



# ITE

ΙΔΡΥΜΑ ΤΕΧΝΟΛΟΓΙΑΣ ΚΑΙ ΕΡΕΥΝΑΣ

# 14<sup>η</sup>

επιστημονική  
**ΔΙΗΜΕΡΙΔΑ 2024**

ΥΠΟ ΤΗΝ ΑΙΓΙΔΑ ΤΗΣ Α.Ε. ΤΗΣ ΠΡΟΕΔΡΟΥ ΤΗΣ ΔΗΜΟΚΡΑΤΙΑΣ ΚΑΤΕΡΙΝΑΣ ΣΑΚΕΛΛΑΡΟΠΟΥΛΟΥ



ΜΕ ΤΗΝ ΥΠΟΣΤΗΡΙΞΗ



ΠΕΡΙΦΕΡΕΙΑ ΚΡΗΤΗΣ  
REGION OF CRETE



ΠΕΡΙΦΕΡΕΙΑΚΟ  
ΤΑΜΕΙΟ  
ΑΝΑΠΤΥΞΗΣ  
ΚΡΗΤΗΣ



ΠΕΡΙΦΕΡΕΙΑ ΔΥΤΙΚΗΣ ΕΛΛΑΔΑΣ  
*ζεμάτη αντιδέσεις!*



ΠΡΟΓΡΑΜΜΑ «ΔΥΤΙΚΗ ΕΛΛΑΔΑ»  
Με τη συγχρηματοδότηση της Ελλάδας  
και της Ευρωπαϊκής Ένωσης



ΕΣΠΑ  
2021-2027  
Ευρωπαϊκό Ταμείο Ανάπτυξης

## 14η Επιστημονική Διημερίδα ITE

### 11 - 13 Οκτωβρίου 2024

### Διεθνής Ολυμπιακή Ακαδημία

### Αρχαία Ολυμπία

Under the patronage of H.E. the President of the Hellenic Republic  
Ms. Katerina Sakellaropoulou

**14<sup>th</sup> FORTH SCIENTIFIC RETREAT**  
**International Olympic Academy, Ancient Olympia**  
**October 11-13 2024**

**Friday, October 11 2024**

**13:15 – 14:45** *Registration & Light Lunch (foyer of IOA Conference Center)*

*All sessions of the day will take place in the D. Vikellas Amphitheatre*

**14:45 - 15:15** **Opening Session**

14:45 – 14:55 **Welcome – Opening Remarks**

Dr. Maria Klapa, ICE-HT Research Director  
Chair of the 14<sup>th</sup> FORTH Retreat Organizing Committee

14:55 - 15:15 **President's Address**

*FORTH – How to stay young after 40*  
Prof. Nektarios Tavernarakis, Chairman of FORTH Board of Directors

**15:15-16:15** **DIRECTORS' PRESENTATIONS: SESSION I**

***BEING A 40+ RESEARCH INSTITUTE OF FORTH: OPPORTUNITIES & CHALLENGES***

*Moderator: Alexandros Lappas, IESL*

**Prof. Vasilis Ntziachristos**, Institute of Electronic Structure and Laser (IESL)

**Prof. Ioannis Vontas**, Institute of Molecular Biology and Biotechnology (IMBB)

**Prof. Dimitris Plexousakis**, Institute of Computer Science (ICS)

**Prof. Charalambos Makridakis**, Institute of Applied & Computational Mathematics (IACM)

**Prof. Gelina Harlaftis**, Institute for Mediterranean Studies (IMS)

**Dr. Theophilos Ioannides**, Institute of Chemical Engineering Sciences (ICE-HT)

**16:15-17:15** **PRESENTATION SESSION I**

***FORTH RESEARCH HIGHLIGHTS Part I***

*Chair: Konstantina Georgiadi, IMS*

16:15 - 16:25 **Stavroula Ntoa**, Principal Researcher, ICS

*Accessibility and User Experience in Digital Applications and Services*

16:25- 16:35 **Panagiotis Moschou**, Collaborating Faculty Member, IMBB

Associate Professor, University of Crete

*Limited proteolysis mechanisms in plants for selective protein translation to improve heat tolerance*

16:35- 16:45 **Konstantina Kalfa**, Post-Doctoral Researcher, IMS

*The apartment building in the Eastern Mediterranean: a project funded by the ERC Starting Grant 2024*

16:45- 16:55 **George Vasilakis**, Principal Researcher, IESL

*Quantum Science & Metrology*

- 16:55- 17:05 **Maria Georgiadou**, Assistant Researcher, BRI  
*The road to studying the impact of matrix stiffness to lung cancer cell treatment response*
- 17:05- 17:15 **Katerina Nikiforaki**, Collaborating Researcher, ICS  
*Magnetic resonance imaging: Probing information at a sub-anatomical level*
- 17:15-18:00 POSTER & DEMO SESSION I: PITCHING PRESENTATIONS**  
**Areas: 1. Nanotechnology/Materials/Microelectronics & 2. Humanities/ Geoinformatics**  
*Chair : Evina Gontikaki, IG*

## FORTH CELEBRATORY EVENT

*(in the Dimitrios Vikellas Amphitheatre)*

**18:30 – 19:00 Welcome Coffee**

### Welcoming Remarks

19:00-19:10 Maria Klapa, ICE-HT Research Director, Researchers' Representative in FORTH BoD  
Chair of the 14th FORTH Retreat Organizing Committee

19:10-19:30 **Short Addresses from Invited Officials**

### FORTH Today

19:30-19:50 Nektarios Tavernarakis, Professor  
Chair of FORTH BoD

### The contribution of technology in the evolution of the Olympic Movement

19:50-20:20 Isidoros Kouvelos  
President of the International Olympic Academy

### FORTH Award Ceremony

- 20:20-21:15
- *Research Awards*
  - *Distinguished Members' Awards*
  - *Employees' Awards*

21:15-21:30 Tour of FORTH Scientific Exhibition

**21:30 Cocktail Reception (IOA Restaurant)**

**Saturday, October 12 2024**

**Morning Sessions**

*All presentation sessions will take place in the D. Vikellas Amphitheatre*

**08:45-10:00 WORKSHOP I**  
**FROM THE RESEARCH RESULT TO PRODUCT EXPLOITATION**  
*Moderator: Maria Klapa , ICE-HT*

*Panelists*

**Kostas Vavekis**, Director, PRAXI NETWORK

**George Papamichail**, Director, Science & Technology Park of Crete (STEP-C)

**Electra Gizeli**, Deputy Director IMBB, Professor Dept. of Biology, U. of Crete, Co-Founder BIOPIX DNA TECHNOLOGY (GR) and AWSensors Dx (ES)

**Panos Trahanias**, CRO & Co-founder of ORamaVR, Collaborating Faculty Member and Lab Head at ICS, Professor of Computer Science, U. of Crete

**Nikolaos Kyriazis**, Co-Founder of SceneOpsis

**Giannis Zacharakis**, Principal Researcher IESL, Co-founder and CEO of KYMATONICS

**Achilleas Gravanis** (via zoom), Co-founder & CEO of ReNeurocell Therapeutics / Co-founder & BoD Member of BioNature, Collaborating Faculty Member IMBB, Professor of Pharmacology, Medical School, U. of Crete

**10:00-10:30 DIRECTORS' PRESENTATIONS: SESSION II**  
**BEING A YOUNG INSTITUTE OF FORTH: OPPORTUNITIES & CHALLENGES**  
*Moderator: Stavroula Ntoa (ICS)*

**Prof. Vasilios Charmandaris**, Institute of Astrophysics (IA) - *via zoom*

**Prof. Savvas Christoforidis**, Biomedical Research Institute (BRI)

**Prof. Ioannis Yentekakis**, Institute of Geoenergy (IG)

**10:30-10:45 THE GREEK INSTITUTE OF HUMAN GENOMICS: THE VISION OF NEWCOMER**

**Prof. Panos Deloukas**, Director, Greek Institute of Human Genomics (GIHG)

**10:45 - 10:50 Group Photo (at the foyer of the Conference Centre)**

**10:50-11:45 POSTER & DEMO SESSION I EXHIBITION (1st floor) + Coffee Break**

**11:45-14:30 Ancient Olympia Archaeological Site & Museum tour**

**14:30-15:30 Lunch**

**Saturday, October 12 2024**

**Afternoon Sessions**

*All presentation except the Parallel sessions will take place in the D. Vikellas Amphitheatre*

**15:30-16:20 PRESENTATION SESSION II**

**FORTH PARTICIPATION IN INFRASTRUCTURES & MISSIONS: FLASH TALKS**

*Chair: Ioannis Kamarianakis, IACM*

- *Precision Medicine, Emmanouela Linardaki, IMBB (via zoom)*
- *BioImaging, Ioannis Zacharakis, IESL*
- *Hybrid Molecular Imaging Unit - HMIU, George Papadakis, ICS*
- *ELIXIR-GR, Maria Klapa, ICE-HT*
- *HDHC, smartHEALTH, PRECISEU: Flagship projects & initiatives addressing digital challenges of the health ecosystem, Dimitris Katehakis, ICS*
- *AI/HPC Computational Infrastructure, Antonis Chazapis, ICS*
- *IESL in Infrastructures (LASERLAB, NFFA, RIANA, HELLAS-CH, INNOVATION-EL, EUSMI, ACTPHAST, IPERION HS), Emmanouel Stratakis, IESL*
- *Air Quality Monitoring Infrastructure, Spyros Pandis, ICE-HT*

**16:20-16:35 PRESENTATION SESSION III**

**Regional Development Plans of Crete and Western Greece**

*Chair: Maria Klapa, ICE-HT*

- **Eleni Maraki-Mpeladaki**, Regional Consultant in the field of Education and Lifelong Learning, Region of Crete
- **Nikos Thomopoulos**, Head of Programming Unit, Managing Authority of Western Greece

**16:35-17:45 POSTER SESSION II: PITCHING PRESENTATIONS**

**Areas: 3. Life Sciences & 4. Mathematical Methods/Informatics/Robotics**

*Chair : Achilleas Tsortos (IMBB)*

**17:45-18:45 POSTER & DEMO SESSION II Exhibition (1st floor) + Coffee Break**

**18:45-20:45 PARALLEL SESSIONS ON INTERDISCIPLINARY TOPICS IN SEARCH OF SYNERGIES**

**Panel Discussions**

**Room 1 : Ketseas Room (Ground Floor)**

**18:45-19:45 Bioinformatics/Precision Medicine**

*Moderators: Irini Fundulaki , ICS; Mathieu Lavigne, IMBB; Maria Klapa, ICE-HT*

**19:45-20:45 Agrobiotechnology**

*Moderators: Ioannis Vontas, Panagiotis Moschou, IMBB*

**Room 2 : Diem Room (Ground Floor)**

**18:45-19:45 Smart Cities**

*Moderator: Costantine Stephanidis, ICS*

**19:45-20:45 Natural sciences & Engineering for the Protection of Cultural Heritage**

*Moderators: Paraskevi Pouli , IESL; Nasos Argyriou ,IMS*

**Room 3 : Amphitheatre "D. Vikellas"**

**18:45-19:45 Materials and Methods for Energy & Environment**

*Moderators: Emmanouel Glynos, IESL; Christos Aggelopoulos, ICE-HT; Emmanouel Stamatakis, IG*

**19:45-20:45 Integrated Processes for Energy & Environmental Challenges**

*Moderators: Stavros Pissadakis, IESL; Maria Daletou, ICE-HT; Spyros Bellas, IG*

**21:30 Gala Dinner in "Amvrosia" Restaurant in Ancient Olympia town**



## Sunday, October 13 2024

All presentation sessions will take place in the D. Vikellas Amphitheatre

### 09:00-10:00 PRESENTATION SESSION IV

#### **FORTH RESEARCH HIGHLIGHTS Part II**

*Chairs: Maria Georgiadou, BRI; Nasos Argyriou, IMS*

- 09:00-09:10 **Alexis Panoutsopoulos**, Elected Assistant Researcher, ICE-HT (via zoom)  
*Human neural organoids for the mechanistic study of neural tube defects. The example of folate receptor 1*
- 09:10-09:20 **Alexandros Pittis**, Assistant Researcher, IMBB  
*Molecular diversity and evolution of the nervous system*
- 09:20-09:30 **Tasos Kostopoulos**, Post-Doctoral Researcher, IMS  
*MACAUTH: Exploring the Macedonian Roots of the Balkan-wide Deep State*
- 09:30-09:40 **Anna Sydorenko**, Post-Doctoral Researcher, IMS  
*Shadow Trade: Unravelling Maritime Smuggling between the Russian and Ottoman Empires (1853-1914)*
- 09:40-09:50 **Ioannis Paradisanos**, Post-Doctoral Researcher, IESL  
*Tailoring Optical Properties and Beyond: Recent Advances in van der Waals Semiconductors and Collaborative Research at FORTH*
- 09:50-10:00 **Grigoris Tsagkatakis**, Affiliated Researcher, ICS  
Assistant Professor, University of Crete  
Advancing Astrophysical Data Analysis through Computational Intelligence

### 10:00-10:30 WORKSHOP II

*organized and moderated by Crete University Press (CUP)*

#### **CRETE UNIVERSITY PRESS: A DISTINCT PRESENCE IN THE GREEK PUBLISHING INDUSTRY**

Presenter: Hephæstion Christopoulos, in-house Editor, CUP

Discussion Panel: Dionysia Daskalou, Panagiotis Soultanis, Nikos Koumpias, CUP

### 10:30-11:15 WORKSHOP III

*organized & moderated by the FORTH Gender Equality & Anti-Discrimination Committee*

#### **WHAT WE DON'T SEE: GENDER STEREOTYPES, DISCRIMINATION AND EXCLUSION IN OUR EVERYDAY LIVES. NECESSARY REFLECTIONS AND TRANSFORMATIONS**

*created and presented by the Gender Alliance Initiative (G-All) team: Vangelis Kosmatos, Psychologist & Giorgos Nikolaidis, Actor/Performer & Playwright*

*Chairs: Maria Klapa, ICE-HT; Konstantina Georgiadi, IMS (on behalf of FORTH GEADC)*

### 11:15-11:45 Coffee Break

### 11:45-12:45 FORTH GENERAL ASSEMBLY

*chaired by Prof. Nektarios Tavernarakis, Chairman of FORTH BoD*

### 12:45-13:30 Closing Session

*moderated by Prof. Nektarios Tavernarakis, Chairman of FORTH BoD*

- 12:45-13:10 **YOUNG INVESTIGATORS' BEST POSTER/DEMO AWARDS**  
*(funded by the Association of FORTH Researchers - SYLER)*

- 13:10-13:30 **CONCLUSIONS - CLOSING REMARKS**

### 13:30-14:30 Light Lunch - Goodbye

## **POSTER/DEMO SESSIONS**

## POSTER/DEMO SESSION I

### AREA 1. NANOTECHNOLOGY/MATERIALS/MICROELECTRONICS

#### **P1.1 Gas sensing applications on intelligent food packaging, control of air quality and detection of explosive energy-related gases (A3)**

Gagaoudakis Emmanouil, Skliri Evangelia, Sfakianou Angeliki, Tsihchis Christos and Binas Vasilios  
Presenting author: Gagaoudakis Emmanouil, Corresponding author: Gagaoudakis Emmanouil, Binas Vasilios

#### **P1.2 Understanding surface kinetics of InGaN epitaxy: Applications towards advanced photovoltaics (A4)**

Lymperakis L. and Iliopoulos E.  
Presenting author: E. Gagaoudakis, Corresponding author: E. Iliopoulos

#### **P1.3 Metamaterials and metasurfaces for advanced electromagnetic wave control (A5)**

A. Tasolamprou, M. Kafesaki, O. Tsilipakos, A. Pitolakis, G. Perrakis, I. Katsantonis, A. Theodosi E.N. Economou  
Presenting author: Anna Tasolamprou, Corresponding author: Maria Kafesaki

#### **P1.4 Nanomaterials for smart electronics and sensing (A6)**

I. Polioudakis, A. Papadopoulou, D. Kosmidis, S. Spinthaki, and G. Deligeorgis  
Presenting author: I. Polioudakis, Corresponding author: G. Deligeorgis

#### **P1.5 Conformational changes of PGL-3 upon crowding and phase separation (A7)**

Ioannis Sampson, Patrick McCall, Andrei Pozniakovsky, Anthony A. Hyman and Emmanouela Filippidi  
Presenting author: Matthieu Lavigne, Corresponding author: Emmanouela Filippidi

#### **P1.6 Perfect ring-shaped Bose-Einstein Condensates (A8)**

Vishal K. Pathak, Vishnupriya P. Veetill, Pedro R. Antunez and Wolf von Klitzing  
Presenting author: Vishal K. Pathak (YOUNG INVESTIGATOR), Corresponding author: Wolf von Klitzing

#### **P1.7 Designing Polymer Electrolytes for Next Generation Solid State Batteries (A9)**

Georgia Nikolakakou, Athanasios Machas, Benoit Loppinet, Georgios Petekidis, and Emmanouil Glynos  
Presenting author: Emmanouil Glynos, Corresponding author: Emmanouil Glynos

#### **P1.8 Tuning Surface Properties by Utilizing Polymer Nanocomposite Coatings (A10)**

F. Gojda, E. Petsi, M. Vlasidi, A. Thomos, F. Krasanakis, M. Stylianakis, K. Chrissopoulou, and S. H. Anastasiadis  
Presenting author: K. Chrissopoulou, Corresponding author: K. Chrissopoulou, S. H. Anastasiadis

#### **P1.9 Tweaking Nanoscale Functionalities by Correlated Disorder (A11)**

George Antonaropoulos, Marianna Vasilakaki, Kalliopi N. Trohidou, Vincenzo Iannotti, Emil S. Bozin and Alexandros Lappas  
Presenting author: Alexandros Lappas, Corresponding author: Alexandros Lappas

#### **P1.10 Antifungal Graphene-based Aerogels as Innovative Absorbers for Preventive Conservation of Cultural Heritage (D1)**

George Gorgolis, George Paterakis, Christos Tsakonas, Maria Giovanna Pastore-Carbone and Costas Galiotis  
Presenting author: George Gorgolis, Corresponding author: Costas Galiotis

#### **P1.11 Synthesis and in situ characterization of graphene grown on liquid metal catalysts (D2)**

Anastasios C. Manikas, Christos Tsakonas, Ilias Sfougkaris and Costas Galiotis  
Presenting author: Anastasios Manikas, Corresponding author: Costas Galiotis

#### **P1.12 New spectroscopic methods for non-invasive pH sensing of aerosols (D3)**

G. Theodoropoulos, A. Psarelis, A. Soto Beobide, G. Mathioudakis, Z. Lada, C. Molina, K. Andrikopoulos, A. Nenes, G. Voyiatzis  
Presenting author: G. Theodoropoulos (YOUNG INVESTIGATOR), Corresponding author: G. Voyiatzis

#### **P1.13 Interfacial Interaction of Palladium with MoS<sub>2</sub> and MoS<sub>2</sub>-rGO hybrids (D5)**

Labrini Sygellou  
Presenting author: Labrini Sygellou, Corresponding author: Labrini Sygellou

#### **P1.14 Laser-assisted graphene electrodes for smart textiles: From energy harvesting to miniaturized energy storage (D6)**

Natalia Kantouni, Athinais Mavrikaki, Markos Anagnostakos, Kapil Bhorkar, Nikolaos Samartzis, Michail Athanasiou, Spyros N. Yannopoulos  
Presenting author: Natalia Kantouni (YOUNG INVESTIGATOR), Corresponding author: Spyros Yannopoulos



**P1.15 In-silico Studies of Complex Molecular Systems via Computational Modeling and Data-driven Atomistic Simulations: 'Linear-to-Colloidal' Transition in Star Polymers (E1)**

Eirini Gkolfi, Petra Baková and Vagelis Harmandaris

Presenting author: Eirini Gkolfi (**YOUNG INVESTIGATOR**), Corresponding author: eirini.gkolfi@iacm.forth.gr and vagelis@iacm.forth.gr

**P1.16 Integrated Autonomous Hydrogen Energy Systems – Resilience advantages & humanitarian crises response (H2)**

Emmanuel Stamatakis, Yentekakis Ioannis

Presenting author: Emmanuel Stamatakis, Corresponding author: Emmanuel Stamatakis

**P1.17 Effect of the Reactor Configuration and Operational Parameters on Formation, Growth and Dissociation of Carbon Dioxide Hydrate – A Combined Experimental and Computational Study (H3)**

Stamatakis Emmanuel, Labropoulos Anastasios, Tallarou Chrysoula, Stavropoulos Stavros, Bellas Spyridon, Pasadakis Nikolaos, Yentekakis Ioannis

Presenting author: Labropoulos Anastasios, Corresponding author: Stamatakis Emmanuel

**P1.18 Hydrocarbon Generation Potential of the Diatomites, Western Crete, Greece (H4)**

Bellas Spyridon, Telemenis Dimosthenis, Manoutsoglou Emmanouil, Yentekakis Ioannis

Presenting author: Telemenis Dimosthenis (**YOUNG INVESTIGATOR**), Corresponding author: Spyridon Bellas

**D1 Ionic liquid dehumidifying System - DEMO (D8)**

Dionysios Vroulias, Theophilos Ioannides, Vassilios Dracopoulos

Presenting author: Dionysios Vroulias (**YOUNG INVESTIGATOR**), Corresponding author: Vassilios Dracopoulos

**D2 Wavelens: a novel wavefront shaping digital microscopy lens (KYMATONICS) - DEMO (A2)**

Mikis Mylonakis, Evangelos Marakis, George J. Tserevelakis, Athanasios Zacharopoulos, Maira Tampakaki, Angela Paspaparakis, Joseph Papamatheakis, Nektarios Tavernarakis, Dimitrios G. Papazoglou and Giannis Zacharakis

Presenting author: Mikis Mylonakis (**YOUNG INVESTIGATOR**), Corresponding author: Giannis Zacharakis

**D3 Photonic Sensors in Ophthalmological Sutures (PHAETHON) - DEMO (A1)**

V. Sarakatsianos, E. Grantzioti, I. Chapalo, T. Manouras, M. Vamvakaki, A. Charonis, M. Konstantaki and Stavros Pissadakis

Presenting author: M. Konstantaki, Corresponding author: S. Pissadakis

**AREA 2. HUMANITIES/GEOINFORMATICS**

**P1.19 Shallow Offshore Archaeological Prospection in Ancient Olous, Crete (F1)**

Angelos Plageras, Dimitrios Oikonomou, Nikos Papadopoulos, and Nasos Argyriou

Presenting author: Angelos Plageras (**YOUNG INVESTIGATOR**), Corresponding author: Angelos Plageras

**P1.20 Religious Patronage as an Instrument of 'Soft' Political Power during War: Russian Donations to Orthodox Communities in the Ottoman Empire (F2)**

Yuliana Boycheva

Presenting author: Yuliana Boycheva, Corresponding author: Yuliana Boycheva

**P1.21 SLAVEGENTS: Enslaved persons in the making of societies and cultures in Western Eurasia and North Africa, 1000 BCE - 300 CE (F3)**

Clara Maria Ramos-Taboada, Kostas Vlassopoulos

Presenting author: Clara Maria Ramos-Taboada (**YOUNG INVESTIGATOR**), Corresponding author: Clara Maria Ramos-Taboada

**P1.22 Electrical Resistivity Tomography (ERT) measurements in inclined boreholes (F4)**

Eleni Tzima, Panagiotis Tsourlos, Prodomos Louvaris, Georgia Zacharopoulou

Presenting author: Eleni Tzima (**YOUNG INVESTIGATOR**), Corresponding author: Panagiotis Tsourlos

**P1.23 The Role of Biogenic Silica and Microscopic Phytoliths in Advancing Archaeoenvironmental Research (F5)**

Nafsika-Chrysoula Andriopoulou, Georgios E. Christidis

Presenting author: Nafsika-Chrysoula Andriopoulou (**YOUNG INVESTIGATOR**), Corresponding author: Nafsika-Chrysoula Andriopoulou

**Note: Numbers in parenthesis correspond to the numbering at the Retreat website per FORTH Institute:**

**A: IESL; B: IMBB; C:ICS; D:ICE-HT; E:IACM; F: IMS; H:IG**

## POSTER/DEMO SESSION II

### AREA 3. LIFE SCIENCES

#### **P2.1 Dendrites endow artificial neural networks with accurate, robust, and parameter-efficient learning (B1)**

Spyridon Chavlis, Panayiota Poirazi

Presenting author: Spyridon Chavlis (YOUNG INVESTIGATOR), Corresponding author: Panayiota Poirazi

#### **P2.2 Linking neural activity to mouse perception using closed loop approaches (B2)**

Maria Diamantaki, Konstantina Georgelou, Stamatios Aliprantis, Konstantin Willeke, Katrin Franke, Andreas Talias, and Emmanouil Froudarakis

Presenting author: Maria Diamantaki, Corresponding author: Maria Diamantaki, Emmanouil Froudarakis

#### **P2.3 Studying insecticide resistance and the physiology of mosquitoes to facilitate the prevention of vector borne diseases (B3)**

Linda Grigoraki, Mengling Chen, Latifa Remadi, Sibora Teta, Hilary Ranson, Gareth Lycett and John Vontas

Presenting author: John Vontas, Corresponding author: Linda Grigoraki

#### **P2.4 An IL-10/DEL-1 axis supports granulopoiesis and survival from sepsis in early life (B4)**

Ourania Kolliniati, Ioanna Lapi, Christos Tsatsanis and Eleni Vergadi

Presenting author: Ourania Kolliniati (YOUNG INVESTIGATOR), Corresponding author: O Kolliniati and Eleni Vergadi

#### **P2.5 Investigating tick biology for disease prevention and novel biotechnological solutions (B5)**

Michail Kotsyfakis

Presenting author: Michail Kotsyfakis, Corresponding author: Michail Kotsyfakis

#### **P2.6 Unraveling the impact of chromatin dissociation dynamics of lncRNAs in gene expression regulation (B6)**

Kozonakis A., Katsioulas C. and Ntini E

Presenting author: Ntini Evgenia, Corresponding author: Ntini Evgenia

#### **P2.7 Reproductive regulation of the mitochondrial stress response in *Caenorhabditis elegans* (B7)**

Nikolaos Charmpilas, Aggeliki Sotiriou, Konstantinos Axarlis, Thorsten Hoppe and Nektarios Tavernarakis

Presenting author: Aggeliki Sotiriou (YOUNG INVESTIGATOR), Corresponding author: Th. Hoppe and N. Tavernarakis

#### **P2.8 *Setdb1* regulates proper differentiation of adult intestinal stem cells via restraining permissive chromatin structure and transcriptional variability (B8)**

Dimitris Botskaris, Ioannis K. Deligiannis, Ioanna Peraki, Haroula Kontaki, Marianna Stagaki, Matthieu D. Lavigne, Celia P. Martinez-Jimenez and Iannis Talianidis

Presenting author: Thymiakou Effie, Corresponding author: Iannis Talianidis, Celia P. Martinez-Jimenez

#### **P2.9 Epigenetic complexes and Notch signaling dynamics in intestinal stem cell plasticity (B9)**

Zoe Veneti, Virginia Fasoulaki, Aristides Eliopoulos and Christos Delidakis

Presenting author: Zoe Veneti, Corresponding author: Christos Delidakis

#### **P2.10 Modeling Transcription: an integrated approach to investigate the role of nascent RNAs in the maintenance of healthy gene expression programs (B10)**

Matthieu Lavigne, Vaios Theodosiou and Marianna Stagaki, Electra Tsaglioti, Christos Botos

Presenting author: Matthieu Lavigne, Corresponding author: Matthieu Lavigne

#### **P2.11 Advancing patient care through health data engineering and trustworthy AI (I1)**

Vasileios C. Pezoulas, Dimitrios I. Zaridis, Kosmas Apostolidis, Nikolaos S. Tachos, Kostas Marias, Manolis Tsiknakis and Dimitrios I. Fotiadis

Presenting author: Vasileios C. Pezoulas (YOUNG INVESTIGATOR), Corresponding author: Prof. Dimitrios Fotiadis

#### **P2.12 Development of the retinal neuro-vascular unit from human pluripotent stem cells as a model system to study retinal diseases (I2)**

Katerina Apostolidi, Maria Markou, Sofia Bellou, Theodore Fotsis, Carol Murphy, and Eleni Bagli

Presenting author: Aikaterini Apostolidi (YOUNG INVESTIGATOR), Corresponding author: Carol Murphy

#### **P2.13 Molecular Mechanisms of Vessel Morphogenesis (I3)**

Rakovoliou Elena, Markou Maria, Eleni Bagli, Bellou Sofia, Theodore Fotsis and Carol Murphy

Presenting author: Eleni Rakovoliou (YOUNG INVESTIGATOR), Corresponding author: Carol Murphy

#### **P2.14 Investigating a potential role for chemosensory proteins in insecticide resistance (I4)**

Angeliki Tsouri, Grigorios Dosis, Kerkyra Pandi, Anastassios Vassiliadis and Vassilis Douris

Presenting author: Angeliki Tsouri (YOUNG INVESTIGATOR), Corresponding author: Vassilis Douris

**P2.15 Dietary interventions in high anxiety: Focus on mitochondria (15)**

Maria P. Papageorgiou, Markus Nussbaumer, Martina Samiotaki, Marianthi Firoglani Moschi and Michaela D. Filiou

Presenting author: Maria P. Papageorgiou (YOUNG INVESTIGATOR), Corresponding author: Michaela D. Filiou

**P2.16 Elucidating the interplay between high anxiety and caloric restriction: a multiomics approach (16)**

Elissavet Anousi, Markus Nussbaumer, Maria P. Papageorgiou, Frederik Dethloff, Martina Samiotaki, Afroditi Divane, Anastasia Mitka, Eirini Panteli and Michaela D. Filiou

Presenting author: Elissavet Anousi (YOUNG INVESTIGATOR), Corresponding author: Michaela D. Filiou

**P2.17 Elucidating the behavioral and mitochondrial correlates of early handling (17)**

Markus Nussbaumer, Christina Thomou, Eleni Grammenou, Chrysoula Komini, Angeliki-Maria Vlaikou, Maria P. Papageorgiou and Michaela D. Filiou

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**P2.18 Exploring the interactome of IKKa and its role in alternative RNA splicing in lung cancer (18)**

Besta S, Roupakia E, Kanellis D.C., Samiotaki M, Foutadakis S, Vatsellas G, Giamas G, Jiri Bartek and Kolettas E

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**P2.19 Proteolytic processing of VE-cadherin during thrombin treatment (19)**

Konstantina Tasioula, Panagiotis Karras, Violetta Maltabe and Panos Kouklis

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**P2.20 The Human Brain Organoids Facility at BRI-FORTH (110)**

Georgia Voudouri, Kleanthi Chalkiadaki, Maria Zafeiri, Elpida Statoulla and Christos G. Gkogkas

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**P2.21 GABA/Glutamate neuron differentiation imbalance and increased AKT/mTOR signalling in CNTNAP2 -/- cerebral organoids (111)**

Kleanthi Chalkiadaki, Elpida Statoulla, Maria Zafeiri, Georgia Voudouri, Alexandra Typou, Theoklitos Amvrosiadis, Niki Theodoridou, Dimitrios Moschovas, Apostolos Avgeropoulos, Martina Samiotaki, John O. Mason and Christos G. Gkogkas

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**P2.22 The role of matrix stiffness on the morphology and migration of lung cancer cells (112)**

Androutopoulou A, Maroudi M, Pothos P, Petropoulos N, Roupakia E and Georgiadou M

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**P2.23 Unraveling the role of endocytic pathways of endothelial cells in amyloid- $\beta$  blood-brain barrier clearance in Alzheimer's disease (113)**

Evi Vasili, Martha Kontostathi, Natalia Tsironi and Savvas Christoforidis

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**P2.24 Beyond confocal resolution: differentiating the lumen from the periphery of thin, elongated vesicles in endothelial cells (114)**

Panagiotis Lentzaris, Evangelia Goula, Alexandra Papafotika, Michael Redd, Virginia Silio, Christopher Thrasivoulou, Vasiliki Lazani, Michalis Aivaliotis and Savvas Christoforidis

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**P2.25 Predicting Gleason Score in Prostate Cancer Using Explainable Machine Learning Radiomics and Quantitative Diffusion MRI (C1)**

Georgios S. Ioannidis, Katerina Nikiforaki, Michalis Goumenakis, Kostas Marias

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**P2.26 An Artificial Intelligence-Powered Annotation Methodology for a Sparsely Labeled Computed Tomography Lung Cancer Dataset: A Use Case for Non-Expert Observers (C6)**

Eleftherios Trivizakis, Kostas Marias

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**P2.27 Deep Learning-based automated assessment of reduced left ventricular ejection fraction by echocardiography (C7)**

Grigorios Kalliatakis, Georgios Manikis, Kostas Marias

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**P2.28 ICT Ecosystems for Precision Medicine Initiatives (C19)**

Irini Fundulaki, Vassilis Papakonstantinou, Tzanina Saveta, Yannis Rousakis  
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**P2.29 Reconstructing the protein-protein interaction network of an industrial CO<sub>2</sub>-assimilating anaerobe using comparative genomics and systematic literature curation (D7)**

Vanessa Savvopoulou and Maria I. Klapa  
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**P2.30 Comparative Study on Protein Language Models for Antimicrobial Peptide Classification (E3)**

Elias Georgoulis, Michaela-Areti Zervou and Yannis Pantazis  
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**P2.31 Subsurface microbial hydrogen cycling: implications for Underground Hydrogen Storage projects (H1)**

Elpida Maragkozioglou, Simon Poirier, Spyros Bellas, Emmanouel Stamatakis, Ioannis Yentekakis, Evina Gontikaki  
Presenting author: Elpida Maragkozioglou (YOUNG INVESTIGATOR), Corresponding author: Evina Gontikaki

**AREA 4. COMPUTATIONAL METHODS - INFORMATICS - ROBOTICS**

**P2.32 The ubiquitous need for integrating data for e-science and the data transformation framework of FORTH-ICS-ISL (C5)**

Yannis Marketakis, Yannis Tzitzikas  
Presenting author: Yannis Marketakis (YOUNG INVESTIGATOR), Corresponding author: Y. Marketakis, Y. Tzitzikas

**P2.33 Leveraging Symbolic and Data-driven Methods for Object State Classification (C8)**

Filippos Gouidis, Kostas Papoutsakis, Katerina Papantoniou, Theodoros Patkos, Dimitris Plexousakis, Antonis Argyros  
Presenting author: Filippos Gouidis (YOUNG INVESTIGATOR), Corresponding author: Filippos Gouidis

**P2.34 Interception Inception: Analyzing CUDA call interception methods for Serverless Environments (C9)**

Manos Pavlidakis, Anargyros Argyros, Stelios Mavridis, Giorgos Vasiliadis, Angelos Bilas  
Presenting author: Manos Pavlidakis (YOUNG INVESTIGATOR), Corresponding author: Manos Pavlidakis

**P2.35 Can LLMs detect deception? An exploratory study from a linguistic cues perspective in a multilingual context (C16)**

Papantoniou Katerina, Papadakos Panagiotis, Plexousakis Dimitris  
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**P2.36 Exploiting the power of HPC: Benefits and technology transfer (C17)**

Eleni Kanellou, Christos Kozanitis, Angelos Bilas  
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**P2.37 Knot: Instant productivity for Kubernetes (C18)**

Antony Chazapis, Angelos Bilas  
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**P2.38 Predicting and Parameterizing the Glass Transition Temperature of Atmospheric Organic Compounds via Molecular Dynamics Simulations (D4)**

Panagiota Siachouli, Vlas G. Mavrantzas and Spyros N. Pandis  
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**P2.39 Modeling Transient Dynamics of Coarse-Grained Molecular Systems (E2)**

Georgia Baxevani, Evangelia Kalligiannaki and Vagelis Harmandaris  
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**P2.40 LASSO-type estimators for Subset ARMA selection (E3)**

Eleni Dretaki, Jorgo Xhixho, Mario Giacomazzo and Yiannis Kamarianakis  
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**D4 ProximIoT: An IoT Platform for Context-Aware Proximity-driven Services - DEMO (C12)**

Giorgos Kelantonakis, Chrysostomos Zeginis, Eleni Maragkaki, Michalis Samaritakis, Kostas Magoutis  
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**D5 Gamified VR Storytelling for Cultural Tourism Using 3D Reconstructions, Virtual Humans, and 360° Videos - DEMO (C13)**

Emmanouil Kontogiorgakis, Antonis Agapakis, Aldo Jhako, Emmanouil Zidianakis, Eirini Kontaki, Constantina Manoli, Stavroula Ntoa, Constantine Stephanidis

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**D6 Interactive Storytelling in VR: Exploring the Cultural Richness of Heraklion - DEMO (C14)**

Ilias Proimakis, Antonis Agapakis, Emmanouil Zidianakis, Eirini Kontaki, Constantina Manoli, Stavroula Ntoa, Constantine Stephanidis

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**D7 Democratizing Photorealistic 3D Modeling Using the Power of AI and Your Smartphone- DEMO (C11)**

Nikolaos Kyriazis, Paschalis Panteleris, Antonis Argyros

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**D8 Legged Robots In The Wild - DEMO (C10)**

Despina-Ekaterini Argiropoulos, Michael Maravgakis, Manos Papadakis, Markos Sigalas, Dimitrios Papageorgiou, Panos Trahanias

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**D9 ORamaVR: Accelerating the world's transition to medical XR through spatial computing and spatial intelligence - DEMO**

Panos Trahanias, George Papagiannakis

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**D10 Activities of Statistical Learning Lab @IACM - DEMO**

Ioannis Kamarianakis

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P, D stand for poster and demo, respectively.

**Note: Numbers in parenthesis correspond to the numbering at the Retreat website per FORTH Institute:  
A: IESL; B: IMBB; C:ICS; D:ICE-HT; E:IACM; F: IMS; H:IG**

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