristóf Karacs** (PPCU- Faculty of Information Technology and Bionics deputy dean, university associate professor)

*A mobile phone based visual assistant for visually impaired people*

**13:00h**

**Dr. iur. Avraham Weber LL.M, LL.M.** (Fordham University, Adjunct Assistant Professor)

*Application of Robots and Artificial Intelligence (AI) in Elderly care in Israel*

**13:15h**

**Dr. Shorena Gogiashvili** (Sulkhan-Saba Orbeliani University Georgia associate professor, international student relations manager)

*Cross-generational Dialogue through Artificial Intelligence: Can Robots Foster Communication Between Youth and Elders?*

**13:30h**

**Dr. habil. Markus Johannes Krienke** ((Facoltà di Teologia di Lugano (Università della Svizzera italiana (USI)) professor)

*Care and the Human Condition: A Theological Reflection on Technology, Fragility, and Freedom*

## SECTION II

### THE CHALLENGES OF SOCIAL CARE IN THE DIGITAL AGE

**Location:** Pázmány Péter Catholic University, Faculty of Humanities and Social Sciences, (Sophianum building) (1 Mikszáth Kálmán square, 1088 Budapest)

**The Chair of the Section:** Dr. habil. Tibor Tóth

(Slachta National Institute of Social Policy, Scientific Council for Care Policy of the Ministry of Interior, PPCU- Faculty of Humanities and Social Sciences Institute of care policy head of institute, university associate professor)

**12:00h**

**Dr. Emőke Nagy** (Ministry of the Interior, Department of Child Protection and Guardianship)  
*Generational change in the civil service: leadership challenges and institutional effectiveness in care policy*

**12:15h**

**Dr. Orsolya Makár** (lawyer, PPCU- Faculty of Humanities and Social Sciences Master's student in care policy studies)

*Improving the regulatory environment for the establishment and operation of specialised care centres*

**12:30h**

**Gabriella German** (Baptist Active Charity Mission head of institution)

*Perspectives for the Care Hour programme*

**12:45h**

**Dr. Péter Farkas** (Slachta National Institute of Social Policy consultant)

*Care– professional journal of the Slachta National Institute of Social Policy*

**13:00h**

**Dr. Péter Prukner** (Széchenyi István University assistant professor)

*Digital technologies and artificial intelligence in care policy*

**13:15h**

**Dr. Zsuzsanna Ládonyi** (Archbishop's College of Veszprém associate professor)

*Intergenerational connections - digital opportunities and good practices*

**13:30h**

**Richárd Zagyva** (Caritas Hungarica national director)

*"From person to person" in the digital world – possible responses of Caritas Hungary as a church-based charity organization for the new challenges of social care*

**13:45h**

**Dr. István Seszták** (Szent Atanáz Greek Catholic Theological College college teacher, HHA Committee board member, president of the College of Theology, pastor)

*Social care issues from the perspective of the care system of the Greek Catholic Church*

**14:00h**

**Vince Szalay-Bobrovniczky** (Prime Minister's Office deputy secretary of state for civil and social relations)

*The challenges of care policy for the civil sector*

**LUNCH AND COFFEE BREAK: 14:00-15:00H**

### **CYBATHLON PRESENTATION 14:30-15:00H**

**Location:** Pázmány Péter Catholic University, Faculty of Humanities and Social Sciences, (Sophianum building) (1 Mikszáth Kálmán square, 1088 Budapest)

## **SECTION III**

### **APPLICATIONS OF ARTIFICIAL INTELLIGENCE AND ROBOTICS IN SOCIAL CARE**

**Location:** Pázmány Péter Catholic University, Faculty of Humanities and Social Sciences, (Sophianum building) (1 Mikszáth Kálmán square, 1088 Budapest)

**The Chair of the Section: Dr. Kristóf Iván**

(PPCU- Faculty of Information Technology and Bionics associate professor)

**15:00h**

**Dr. Róbert Nagy** (EKCÚ assistant professor)

*How AI can help the helper - Pedagogy of AI*

**15:15h**

**Norbert Czibik** (Government Service Centre Nonprofit Ltd. operative director)

*Introducing the Care Hour programme, people and technology together for older people*

**15:30h**

**Dr. Norbert Vajda** (Catholic Relief Service director general, Károli Gáspár Reformed University Faculty of Economics, Health Sciences and Social Sciences associate professor)

*The role of artificial intelligence in person-centred care in nursing homes*

**15:45h**

**Dr. Kristóf Iván** (PPCU- Faculty of Information Technology and Bionics associate professor)

*Bionics in the Service of Society and Humanity*

**16:00h**

**Dr. Sándor Földi** (PPCU- Faculty of Information Technology and Bionics teacher, researcher)

*Initial Steps in the Development of a Soft Robotic Exoskeleton for Dampening Involuntary Movements and Assisting Habilitation Exercises*

**16:15h**

**Dr. Csaba Köllöd** (PPCU- Faculty of Information Technology and Bionics teacher, researcher)

*Tetraplegic e-athletes*

**16:30h**

**Dr. Lilla Botzheim** (HUN-REN Wigner Research Associate, Department of Computational Sciences, Physics Research Center)

*Artificial control of cycling movements in people with spinal cord injuries and limb paralysis using functional electrical muscle stimulation*

## **SECTION IV**

### **REMAINING HUMAN, THE IMAGE OF GOD IN THE HELPING VOCATION IN THE CHALLENGES OF THE AGE OF AI AND ROBOTICS. SELF-AWARENESS IN THE PRESENCE OF GOD**

**Location:** Pázmány Péter Catholic University, Faculty of Humanities and Social Sciences, (Sophianum building)

(1 Mikszáth Kálmán square, 1088 Budapest)

**The Chair of the Section:**

**Gyula Johann** (EUT Diaconia Training Centre head of institute, master teacher, pastor)

**György Gregersen-Labossa** (EUT Diaconia Training Centre teacher, pastor)

**15:00h**

**Ft. Dr. habil. Tamás Tóth** (PPCU- Faculty of Humanities and Social Sciences associate professor, pastor)

*The Social Teaching of the Church – From Saint Peter to Pope Leo XIV*

**15:15h**

**Miklós Thaisz** (Hungarian Maltese Charity School Foundation president of the board of trustees)

**Dr. Mátyás Binder** (Hungarian Maltese Charity School Foundation pedagogical and methodological expert)

*Mission in the country's most disadvantaged communities*

**15:30-17:00h**

**Gyula Johann** (EUT head of institute, master teacher, pastor)

**György Gregersen-Labossa** (EUT teacher, pastor)

*On the spirituality of the helping relationship* (discussion, training)

### **CLOSING OF SECTIONS: 17:00H**

# SCIENTIFIC COMMITTEE OF THE CONFERENCE

## CHAIR OF THE SCIENTIFIC COMMITTEE

### Prof. Dr. Nándor Birher

(PPCU- Faculty of Humanities and Social Sciences dean, university professor,  
Rector's Chief Advisor)

## MEMBERS OF THE SCIENTIFIC COMMITTEE

### Prof. Dr. Clemens Sedmak

(director of the Nanovic Institute for European Studies at the Keough School of Global Affairs,  
University of Notre Dame)

### Dr. Péter Farkas

(Slachta National Institute of Social Policy consultant)

### Dr. Kristóf Iván

(PPCU- Faculty of Information Technology and Bionics associate professor)

### Gyula Johann

(EUT Diaconia Training Centre head of institute, master teacher, pastor)

### Dr. Kristóf Karacs

(PPCU- Faculty of Information Technology and Bionics deputy dean,  
university associate professor)

### Dr. habil. Tamás Tóth

(PPCU- Faculty of Humanities and Social Sciences associate professor, pastor)

### Dr. habil. Tibor Tóth

(Slachta National Institute of Social Policy director general, Scientific Council for Care Policy  
of the Ministry of Interior president, PPCU- Faculty of Humanities and Social Sciences Institute  
of care policy head of institute, university associate professor)

### Dr. Norbert Vajda

(Catholic Relief Service director general, Károli Gáspár Reformed University Faculty of Econo-  
mics, Health Sciences and Social Sciences associate professor)

Conference Program Secretary:

### Dr. Evelin Janó

(PPCU- Faculty of Humanities and Social Sciences assistant lecturer)

# ORGANIZING COMMITTEE



Scientific Council for Care Policy  
of the Ministry of Interior



Pázmány Péter Catholic University  
Faculty of Humanities and Social Sciences



Margit Slachta National Institute of Social Policy



Pázmány Péter Catholic University  
Faculty of Information Technology and Bionics



Evangelical University of Theology



Saint John Paul II Research Center (PPCU)

