2014 IEEE-EMBS International Conference on Biomedical and Health Informatics

(BHI 2014)

Valencia, Spain
1-4 June 2014

Program in Chronological Order
(Copyrighted Papers)

Monday, 2 June 2014

MoAT1: 08:30-10:00	Cronos

Health Data Management (Regular Session)
Chair: Martinelli, Elena *(Azienda Ospedaliero Univ. di Parma)*

08:30-08:45   MoAT1.1
Possibility of Non-Invasive Blood Pressure Estimation by Measurements of Force and Arteries Diameter 1-4

Veye, Florent* (LIRMM); Mestre, Sandrine (Montpellier University Hospital Center); Perez-Martin, Antonia (Nîmes University Hospital Center); Triboulet, Jean (University of Montpellier II)

08:45-09:00   MoAT1.2
Data Collection for Models Validation: Application to Prostate Cancer – Clinical Aspects 5-8

Gabriele, Domenico* (University of Torino); Cattari, Gabriella (IRCCS-FPO Cancer Center, Candiolo (Torino), Radiation Oncology D); Fiorito, Chiara (University of Torino, Molinette Hospital, Urology Dept.); Carchedi, Maria Teresa (Gradenigo Hospital, Torino, Urology Unit); Garibaldi, Elisabetta (IRCCS-FPO Cancer Center, Candiolo (Torino), Radiation Oncology D)

09:00-09:15   MoAT1.3
Using a Database as a Service for Providing Electronic Health Records 9-12

Lin, Tsai-Huei (Chang Gung University,Taoyuan,Taiwan); Chang, Hsien-Tsung* (Chang Gung University); Chen, Ming-Jen (Institute for Information Industry); Yang, Ping-Yen (Institute for Information Industry)

09:15-09:30   MoAT1.4
Information Technology Meets Pharmacogenomics: Design Specifications of an Integrated Personalized Pharmacogenomics Information System 13-16

Lakiotaki, Kleanthi (Foundation for Research and Technology - Hellas (FORTH)); Patrinos, George (University of Patras, Dept. of Pharmacy); Potamias, George* (Foundation for Research and Technology - Hellas)

09:30-09:45   MoAT1.5
CGU Smart Clothes Platform – Development of a Gateway Device and Real-Time Mobile Display 17-20

Tsai, Tzung You (Chang Gung University); You, Kun-Ming (Chang Gung University,Computer Science and Information Engineeri); Ma, Yung-Cheng* (Chang-Gung University); Chao, Yi-Ping (Chang Gung University)

09:45-10:00   MoAT1.6
An Improvement of Skin Aging Assessment by Non-Invasive Laser Speckle Effect: A Comparative Texture Analysis 21-24

Orun, Ahmet (De Montfort University); Uslan, Volkan (De Montfort University); Seker, Huseyin* (Bio-Health Informatics Research Group)

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ICT in Healthcare Management (Regular Session)
Chair: Meneu, Teresa *(Univ. Pol. de Valencia)*
Co-Chair: Demiroglu, Cenk *(Ozyegin Univ.)*

08:30-08:45   MoAT2.1
Retrieval of Trustworthy Health Videos from YouTube 25-28

Karlsen, Randi* (UiT The Arctic University of Norway); Borrás Morell, Jose Enrique (Universitat Politècnica de València); Fernandez-Luque, Luis (Northern Research Institute Tromsø (Norut)); Traver, Vicente (Institute ITACA)

08:45-09:00 MoAT2.2

An Intelligent Mobile Diabetes Management and Educational System for Saudi Arabia (System Architecture) 29-32

alotaibi, Mohammed* (Kingston university london); Istepanian, Robert (Imperial College, London); Philip, Nada (Kingston University); Sungoor, Ala (Kingston University London)

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Papamakarios, Georgios (Centre for Research and Technology Hellas, Information Technolog); Giakoumis, Dimitris (Centre for Research and Technology Hellas); Votis, Konstantinos (CERTH/ITI); Segkouli, Sofia (Greek Association of Alzheimer's Disease and Related Disorders,); Tzovaras, Dimitrios* (Centre for Research and Technology Hellas); Karagiannidis, Charalampos (Dept. of Special Education, University of Thessaly, Thessal)

09:15-09:30 MoAT2.4

A Novel Tool for Detecting Buruli Ulcer Disease based on Multispectral Image Analysis on Handheld Devices 37-40

Hu, Rui (University of Houston); Queen, Courtney (University of Houston); Zouridakis, George* (University of Houston)

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Tan, Hsu-Tan (National Taipei University of Technology); Gochoo, Munkhjargal* (National Taipei University of Technology); Chen, Ke-Hao (National Taipei University of Technology); Jean, Fu-Rong (National Taipei University of Technology); Chen, Yung-Fu (Central Taiwan University of Science and Technology); Shih, Fu-Jin (Chair Professor, Research Development & Nursing Dept., Chay); Ho, Chiung Fang (Mackay Medical College)

09:45-10:00 MoAT2.6

Convergent Validity of an Application for Hand Anthropometric Measurement 45-48

Massiris, Manlio* (Universidad del Norte); Maestre-Meyer, Marla Lucía (Universidad del Norte); Peñabaena Niebles, Rita (Universidad del Norte); Oviedo-Trespalacios, Oscar (Universidad del Norte)

MoAT3: 08:30-10:00 Calipso
Medical Imaging Informatics (Regular Session)
Chair: Fotiadis, Dimitrios I. (Univ. of Ioannina)

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Wan, Ying* (University of Technology, Sydney); Wu, Qiang (University of Technology, Sydney); He, Xiangjian (University of Technology, Sydney)

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Brain Structural Underpinnings of Autism Spectrum Disorder Revealed by Sulcus-Based Morphometry 53-56

Auzias, Guillaume* (UMR CNRS 6168); Viellard, Marine (INT UMR 7289, Aix Marseille Université, CNRS and APHM, Hôpital S); Takerkart, Sylvain (INT UMR 7289, Aix Marseille Université, CNRS.); Villeneuve, Nathalie (APHM, Hôpital Ste Marguerite, Centre de Ressources Autisme, Serv); Poinso, François (INT UMR 7289, Aix Marseille Université, CNRS and APHM, Hôpital S); Da Fonséca, David (INT UMR 7289, Aix Marseille Université, CNRS and APHM, Hôpital S); Girard, Nadine (CRMBM UMR 7339, Aix Marseille Université, CNRS and APHM, Hôpital); Deruelle, Christine (INT UMR 7289, Aix Marseille Université, CNRS.)

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Kim, Seong Tae* (Korea Advanced Institute of Science and Technology (KAIST)); Kim, Dae Hoe (Korea Advanced Institute of Science and Technology); Cha, Eun Suk (Ewha Womans University School of Medicine, Mokdong Hospital); Ro, Yong Man (Korea Advanced Institute of Science and Technology)

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Study of Skeletal Muscle Behavior by PET/MRI. 61-64

García, David* (Geneva University Hospitals, Division of Nuclear Medicine.); Trombella, Sara (Geneva University Hospitals, Division of Nuclear Medicine.); Delattre, Bénédicte M.A. (Geneva University Hospitals, Radiology Dept.); Seimbille, Yann (University of Geneva and the University hospital); Ratib, Osman (Geneva University Hospitals, Division of Nuclear Medicine.)

09:30-09:45   MoAT3.5

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Bastião Silva, Luís A.* (University of Aveiro); Beroud, Louis (École supérieure d'informatique, électronique, automatique (ESIE); Costa, Carlos (DETI/IEETA, University of Aveiro); Oliveira, José Luis (DETI/IEETA - University of Aveiro)

09:45-10:00   MoAT3.6

Gender Classification based on SVM and Hair-Style Detection .... ⊳⊞⊏

Zhang, Li (Guilin University of Electronic Technology); Cai, Xiaodong* (Guilin University of Electronic Technology); Liu, Shuangcheng (Guilin University of Electronic Technology); Bi, Weiwei (Guilin University of Electronic Technology); Liang, Jianyong (Guilin University of Electronic Technology)

MoAT4: 08:30-10:00   Baco
Health Information Systems (Regular Session)
Chair: Sevillano, Jose Luis *(Univ. de Sevilla)*
Co-Chair: Marco, Luis *(Univ. Hospital of Northern Norway)*

08:30-08:45   MoAT4.1

A Virtual PHR Authorization System 73-76

Poulymenopoulou, Mikaela* (University of Piraeus); Malamateniou, Flora (University of Piraeus); Vassilacopoulos, George (University of Piraeus)

08:45-09:00   MoAT4.2

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Bae, Sungchul* (Kyungpook National University); Kim, Il Kon (Kyungpook National University); Lee, Do-Youn (Kyungpook National University)

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09:15-09:30   MoAT4.4

**Data Quality in European Primary Care Research Databases. Report of a Workshop
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09:30-09:45   MoAT4.5

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09:45-10:00   MoAT4.6

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Viana-Ferreira, Carlos* (University of Aveiro); Costa, Carlos (DETI/IEETA, University of Aveiro)

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Health Data Management II (Regular Session)
Chair: Demiroglu, Cenk *(Ozyegin Univ.)*
Co-Chair: Fernandez-Llatas, Carlos *(Univ. Pol. de Valencia)*

11:15-11:30   MoBT1.1

**Two-Stage Computational Bio-Network Discovery Approach for Metabolites:
Ovarian Cancer as a Case Study** 97-100

Akutekwe, Arinze (De Montfort University); Seker, Huseyin* (Bio-Health Informatics Research Group)

11:30-11:45   MoBT1.2

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Bernal, Edgar A.* (Xerox Corporation); Mestha, Lalit, K. (Xerox Corporation);
Shilla, Eribaweimon (Manipal University)

11:45-12:00   MoBT1.3

Simultaneous Electroencephalography and Photoacoustic Monitoring of Seizure in Free Moving Rats 105-108

Xiao, Jiaying (School of Geosciences and Info-Physics Engineering, Central Sout); Wang, Bo* (University
of Florida); Peng, Kuan (School of Geosciences and Info-Physics Engineering, Central Sout);
Zhu, Ziqiang (School of Geosciences and Info-Physics Engineering, Central Sout)

12:00-12:15   MoBT1.4

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Pierleoni, Paola (Università Politecnica delle Marche); Palma, Lorenzo* (Università Politecnica delle Marche);
Belli, Alberto (Università Politecnica delle Marche); Pernini, Luca (Università Politecnica delle Marche)

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Wallace, Raymond Bruce* (Carleton University); Goubran, Rafik A. (Carleton University); Knoefel, Frank-Dietrich
(SCO Health Service); Petriu, Mihaela (Carleton University); McAvoy, Alexander (Carleton University)

MoBT2: 11:15-12:45   Centauros
ICT in Healthcare Management II (Regular Session)
Chair: Meneu, Teresa *(Univ. Pol. de Valencia)*
Co-Chair: Karlsen, Randi *(UiT - The Arctic Univ. of Norway)*

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degli Studi di Firenze); Biffi Gentili, Guido (Dept. of Information Engineering); Belardinelli, Andrea (Azienda
Ospedaliero-Universitaria Careggi)

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Marzi, Luca (Università degli Studi di Firenze); Frosini, Francesco* (University of Florence);
Miniati, Roberto (Università di Firenze); Iadanza, Ernesto (Università degli Studi di Firenze)

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Uddin, Mostafa* (Old Dominion University); Gupta, Ajay (Old Dominion University); Maly, Kurt (Old Dominion
University); Nadeem, Tamer (Old Dominion University); Godambe, Sandip (Children's Hospital of The King's
Daughters); Zaritsky, Arno (Children's Hospital of The King's Daughters)

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Pastorino, Matteo* (Universidad Politecnica de Madrid); Fioravanti, Alessio (Technical University of Madrid);
Arredondo, María Teresa (Technical University of Madrid); Cogollor, José M. (Technical University of Madrid);
Rojo, Javier (Technical University of Madrid); Ferre, Manuel (Technical University of Madrid);
Wing, Alan M. (Psychology University of Birmingham)

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Ferguson, Robert* (Case Western Reserve University); Lee, Jonathan (Case Western Reserve University);
Baughman, Chris (Case Western Reserve University)

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Chair: Alberich-Bayarri, Angel *(Quiron Hospital Group, R&D&I and Teaching Dept.)*
Co-Chair: Wong, Stephen *(The Methodist Hospital)*

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Ureña, Nuria (Universidad Politécnica de Valencia); López, Fernando (Universitat Politècnica de València);
Morales, Sandra (Universitat Politècnica de València); Naranjo, Valery (Universitat Politècnica de València);
Ruiz, Jose Luis (Hospital universitario y politécnico La Fe)*

11:30-11:45   MoBT3.2
A Sparse Representation of Complete Local Binary Pattern Histogram for Human Face Recognition .... ÞÐE
Mekhalfi, Mohamed Lamine (University of Batna); Guermoui, Mawloud* (University of Batna)

11:45-12:00   MoBT3.3
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Landesa-Vazquez, Iago (University of Vigo); Alba-Castro, José Luis (University of Vigo);
Mera-Iglesias, Moisés (Meixoeiro Hospital); Aramburu-Núñez, David (Meixoeiro Hospital);
López-Medina, Antonio (Meixoeiro Hospital); Muñoz-Garzón, Víctor (Meixoeiro Hospital)*

12:00-12:15   MoBT3.4
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Garud, Hrushikesh (Indian Institute of Technology Kharagpur); Ray, Ajoy Kumar (Indian Institute of
Technology, Kharagpur); Mahadevappa, Manjunatha (Indian Institute of Technolgy); Chatterjee, Jyotirmoy
(Indian Institute of Technology Kharagpur); Mandal, Subhamoy (Indian Institute of Technology Kharagpur)*

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Koutsouris, Dimitrios (Biomedical Engineering Laboratory, School of Electrical and Comp);
Iliopoulou, Dimitra (National Technical University of Athens); Michalis, Lampros (University of Ioannina);
Fotiadis, Dimitrios I. (University of Ioannina)*

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Vicente Javier, García Gómez (University); Alberich-Bayarri, Angel (Universitat Politècnica de València);
Sanz-Requena, Roberto (Hospital Quirón-Valencia); Mañas García, Alejandro (Biomedical Engineering Unit,
R&D&I Dept., Quiron Hospital G); Martí-Bonmatí, Luis (Hospital Quirón-Valencia); Naranjo, Valery (Universitat
Politècnica de València)*

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Harma, Aki* (Philips Research); Ten Kate, Warner (Philips Research); Espina, Javier (Philips Research)

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Medrano, Carlos (EduQTech, University of Zaragoza); Igual, Raul (EduQTech, University of Zaragoza);
Plaza, Inmaculada (EduQTech, University of Zaragoza); Castro, Manuel (Electrical and Computer
Engineering Dept. (DIEEC), Spanish); Fardoun, Habib M. (King Abdulaziz University)*

MoCT1: 12:45-14:15	Cronos
Knowledge Management and Decision Support (Regular Session) **Chair:** de Carvalho, Paulo *(Univ. of Coimbra - NIF: 501617582)* **Co-Chair:** Fernandez-Llatas, Carlos *(Univ. Pol. de Valencia)*	

MoCT2: 12:45-14:15   Centauros
Health Information Systems II (Regular Session)
Chair: Calvillo-Arbizu, Jorge *(Ciber-BBN, Biomedical Engineering Group, Univ. of Sevilla)*
Co-Chair: Fico, Giuseppe *(Tech. Univ. of Madrid)*

12:45-13:00   MoCT2.1

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Seeberg, Trine Margrethe (SINTEF ICT); Vedum, Jon (SINTEF ICT); Sandsund, Mariann (SINTEF Health); Austad, Hanne Opsahl (SINTEF ICT); Liverud, Anders Erik (SINTEF); Vardøy, Astrid-Sofie Borge (SINTEF ICT); Svagård, Ingrid (SINTEF ICT); Strisland, Frode (SINTEF ICT)*

13:00-13:15   MoCT2.2

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Yigzaw, Kassaye Yitbarek (Uiniversity of Tromsø - The Arctic University of Norway); Bellika, Johan Gustav (Norwegian Centre for Integrated Care and Telemedicine)*

13:15-13:30   MoCT2.3

Building a Cloud-Based Platform for Personal Health Sensor Data Management 223-226

Li, Yang (Imperial College London); Guo, Li (University of Central Lancashire); Wu, Chao (Imperial College London); Lee, Chun-Hsiang (Imperial College London); Guo, Yike (Imperial College London)*

13:30-13:45   MoCT2.4

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Mañas García, Alejandro (Biomedical Engineering Unit, R&D&I Dept., Quiron Hospital G); Sanz-Requena, Roberto (Hospital Quirón-Valencia); Alberich-Bayarri, Angel (Universitat Politècnica de València); García-Martí, Gracián (Biomedical Engineering Unit, R&D&I Dept., Quiron Hospital G); Egea, Marina (R&D ATOS); Mediavilla Martinez, César (R&D ATOS)*

13:45-14:00   MoCT2.5

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Rubio, Óscar J. (University of Zaragoza); Alesanco, Alvaro (University of Zaragoza); Garcia Moros, Jose (University of Zaragoza)*

14:00-14:15   MoCT2.6

Designing Interactive Health Care Systems: Bridging the Gap between Patients and Health Care Professionals 235-239

Graham, Lisa (University of Calgary); Moshirpour, Mohammad (University of Calgary); Smith, Michael (University Of Calgary); Far, Behrouz H. (University of Calgary)*

MoCT3: 12:45-14:15   Calipso
Advanced Mining Tools for Metabolic Disorders Early Detection (Special Session)
Chair: Arredondo, María Teresa *(Tech. Univ. of Madrid)*

12:45-13:00   MoCT3.1

Temporal Data Mining and Process Mining Techniques to Identify Cardiovascular Risk-Associated Clinical Pathways in Type 2 Diabetes Patients 240-243

Dagliati, Arianna (University of Pavia, Italy); Sacchi, Lucia (University of Pavia); Cerra, Carlo (ASL Pavia); Leporati, Paola (Fondazione Salvatore Maugeri); De Cata, Pasquale (Fondazione Salvatore Maugeri); Luca, Chiovato (Fondazione Salvatore Maugeri); Holmes, John H. (Dept. of Biostatistics and Epidemiology, Center for Clinica); Bellazzi, Riccardo (University of Pavia)*

13:00-13:15   MoCT3.2

A Data Gathering Framework to Collect Type 2 Diabetes Patients Data 244-247

Dagliati, Arianna (Univ. of Pavia, Italy); Sacchi, Lucia (Univ. of Pavia); Bucalo, Mauro (BIOMERIS); Daniele, Segagni (IRCCS Fondazione Salvatore Maugeri, Pavia); Zarkogianni, Konstantia (National Technical Univ. of Athens); Martínez-Millana, Antonio (Univ. Politécnica de Valencia); Cancela, Jorge (Univ. Politécnica de Madrid); Sambo, Francesco (Dept. of Information Engineering Univ. of Padova); Fico, Giuseppe (Technical Univ. of Madrid); Meneu, Teresa (Univ. Politécnica de Valencia); Cerra, Carlo (ASL Pavia); Nikita, Konstantina (National Technical Univ. of Athens); Cobelli, Claudio (Univ. of Padova); Luca, Chiovato (Fondazione Salvatore Maugeri); Arredondo, María Teresa (Technical Univ. of Madrid); Bellazzi, Riccardo (Univ. of Pavia)*

13:15-13:30   MoCT3.3
Can Continuous Glucose Monitoring Identify Risk Factors in Type 1 and Type 2 Diabetes?
A Literature Review 248-251
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Fico, Giuseppe* (Technical University of Madrid); Facchinetti, Andrea (University of Padova);
Cobelli, Claudio (University of Padova); Arredondo, María Teresa (Technical University of Madrid)

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University of Athens); Arredondo, María Teresa (Technical University of Madrid); Fico, Giuseppe (Technical
University of Madrid); Fioravanti, Alessio (Technical University of Madrid); Nikita, Konstantina (National
Technical University of Athens)

Health Data Management III (Regular Session)
Chair: Honko, Harri *(Tampere Univ. of Tech.)*
Co-Chair: Sevillano, Jose Luis *(Univ. de Sevilla)*

17:00-17:15   MoDT1.1
Low Complexity QRS Detectors for Performance and Energy Aware Applications 256-259
Gutiérrez, Raquel* (University of Alcala); Spagnol, Christian (University College Cork); Garcia, J. Jesus
(University of Alcala); Marnane, Liam (University College Cork); Popovici, Emanuel (University College Cork)

17:15-17:30   MoDT1.2
Acquired Brain Injury Cognitive Dysfunctional Profile Based on Neuropsychological
Knowledge and Medical Imaging Studies 260-263
Luna-Serrano, Marta* (Bioengineering and Telemedicine Centre, ETSI Telecomunicación, U); Caballero-
Hernández, Ruth (Bioengineering and Telemedicine Centre, ETSI Telecomunicación, U); Chausa, Paloma
(Bioengineering and Telemedicine Centre, ETSI Telecomunicación, U); García Molina, Alberto (Institut
Guttmann Neurorehabilitation Hospital, Universitat Autó); Cáceres, Cesar (Bioengineering and Telemedicine
Centre, ETSI Telecomunicación, U); Bernabeu-Guitart, Monsterrat (Institut Guttmann Neurorehabilitation
Hospital, Universitat Autó); Roig-Rovira, Teresa (Institut Guttmann Neurorehabilitation Hospital, Universitat
Autó); Tormos, Jose M. (Institut Guttmann Neurorehabilitation Hospital, Universitat Autó); Gomez, Enrique J.
(Bioengineering and Telemedicine Centre, ETSI Telecomunicación, U)

17:30-17:45   MoDT1.3
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Giordano, Daniela* (Universita' di Catania); Maiorana, Francesco (University of Catania)

17:45-18:00   MoDT1.4
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K V, Ahammed Muneer* (Government College of Engineering Kannur, Kerala)

18:00-18:15   MoDT1.5
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Algorithm and System with Its GUI Evaluation 273-276
Suthakorn, Jackrit* (Mahidol University); Treepong, Bantita (Mahidol University);
Tanaiutchawoot, Narucha (Mahidol University)

18:15-18:30   MoDT1.6
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Tafreshi, Reza* (Texas A&M University at Qatar); Saade, Georges (Texas A&M University at Qatar);
Altouma, Albert (Texas A&M University at Qatar); Makki, Mustapha (Texas A&M University at Qatar);
Al-Terkawi Hasib, SamiHAlTer (Texas A&M University at Qatar); Baobeid, Abdulla (Texas A&M at Qatar)

MoDT2: 17:00-18:30   Centauros
ICT in Healthcare Management III (Regular Session)
Chair: Traver, Vicente *(Inst. ITACA)*
Co-Chair: Karlsen, Randi *(UiT - The Arctic Univ. of Norway)*

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A Web Based Tool for Antimicrobial Resistance Evaluation in Immunocompromised Patient 281-284
  Pupella, Valeria (Univ. of Genoa); Tagliati, Alessandro (Univ. of Genoa); Secondo, Giovanni (Borea Hospital); Dentone, Chiara (Borea Hospital); Mondain, Veronique (CHU ARCHET); Guttmann, Rosa (CHU ARCHET-Département de Santé Publique); Ferrea, Giuseppe (Borea Hospital); Giacomini, Mauro* (Univ. of Genoa)

17:15-17:30   MoDT2.2
Making Medical Treatments Resilient to Technological Disruptions in Telemedicine Systems 285-288
  Larburu, Nekane* (University of Twente); Widya, Ing (University of Twente); Bults, Richard G.A. (University of Twente); Hermens, H.J. (RRD)

17:30-17:45   MoDT2.3
A Comprehensive Framework Design for Continuous Quality Improvement within the Neonatal Intensive Care Unit: Integration of the SPOE, CRISP-DM and PaJMa Models 289-292
  Huang, Wenlan* (University of Ontario Institute of Technology); McGregor, Carolyn (Univ of Ontario Inst of Technology); James, Andrew (University of Toronto)

17:45-18:00   MoDT2.4
Improving Emergency Medical Dispatching by Means of the Adaptive Large Neighborhood Search 293-296
  Kleinoscheg, Gabriel* (Graz University of Applied Sciences); Burgsteiner, Harald (Graz University of Applied Sciences); Bernroider, Martin (Salzburg Research Forschungsgesellschaft m.b.H.); Kiechle, Günter (Salzburg Research Forschungsgesellschaft); Obermayer, Maria (Salzburg Research Forschungsgesellschaft mbH.)

18:00-18:15   MoDT2.5
Towards Personalization of Trust Management Service for Ubiquitous Healthcare Environment 297-301
  Athanasiou, Georgia (University of Patras); Mantas, Georgios (University of Patras); Fengou, Maria-Anna (University of Patras); Lymberopoulos, Dimitrios* (University of Patras)

18:15-18:30   MoDT2.6
A Mobile Memory Game for Patients with Acquired Brain Damage: A Preliminary Usability Study 302-305
  Moron, Maria J. (Univ. de Málaga); Yañez, Rosa (Universidad de Sevilla); Cascado, Daniel (Univ. of Seville); Suarez-Mejias, Cristina (Virgen del Rocio Univ. Hospital); Sevillano, Jose Luis* (Univ. de Sevilla)

MoDT3: 17:00-18:30   Calipso
Medical Imaging Informatics III (Regular Session)
Chair: Tzovaras, Dimitrios *(Centre for Res. and Tech. Hellas)*
Co-Chair: López, Fernando *(Univ. Pol. de València)*

17:00-17:15   MoDT3.1
PET Image Improvement Using the Patch Confidence K-Nearest Neighbors Filter 306-309
  Yu, Sicong* (KTH Royal Institute of Technology); Hamid Muhammed, Hamed (School of Technology and Health STH, Royal Institute of Technolo)

17:15-17:30   MoDT3.2
Detecting Left Ventricular Impaired Relaxation Using MR Imaging 310-313
  Punithakumar, Kumaradevan* (University of Alberta); Noga, Michelle (University of Alberta); Boulanger, Pierre (University of Alberta); Afshin, Mariam (Sunnybrook Health Science Centre); Ben Ayed, Ismail (GE Healthcare); Islam, Ali (western university); Li, Shuo (University of Western Ontario)

17:30-17:45   MoDT3.3
Detectability of Brain Structure Abnormalities Related to Autism through MRI-Derived Measures from Multiple Scanners 314-317
  Auzias, Guillaume* (UMR CNRS 6168); Breuil, Camille (INT UMR 7289, Aix Marseille Université, CNRS.); Takerkart, Sylvain (INT UMR 7289, Aix Marseille Université, CNRS.); Deruelle, Christine (INT UMR 7289, Aix Marseille Université, CNRS.)

17:45-18:00 MoDT3.4

Cardiac Ultrasound Multiview Fusion Using a Multicamera Tracking System 318-321

Punithakumar, Kumaradevan* (University of Alberta); Noga, Michelle (University of Alberta); Boulanger, Pierre (University of Alberta); Wood, Peter William (University of Alberta); Becher, Harald (Mazankowski Alberta Heart Institute, University of Alberta, Edmo); Biamonte, Marina (University of Alberta)

18:00-18:15 MoDT3.5

Improvement of Subtle Microcalcifications Detection in DBT Slices 322-325

Kim, Eun Joon (KAIST); Kim, Dae Hoe (Korea Advanced Institute of Science and Technology); Cha, Eun Suk (Ewha Womans University School of Medicine, Mokdong Hospital); Ro, Yong Man* (Korea Advanced Institute of Science and Technology)

18:15-18:30 MoDT3.6

Neurovascular Coupling Study of PTZ-Induced Seizure in Rats by Simultaneous Real-Time 3D PAT and EEG at Two Wavelengths 326-329

Xiao, Jiaying* (School of Geosciences and Info-Physics Engineering, Central Sout); Wang, Bo (University of Florida); Peng, Kuan (School of Geosciences and Info-Physics Engineering, Central Sout); Zhu, Ziqiang (School of Geosciences and Info-Physics Engineering, Central Sout)

MoDT4: 17:00-18:30	Baco

Health Information Systems III (Regular Session)
Chair: Fico, Giuseppe *(Tech. Univ. of Madrid)*
Co-Chair: Calvillo-Arbizu, Jorge *(Ciber-BBN, Biomedical Engineering Group, Univ. of Sevilla)*

17:00-17:15 MoDT4.1

A Wireless Patient Monitoring System for Hospitalized Older Adults: Acceptability, Reliability and Accuracy Evaluation 330-333

Baig, Mirza Mansoor* (Auckland University of Technology); GholamHosseini, Hamid (Auckland University of Technology); Connolly, Martin J. (University of Auckland, North Shore Hospital); Kashfi, Ghodsi (Waitemata District Health Board)

17:15-17:30 MoDT4.2

Quality Assessment Model of Software for Managing Family Medicine Practice – Methodology and Basic Results 334-337

Kralj, Damir* (MUP RH - PD Karlovac); Končar, Miroslav (ORACLE Croatia, Zagreb, HR-10000 Croatia); Tonković, Stanko (University of Zagreb, Faculty of Electrical Engineering and Comp)

17:30-17:45 MoDT4.3

Automatically Capturing Sleep and Social Factors to Understand Ramadan in the Real World 338-341

Popoola, AbdulFattah (Masdar Institute of Science and Technology); Butt, Maryam (Masdar Institute of Science and Technology); Ouarda, Taha B.M.J. (Masdar Institute of Science and Technology); Khayal, Inas* (Masdar Institute of Science and Technology, MIT)

17:45-18:00 MoDT4.4

Tele-Monitoring and Diagnostic for Fall Prevention: The KINOPTIM Concept 342-345

Barelle, Caroline (Univ Orléans PRISME EA4249); Courtial, Estelle (Univ Orléans, PRISME); Vellidou, Eleftheria (National Technical University of Athens); Tsirmpas, Charalampos (School of Electrical and Computer Engineering, NationalTechnical); Tagaris, Anastassios (National Technical University of Athens); Ibanez, Francisco* (Brainstorm Multimedia SL); Sanchez, Emilio (Centro de Estudios e Investigaciones Tecnicas (CEIT),); Koutsouris, Dimitrios (Biomedical Engineering Laboratory, School of Electrical and Comp)

18:00-18:15 MoDT4.5

A Web-Tool to Manage Ophthalmologic Electronic Health Records 346-349

Bonetto, Monica (University of Genoa); Fraccaro, Paolo (University of Genoa); Nicolò, Massimo (University of Genoa); Giacomini, Mauro* (University of Genoa)

18:15-18:30 MoDT4.6

W2E - Wellness Warehouse Engine for Semantic Interoperability of Consumer Health Data 350-354

Saaranen, Mika (Tampere University of Technology); Parak, Jakub (Tampere University of Technology); Honko, Harri* (Tampere University of Technology); Aaltonen, Timo (Tampere University of Technology); Korhonen, Ilkka (Tampere University of Technology)

Knowledge Management and Decision Support II (Regular Session)
Chair: Acosta, Dionisio *(Univ. Coll. London)*
Co-Chair: Fernandez-Llatas, Carlos *(Univ. Pol. de Valencia)*

19:00-19:15   MoET1.1

Real-Time Vital Signs Monitoring and Interpretation System for Early Detection of Multiple Physical Signs in Older Adults 355-358

Baig, Mirza Mansoor* (Auckland University of Technology); GholamHosseini, Hamid (Auckland University of Technology); Connolly, Martin J. (University of Auckland, North Shore Hospital); Kashfi, Ghodsi (Waitemata District Health Board)

19:15-19:30   MoET1.2

A Study of Heart Rate Variability as Sleep Apnoea Predictor over Two Different Databases 359-362

Peiteado-Brea, Verónica (University of A Coruña); Alvarez-Estevez, Diego* (Medisch Centrum Haaglanden); Moret-Bonillo, Vicente (A Coruña University)

19:30-19:45   MoET1.3

Breast Tissue Removal for Enhancing Microcalcification Cluster Detection in Mammograms 363-366

Baddar, Wissam* (KAIST); Kim, Dae Hoe (Korea Advanced Institute of Science and Technology); Ro, Yong Man (Korea Advanced Institute of Science and Technology)

19:45-20:00   MoET1.4

Fuzzy Reasoning Clinical Decision Support for Manual Titration of Positive Airway Pressure Support and Oxygen Supply in Patients with Obstructive Sleep Apnea 367-370

Tzavaras, Aris* (Tech Educational Inst of Athens); Spyropoulos, Basile (Technological Education Institute of Athens); Weller, Peter (City University London)

20:00-20:15   MoET1.5

A Two-Stage Approch to Bring the Postural Assessment to Masses: The KISS-Health Project 371-374

Bortone, Ilaria* (KISS-Health Project); Argentiero, Alberto (KISS-Health Project); Agnello, Nadia (KISS-Health Project); Santo Sabato, Stefano (Mediasoft Srl); Bucciero, Alberto (Italian National Council of Researches)

ICT in Healthcare Management IV (Regular Session)
Chair: Thiel, Rainer *(Empirica Gesellschaft für Kommunikations - und Tech. mbH)*
Co-Chair: Meneu, Teresa *(Univ. Pol. de Valencia)*

19:00-19:15   MoET2.1

Implementation of an Extended Fellegi-Sunter Probabilistic Record Linkage Method Using the Jaro-Winkler String Comparator 375-379

Li, Xinran* (University of Auvergne); Guttmann, Aline (Image Science for Interventional Techniques, UMR 6284 UdA-CNRS); Cipiere, Sebastien (Blaise Pascal University); Maigne, Lydia (Blaise Pascal University); Demongeot, Jacques (Laboratoire TIMC-IMAG); Boire, Jean-Yves (Université d'Auvergne); Ouchchane, Lemlih (University Hospital of Clermont-Ferrand)

19:15-19:30   MoET2.2

Comparing Different Visual Biofeedbacks in Static Posturography 380-383

D'Anna, Carmen* (Roma TRE University- Engineering Dept.); Bibbo, Daniele (Universita' degli Studi Roma TRE); De Marchis, Cristiano (Università degli Studi Roma Tre); Goffredo, Michela (Engineering Dept. University Roma TRE); Schmid, Maurizio (Roma Tre University); Conforto, Silvia (University Roma TRE)

19:30-19:45   MoET2.3

The Salus Platform: A Tele-Health Solution to Support Teleconsulting for the Brazilian Primary Health Care Network 384-387

Celestrini, Jordano (Federal Institut of Espírito Santo); da Silva, Wesley (Federal Institut of Espírito Santo); Andreao, Rodrigo* (Federal Institute of Espirito Santo); Komati, Karin (Federal Institut of Espírito Santo); Corradi, Solange (State Health Secretary); Sylvan, Ana (Federal Institut of Espírito Santo); Fernandes, Filipe (Federal Institut of Espírito Santo); Schimidt, Marcelo (Federal Institut of Espírito Santo); Sarti, Thiago (Federal University of Espírito Santo)

19:45-20:00   MoET2.4

**Relationship between Foot Arch Structure and Postural Stability – Measurements in
Over 100 Older People for Health Monitoring** 388-391

Anzai, Emi (Ochanomizu University); Nakajima, Kanako (Ochanomizu University); Iwakami, Yumi (Tokyo
Healthcare University); Sato, Mitsuru (Showa University); Ino, Shuichi (AIST); Yamashita, Kazuhiko (Tokyo
Healthcare University); Ohta, Yuji (Graduate School of Humanities and Sciences, Ochanomizu Universit)*

20:00-20:15   MoET2.5

A System to Evaluate the Presence of a Diarrheal Epidemic Caused by Shigella and Salmonella 392-395

Chaturvedi, Ojaswita (University of Botswana); Masupe, Shedden (Botswana International University of
Science and Technology); Masupe, Tiny (University of Botswana)*

20:15-20:30   MoET2.6

**Development and Evaluation of an Innovative Chronic Disease Management Program in
Valencia-La Fe Health Dept.** 396-399

Valdivieso Martinez, Bernardo (Hospital La Fe); Faubel, Raquel (Hospital La Fe, Valencia, Spain);
Gonzalez-Cappa, Javier (VITALAIRE); Borrás-Justus, Pablo (Accenture); Dominguez, David (TSB
Soluciones Tecnológicas para la Salud y el Bienestar S.A.)*

MoET3: 19:00-20:30	Calipso

Medical Imaging Informatics IV (Regular Session)
Chair: Alberich-Bayarri, Angel *(Quiron Hospital Group, R&D&I and Teaching Dept.)*
Co-Chair: Wong, Stephen *(The Methodist Hospital)*

19:00-19:15   MoET3.1

**The Colibri Project: A Multicenter Shared Database of Magnetic Resonance Images
about Rare Neurological Diseases** 400-403

Altomare, Cristina (University of Pavia); Lanzola, Giordano (University of Pavia);
Bellazzi, Riccardo (University of Pavia); Reni, Gianluigi (IRCCS)*

19:15-19:30   MoET3.2

Feature Extraction for Retinal Vascular Network Classification 404-407

*Montoro, Ana (Universitat Politècnica de València); Morales, Sandra (Universitat Politècnica de València);
Naranjo, Valery (Universitat Politècnica de València); López, Fernando* (Universitat Politècnica de València);
Alcañiz, Mariano (Universitat Politècnica de València)*

19:30-19:45   MoET3.3

Mask Motion Adaptive Medical Image Coding 408-411

Mhedhbi, Imen (UPMC); Kaddouh, Fayez (INSERM); Hachicha, Khalil (UPMC);
Heudes, Didier (INSERM); Hochberg, Sylvain (CIRA); Garda, Patrick (UPMC)*

19:45-20:00   MoET3.4

Automated Nuclei Clump Splitting by Combining Local Concavity Orientation and Graph Partitioning 412-415

Samsi, Siddharth (University of Luxembourg); Trefois, Christophe (University of Luxembourg / LCSB); Antony,
MA, Paul (Luxembourg Centre for Systems Biomedicine (LCSB)); Skupin, Alexander (Universtiy Luxembourg)*

20:00-20:15   MoET3.5

Imaging Biomarkers Processing Platform 416-419

*Mañas García, Alejandro (Biomedical Engineering Unit, R&D&I Dept., Quiron Hospital G); Sanz-Requena,
Roberto (Hospital Quirón-Valencia); Alberich-Bayarri, Angel* (Universitat Politècnica de València); García-Martí,
Gracián (Biomedical Engineering Unit, R&D&I Dept., Quiron Hospital G); Aparici-Tortajada, Lucia (Biomedical
Engineering Unit, R&D&I Dept., Quiron Hospital G); Ruiz-Martinez, Enrique (GIBI2-30, La Fe Polytechnics and
University Hospital, Valencia,); Martí-Bonmatí, Luis (Hospital Quirón-Valencia)*

20:15-20:30   MoET3.6

Stained and Infrared Image Registration As First Step for Cancer Detection 420-423

*Naranjo, Valery (Universitat Politècnica de València); Villanueva, Eliseo (Universidad Politécnica de Valencia);
Rhys Lloyd, Gavin (Gloucestershire Royal Hospital); Stone, Nick (Exeter University); Alcañiz, Mariano
(Universitat Politècnica de València); López, Fernando* (Universitat Politècnica de València)*

Health Information Systems IV (Regular Session)
Chair: Guillen, Sergio *(Inst. Itaca Valencia)*

19:00-19:15   MoET4.1

FPGT: An Online System for Customized Fetal and Pediatric Growth Tracking 424-427

Bochicchio, Mario (University of Salento); Vaira, Lucia* (University of Salento); Longo, Antonella (University of Salento); Malvasi, Antonio (Obstetric & Gynecology Dept. Santa Maria Hospital Bari); Tinelli, Andrea (Obstetric & Gynecology Dept. Vito Fazzi Hospital Lecce)

19:15-19:30   MoET4.2

Semantic Interoperability in the OR.NET Project on Networking of Medical Devices and Information Systems - a Requirements Analysis 428-431

Andersen, Björn* (Universität zu Lübeck); Ulrich, Hannes (Universität zu Lübeck); Kock, Ann-Kristin (Universität zu Lübeck); Wrage, Jan-Hinrich (Universität zu Lübeck); Ingenerf, Josef (Universität zu Lübeck)

19:30-19:45   MoET4.3

Conceptual Schema of Breast Cancer: The Background to Design an Efficient Information System to Manage Data from Diagnosis and Treatment of Breast Cancer Patients 432-435

Burriel, Verónica* (Universidad Politécnica de Valencia); Pastor, Oscar (Universidad Politécnica de Valencia)

19:45-20:00   MoET4.4

Modeling of Community Pharmacy Dispensing Process 436-439

Rose, Jose (Softmedical); Noumeir, Rita* (Ecole de technologie superieure)

20:00-20:15   MoET4.5

Integrated Digital Care Framework for Successful Aging 440-443

Dasgupta, Dipanwita (University of Notre Dame); Feldman, Keith (University of Notre Dame); Waghray, Disha (Penn High School); Mikels-Carrasco, Waldo (University of Notre Dame); Willaert, Patty (Memorial Hospital of South Bend, South Bend); Raybold, Debra (Memorial BrainWorks, Memorial Hospital of South Bend, South Bend); Chawla, Nitesh* (University of Notre Dame)

20:15-20:30   MoET4.6

R&D of Versatile Distributed e-Home Healthcare System for Cardiovascular Disease Monitoring and Diagnosis 444-447

MA, Jia-Li* (University of Macau); Dong, Ming Chui (University of Macau)

IEEE CommS, BHI-TC and J-BHI Sponsored: IEEE CommS-EMBS Special Session
e-Health Communications (Regular Session)
Chair: Rodrigues, Joel *(Inst. de Telecomunicações, Univ. of Beira Interior, Portugal)*

19:00-19:15   MoET5.1

An Ambient Assisted Living Framework for Mobile Environments 448-451

Silva, Bruno (Instituto de Telecomunicações, Univ. of Beira Interior); Tiago, Simões (Instituto de Telecomunicações, Univ. of Beira Interior); Rodrigues, Joel* (Instituto de Telecomunicações, Univ. of Beira Interior, Por); Sendra, Sendra (Univ. Politécnica de Valencia); Lloret, Jaime (Univ. Politécnica de Valencia)

19:15-19:30   MoET5.2

A Protocol Architecture for Energy Efficient and Pervasive Ehealth Systems 452-455

Tennina, Stefano* (WEST Aquila srl); Di Renzo, Marco (Supelec CNRS, Paris); Kartsakli, Elli (Technical University of Catalonia (UPC), Signal Theory and Commu); Graziosi, Fabio (WEST Aquila srl); Lalos, Aris S. (Technical University of Catalonia (UPC), Signal Theory and Commu); Antonopoulos, Angelos (CTTC, Barcelona); Mekikis, Prodromos Vasileios (Technical University of Catalonia (UPC), Signal Theory and Commu); Alonso, Luis (Technical University of Catalonia (UPC), Signal Theory and Commu); Verikoukis, Christos (CTTC, Barcelona)

19:30-19:45   MoET5.3

Jamming Attack Detection in Wireless Body Area Networks P30E

Makke, Ali* (Paris Descartes University); Mehaoua, Ahmed (Paris Descartes University)

19:45-20:00   MoET5.4

An Intelligent Brain Machine Interface with Wireless Micro-Stimulation and Neural Recording 460-463

Chiu, Hung-Chih (National Tsing Hua University); Lee, Yi-Ting (National Tsing Hua University); Chuang, Chi-Fen (National Tsing Hua University); Chang, Yen-Chung (National Tsing Hua University); Yeh, Shih-Rung (National Tsing Hua University); Huang, Po-Chiun (National Tsing Hua University); Ma, Hsi-Pin* (National Tsing Hua University)

20:00-20:15   MoET5.5

TICE.Healthy: A Perspective on Medical Information Integration 464-467

Garcia, Nuno M.* (Universidade da Beira Interior); Garcia, Nuno C (University of Beira Interior); Oliveira, Daniel (University of Beira Interior); Alexandre, Celina (University of Beira Interior); Felizardo, Virginie (University of Beira Interior); Sousa, Paula (University of Beira Interior)

Tuesday, 3 June 2014

TuAT1**:** 08:30-10:00   Cronos
Modelling and Simulation (Regular Session)
Chair: Fotiadis, Dimitrios I. *(Univ. of Ioannina)*
Co-Chair: Moret-Bonillo, Vicente *(A Coruña Univ.)*

08:30-08:45   TuAT1.1

Non-Invasive Calculation of Non-Linear ESPVR: Theoretical Study and Clinical Applications 468-471

Shoucri, Rachad M.* (Royal Military College of Canada)

08:45-09:00   TuAT1.2

Contempo: A Home Care Model to Enhance the Wellbeing of Elderly People 472-475

Kurnianingsih, Kurnianingsih* (Universitas Gadjah Mada); Nugroho, Lukito Edi (Universitas Gadjah Mada); Widyawan, Widyawan (Universitas Gadjah Mada); Lazuardi, Lutfan (Universitas Gadjah Mada); Ferdiana, Ridi (Universitas Gadjah Mada); Selo, Selo (Universitas Gadjah Mada)

09:00-09:15   TuAT1.3

Modeling Cervix Cancer Growth and Response to Radiation Therapy: A Validation Study Using Patient Volumetric Tumor Data 476-479

Belfatto, Antonella* (Politecnico di Milano); Garbey, Marc (University of Houston); Riboldi, Marco (Politecnico di Milano); Ciardo, Delia (Istituto Europeo di Oncologia); Cecconi, Agnese (Istituto Europeo di Oncologia); Lazzari, Roberta (Istituto Europeo di Oncologia); Jereczek, Barbara Alicja (Istituto Europeo di Oncologia); Orecchia, Roberto (Istituto Europeo di Oncologia); Baroni, Guido (Politecnico di Milano); Cerveri, Pietro (Politecnico di Milano)

09:15-09:30   TuAT1.4

A Graphical User Interface for an External Fixation System 480-483

Avşar, Ercan* (Cukurova University); Ün, Mustafa Kerem (Cukurova University); Akçalı, Ibrahim Deniz (Cukurova University)

09:30-09:45   TuAT1.5

Generalised Stochastic Model for Characterisation of Subcutaneous Glucose Time Series 484-487

Khovanova, Natasha* (Univ. of Warwick); Zhang, Yan (Univ. of Warwick); Holt, Tim (Oxford Univ.)

09:45-10:00   TuAT1.6

Predictability of Unplanned Extubations 488-491

Matam, Basava Rajeswari (Birmingham Children's Hospital); Fule, Balazs* (Birmingham Children's Hospital PICU); Duncan, Heather (Birmingham Children's Hospital); Lowe, David (Aston University)

Data Mining and Machine Learning (Regular Session)
Chair: Vellido, Alfredo *(Dept. de Llenguatges i Sistemes Informatics, Univ. Pol. de Catalunya)*
Co-Chair: Pattichis, Constantinos *(Univ. of Cyprus)*

08:30-08:45   TuAT2.1
Multi-Task Gaussian Process Models for Biomedical Applications 492-495
   Duerichen, Robert (University of Luebeck); Pimentel, Marco A.F. (University of Oxford); Clifton, Lei (University of Oxford); Schweikard, Achim (University of Luebeck, Germany); Clifton, David* (University of Oxford)

08:45-09:00   TuAT2.2
Electroencephalographic Complexity Markers Explain Neuropsychological Test Scores in
Alzheimer´s Disease 496-499
   Garn, Heinrich* (AIT Austrian Institute of Technology GmbH); Waser, Markus (AIT Austrian Institute of Technology GmbH); Deistler, Manfred (Vienna University of Technology); Benke, Thomas (Innsbruck Medical University); Dal-Bianco, Peter (Medical University of Vienna); Ransmayr, Gerhard (AKh Allgemeines Krankenhaus der Stadt Linz GmbH); Schmidt, Helena (Medical University of Graz); Sanin, Guenter (Innsbruck Medical University); Santer, Peter (Medical University of Vienna); Caravias, Georg (AKh Allgemeines Krankenhaus der Stadt Linz GmbH); Seiler, Stephan (Graz Medical University); Grossegger, Dieter (B.E.S.T. Medical Systems Dr. Grossegger und Drbal GmbH); Fruehwirt, Wolfgang (Dr. Grossegger u. Drbal GmbH); Schmidt, Reinhold (Graz Medical University)

09:00-09:15   TuAT2.3
Multivariate Statistical Analysis for Dermatological Disease Diagnosis 500-504
   Barreto, Alexandre Serra* (Ministry of Finance of Brazil)

09:15-09:30   TuAT2.4
An Entry Generation Pipeline for Converting Free-Text Medical Document into
Clinical Document Architecture Document with Entry-Level 505-508
   Lin, Ching-Heng (National Yang-Ming University); Lai, Wei-Shao (Institute of Biomedical Informatics, National Yang-Ming Universi); Lee, Li-Hui (Institute of Public Health, National Yang-Ming University); Tsao, Hsiao-mei (National Yang-Ming University); Liou, Der-Ming* (National Yang-Ming University)

09:30-09:45   TuAT2.5
A Platform for Developing Privacy Preserving Diagnosis Mobile Applications 509-512
   Ucan, Sanem* (New York Institute of Technology); Gu, Huanying (New York Institute of Technology)

09:45-10:00   TuAT2.6
Real-time apnea detection using pressure sensor and tri-axial accelerometer 513-516
   Pernini, Luca* (Università Politecnica delle Marche); Pierleoni, Paola (Università Politecnica delle Marche); Belli, Alberto (Università Politecnica delle Marche); Palma, Lorenzo (Università Politecnica delle Marche)

TuAT3: 08:30-10:00   Calipso
Special Session on EHR Interoperability (Special Session)
Chair: Maldonado, José Alberto *(Pol. Univ. of Valencia)*
Co-Chair: Saranummi, Niilo *(VTT Tech. Res. Centre)*

08:30-08:45   TuAT3.1
Meta-Architecture for the Interoperability and Knowledge Management of Archetype-Based
Clinical Decision Support Systems 517-521
   Marco, Luis* (University hospital of Northern Norway); Maldonado, José Alberto (Polytechnical University of Valencia); Traver, Vicente (Institute ITACA); Karlsen, Randi (UiT The Arctic University of Norway); Bellika, Johan Gustav (Norwegian Centre for Integrated Care and Telemedicine)

08:45-09:00   TuAT3.2
Analyzing Healthcare Provider Centric Networks through Secondary Use of Health Claims Data 522-525
   Sauter, Simone Katja* (Medical University of Vienna); Neuhofer, Lisa Maria (Medical University of Vienna); Endel, Gottfried (Main Association of Austrian Social Security Institutions); Klimek, Peter (Medical University of Vienna); Duftschmid, Georg (Medical University of Vienna)

09:00-09:15   TuAT3.3

Use of the Virtual Medical Record Data Model for Communication among Components of a Distributed Decision-Support System 526-530

González-Ferrer, Arturo* (University of Haifa); Peleg, Mor (University of Haifa); Parimbelli, Enea (University of Pavia); Shalom, Erez (Ben-Gurion University of the Negev); Marcos Lagunar, Carlos (Atos Spain); Klebanov, Guy (University of Haifa); Martínez-Sarriegui, Iñaki (Universidad Politécnica de Madrid); Fung, Nick Lik San (University of Twente); Broens, Tom (MobiHealth B.V.)

09:15-09:30   TuAT3.4

Using Semantic Web Technologies for Quality Measure Phenotyping Algorithm Representation and Automatic Execution on EHR Data 531-534

Shen, Feichen (University of Missouri Kansas City); Li, Dingcheng (Mayo Clinic); Liu, Hongfang (Mayo Clinic); Lee, Yugyung (University of Missouri Kansas City); Pathak, Jyotishman (Mayo Clinic); Chute, Christopher (Mayo Clinic); Tao, Cui* (University of Texas)

09:30-09:45   TuAT3.5

Ontology-Based Infrastructure for a Meaningful EHR Representation and Use 535-538

Martinez-Costa, Catalina* (Medical Univ. of Graz); Legaz-García, María del Carmen (Univ. de Murcia); Schulz, Stefan (Medical Univ. of Graz); Fernández-Breis, Jesualdo Tomás (Univ. de Murcia)

09:45-10:00   TuAT3.6

Standardized Access Control Mechanisms for Protecting ISO 13606-Based Electronic Health Record Systems 539-542

Calvillo-Arbizu, Jorge* (Ciber-BBN, Biomedical Engineering Group, University of Sevilla); Roman, Isabel (University of Seville); Roa, Laura M. (University of Seville)

TuAT4: 08:30-10:00   Baco
Healthcare Networks and Environments II (Regular Session)
Chair: Honko, Harri *(Tampere Univ. of Tech.)*
Co-Chair: McGregor, Carolyn *(Univ. of Ontario Inst. of Tech.)*

08:30-08:45   TuAT4.1

A Basic Study on a Method of Evaluating 3-Dimentional Foot Movements in Walking 543-546

Shiotani, Maho (Tohoku University school of engineering); Watanabe, Takashi* (Tohoku University)

08:45-09:00   TuAT4.2

Proposal of Use of Smartphones to Evaluate and Diagnose Depression and Anxiety Symptoms During Pregnancy and after Birth 547-550

Osma, Jorge (Psychological Research and Technological Applications (INPAT) gr); Plaza, Inmaculada* (EduQTech, Univ. of Zaragoza); Crespo, Elena (Jaume I Univ. (Castellón, Spain)); Medrano, Carlos (EduQTech, Univ. of Zaragoza); Serrano, Raquel (Psychology and Sociology Dept. of Univ. of Zaragoza)

09:00-09:15   TuAT4.3

Literature Review on Wearable Systems in Upper Extremity Rehabilitation 551-555

Wang, Qi* (Technology University of Eindhoven); Chen, Wei (Eindhoven University of Technology); Markopoulos, Panos (Eindhoven University of Technology)

09:15-09:30   TuAT4.4

Using the Smartphone Camera to Monitor Heart Rate and Rhythm in Heart Failure Patients 556-559

Belchior Teles Lagido, Ricardo* (Associacao Fraunhofer Portugal Research); Polónia Lobo, Joana (Associacao Fraunhofer Portugal Research); Lopes Mariano Machado Leite, Sérgio (Faculdade de Medicina da Universidade do Porto); Castanheira de Sousa Gonçalves, Carla Margarida (Faculdade de Medicina da Universidade do Porto); Ferreira, Liliana (Fraunhofer Portugal AICOS); Magalhães Silva Cardoso, José Carlos (Faculdade de Medicina da Universidade do Porto)

09:30-09:45   TuAT4.5

Feature Extraction from Ear-Worn Sensor Data for Gait Analysis 560-563

Li, Ling* (University of Kent); Atallah, Louis (Imperial College London); Lo, Benny (Imperial College London); Yang, Guang-Zhong (Imperial College London)

09:45-10:00 TuAT4.6

A Communicable Disease Prediction Benchmarking Platform 564-568

Yigzaw, Kassaye Yitbarek (Uiniversity of Tromsø - The Arctic University of Norway);
Bellika, Johan Gustav* (Norwegian Centre for Integrated Care and Telemedicine)

TuBT2: 12:00-13:30 | Centauros
Data Mining and Machine Learning II (Regular Session)
Chair: Bellika, Johan Gustav *(Norwegian Centre for Integrated Care and Telemedicine)*
Co-Chair: Fernandez-Llatas, Carlos *(Univ. Pol. de Valencia)*

12:00-12:15 TuBT2.1

Classification of Atrial Fibrillation Episodes Using Short ECG Segments 569-572

Ortigosa, Nuria* (I.U. Matemática Pura y Aplicada, Universitat Politècnica de Valè); Cano, Óscar (Hospital Universitari i Politècnic La Fe, Servicio de Cardiologí); Andrés, Ana (Hospital Universitari i Politècnic La Fe, Servicio de Cardiologí); Fernández, Carmen (Dept. Math. Analysis, Univ. Valencia); Galbis, Antonio (Dept. Math. Analysis, Univ. Valencia); Ayala, Guillermo (Universidad de Valencia)

12:15-12:30 TuBT2.2

Development of an Intelligent Real-Time Heuristic-Based Algorithm to Identify Human Gait Events 573-576

Gouwanda, Darwin* (Monash University Malaysia); Gopalai, Alpha Agape (Curtin University Sarawak campus); Azhar, Mohammed Ariff (Monash University Malaysia)

12:30-12:45 TuBT2.3

**Bootstrap Resampling Feature Selection and Support Vector Machine for
Early Detection of Anastomosis Leakage** 577-580

Soguero-Ruiz, Cristina* (Rey Juan Carlos University); Hindberg, Kristian (University of Tromso); Rojo Alvarez, Jose Luis (Universidad Rey Juan Carlos); Skrøvseth, Stein Olav (Norwegian Centre for Integrated Care and Telemedicine); Godtliebsen, Fred (University of Tromsø); Mortensen, Kim (University Hospital of North Norway); Revhaug, Arthur (University Hospital of North Norway); Lindsetmo, Rolv-Ole (University Hospital of North Norway); Mora-Jiménez, Inmaculada (Rey Juan Carlos University); Augestad, Knut Magne (Norwegian Centre for Integrated Care and Telemedicine); Jenssen, Robert (University of Tromsø)

12:45-13:00 TuBT2.4

Natural Language Features for Detection of Alzheimer's Disease in Conversational Speech 581-584

Khodabakhsh, Ali* (Ozyegin University); Kuscuoglu, Ahmet Serhan (Ozyegin University); Demiroglu, Cenk (Ozyegin University)

13:00-13:15 TuBT2.5

Unveiling Preclinical Idiopathic Macular Hole Formation Using Support Vector Machines 585-588

C. Silva, Ana S.* (IBILI, Faculty of Medicine, University of Coimbra); Figueira, João (Coimbra Hospital and Universitary Center); Simão, Sílvia (Association for Innovation and Biomedical Research on Light and); Gomes, Nuno (Braga Hospital); Neves, Carlos (North Lisbon Hospital Center); Meireles, Angelina (St. António Hospital, Porto Hospital Center); Ferreira, Natália (St. António Hospital, Porto Hospital Center); Bernardes, Rui (IBILI, Faculty of Medicine, University of Coimbra)

TuBT3: 12:00-13:30 | Calipso
Big Data In Healthcare (Special Session)
Chair: Martin, Jose D. *(Univ. of Valencia)*
Co-Chair: Lisboa, Paulo *(Liverpool John Moores Univ.)*

12:00-12:15 TuBT3.1

A Method for Modeling Surrounding Tissue Support and Its Global Effects on Arterial Hemodynamics 589-592

Itu, Lucian* (Transilvania University of Brasov); Suciu, Constantin (Siemens Corporate Technology)

12:15-12:30 TuBT3.2

Towards Cloud-Based Image-Integrated Similarity Search in Big Data 593-596

Tsymbal, Alexey* (Siemens AG); Meissner, Eugen (Siemens AG); Kelm, B. Michael (Siemens AG); Kramer, Martin (Siemens AG)

17:00-17:15　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT1.3

**Subject-Specific Assessment of Loading Variation in the Knee Ligaments with a
View to Preoperative Planning** 640-643

Chincisan, Andra (University of Geneva); Choi, Hon Fai (University of Geneva); Assassi, Lazhari (University of
Geneva); Lynch, Sean (Hannover Medical School); Hurschler, Christof (Hannover Medical School);
Magnenat-Thalmann, Nadia (University of Geneva)*

17:15-17:30　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT1.4

A Motion Accuracy Evaluator Based on Body Parts Movement by MapReduce Video Processing 644-647

Lee, Chonho (Nanyang Technological University); Terada, Yu (Osaka University); Liu, Yi (Nanyang
Technological University); Lee, Bu Sung (Nanyang Technological University)*

TuCT2: 16:30-18:00	Centauros
Data Mining and Machine Learning III (Regular Session)	
Chair: Karlsen, Randi *(UiT The Arctic Univ. of Norway)*	
Co-Chair: Acosta, Dionisio *(Univ. Coll. London)*	

16:30-16:45　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.1

**An Improved High-Accuracy Compressed Sensing Method Using a Novel Constructed
Dictionary for Neural Signal Detection** 648-651

*Xu, Shengwei (Institute of Electronics, Chinese Academy of Science); Song, Yilin (Institute of Electronics,
Chinese Academy of Science); Liu, Juntao (Institute of Electronics, Chinese Academy of Sciences); Liu,
Xinyang (Institute Of Electronics, Chinese Academy Of Scences); Zhou, Shuai (Institute Of Electronics,
Chinese Academy Of Scences); Lin, Nansen (Institute of Electronics, Chinese Academy of Science); Cai,
Xinxia* (Institute of Electronics, Chinese Academy of Sciences)*

16:45-17:00　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.2

**Assessing the Similarity between Time Series Using a Wavelet Transform:
Application and Interpretability Aspects** 652-655

*Rocha, Teresa (Inst Superior de Eng de Coimbra); Paredes, Simão (Instituto Superior de Engenharia de
Coimbra); de Carvalho, Paulo* (University of Coimbra - NIF: 501617582); Henriques, Jorge (University of
Coimbra - NIF 501617582)*

17:00-17:15　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.3

**A New Cyclostationarity-Based Blind Approach for Motor Unit's Firing Rate
Automated Detection in Electromyographic Signals** 656-659

Roussel, Julien (University of Orléans, PRISME Laboratory); Haritopoulos, Michel (Institut PRISME);
Ravier, Philippe (Univ. Orléans, ENSI de Bourges, PRISME, EA 4229, F45072, Orléans);
Buttelli, Olivier (Univ. Orléans, ENSI de Bourges, PRISME, EA 4229, F45072, Orléans)*

17:15-17:30　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.4

**A Silicon Nanowire-Based Bio-Sensing System with Digitized Outputs for
Acute Myocardial Infraction Diagnosis** 660-663

Shen, Shih-Hsiang (National Taiwan University); Ting, Chung-Yi (National Taiwan University,
Graduate Institute of Electronics En); Liu, Chi-Yun (National Taiwan University); Cheng, Hua (National
Taiwan University); Liu, Shen-Iuan (National Taiwan University, Graduate Institute of Electronics En);
Lin, Chih-Ting (National Taiwan University)*

17:30-17:45　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.5

Monitoring Physical Activity and Energy Expenditure with Smartphones 664-667

Aguiar, Bruno (Fraunhofer Portugal AICOS); Silva, Joana (Fraunhofer Portugal AICOS);
Rocha, Tiago (Fraunhofer Portugal AICOS); Carneiro, Susana (Fraunhofer Portugal AICOS);
Sousa, Inês (Fraunhofer Portugal AICOS)*

17:45-18:00　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　TuCT2.6

Spike Detection in EEG by LPP and SVM 668-671

Zacharaki, Evangelia (University of Patras); Garganis, Kyriakos (St. Luke's Hospital, Thessaloniki);
Mporas, Iosif (University of Patras); Megalooikonomou, Vasileios (University of Patras)*

TuCT3: 16:30-18:00
Special Session Towards Re-Stratifying Cardiovascular Risk: The Role of Ultrasound Imaging Informatics (Special Session)
Chair: Golemati, Spyretta *(National Kapodistrian Univ. of Athens)*

16:30-16:45   TuCT3.1
Tracking Arterial Wall Motion in a 2D+t Volume 672-675
Zahnd, Guillaume* (Biomedical Imaging Group Rotterdam - Erasmus MC); Orkisz, Maciej (Université Lyon 1, INSA-Lyon, CNRS UMR5220, INSERM U630); Balocco, Simone (Computer Vision Center, Medical Imaging Laboratory, University o); Sérusclat, André (Université de Lyon, CREATIS ; CNRS UMR5220 ; Inserm U1044 ; INSA); Moulin, Philippe (Dept. of Endocrinology, Louis Pradel Hospital, Hospices Civ); Vray, Didier (INSA-LYON, CNRS UMR5220, INSERM U630)

16:45-17:00   TuCT3.2
Dual Fuzzy-Snake Model for IMT Measurement in Carotid Ultrasound Images of Low and High-Risk Patients 676-679
Rosati, Samanta (Politecnico di Torino); Balestra, Gabriella (Politecnico di Torino); Molinari, Filippo* (Politecnico di Torino)

17:00-17:15   TuCT3.3
Bilateral Asymmetry of Ultrasound-Image-Based Mechanical and Textural Features in Subjects with Asymptomatic Carotid Artery Disease 680-683
Golemati, Spyretta* (National Kapodistrian University of Athens); Gastounioti, Aimilia (National Technical University of Athens); Tsiaparas, Nikos (National Technical University of Athens); Nikita, Konstantina (National Technical University of Athens)

17:15-17:30   TuCT3.4
Texture Analysis of the Media-Layer of the Left and Right Common Carotid Artery 684-687
Loizou, Christos* (Intercollege); Georgiou, Niki (Vascular Screening and Diagnostic Center); Griffin, Maura (Vascular Noninvasive Screening and Diagnostic Centre, London, UK); Kyriacou, Efthyvoulos (Frederick University Cyprus); Nicolaides, Andrew (Imperial College); Pattichis, Constantinos (University of Cyprus)

17:30-17:45   TuCT3.5
Toward Diagnostic Criteria for Left Ventricular Systolic Dysfunction from Myocardial Deformation 688-692
Gamarnik, Viktor* (Columbia University); Russo, Cesare (Columbia University Medical Center); Angelini, Elsa (Columbia University); Laine, Andrew (Columbia University)

TuCT4: 16:30-18:00
Data Mining and Machine Learning IV (Regular Session)
Chair: Pattichis, Constantinos *(Univ. of Cyprus)*
Co-Chair: Maldonado, José Alberto *(Pol. Univ. of Valencia)*

16:30-16:45   TuCT4.1
Novel Bayesian Classifier Discriminant Function Optimization Strategies for Arrhythmia Classification 693-696
Ahmed, Aya* (Cairo University); Owis, Mohamed (Cairo University); Yassine, Inas (Cairo University)

16:45-17:00   TuCT4.2
Swallowscope: A Smartphone Based Device for the Assessment of Swallowing Ability 697-700
Jayatilake, Dushyantha* (University of Tsukuba); Suzuki, Kenji (University of Tsukuba); Teramoto, Yohei (University of Tsukuba Hospital); Ueno, Tomoyuki (University of Tsukuba Hospital); Nakai, Kei (University of Tsukuba Hospital); Hidaka, Kikue (University of Tsukuba Hospital); Eguchi, Kiyoshi (University of Tsukuba); Ayuzawa, Satoshi (University of Tsukuba Hospital); Matsumura, Akira (University of Tsukuba)

17:00-17:15   TuCT4.3
Time Frequency Noise Canceller for an Optimized Separation of the ECG from Low Back sEMG Signals 701-704
Djellatou, Mohamed El Fares* (Université du Québec à Trois Rivières); Boukadoum, Mounir (University of Quebec at Montréal); Daniel, Massicotte (Université du Québec à Trois Rivières)

17:15-17:30   TuCT4.4

Simultaneous Chemiluminescence Detection of Multiple Tumor Markers Using Bio-Functionlized Magnetic Nanocomposites 705-708

Luo, Jinping (Institute of Electronics, Chinese Academy of Sciences); Liu, Juntao (Institute of Electronics, Chinese Academy of Sciences); Yan, Shi (Peking University Cancer Hospital); Yang, Yue (Peking University Cancer Hospital); Cai, Xinxia (Institute of Electronics, Chinese Academy of Sciences)*

17:30-17:45   TuCT4.5

Detection of Artifacts in Oscillometric Pulsations Signals 709-711

Havlik, Jan (Czech Technical Univ. in Prague); Martinovska, Zuzana (Czech Technical Univ. in Prague); Dvorak, Jan (Czech Technical Univ. in Prague); Lhotska, Lenka (Czech Technical Univ. in Prague)*

TuDT1: 18:15-19:45	Cronos

Modelling and Simulation II (Regular Session)
Chair: Laine, Andrew *(Columbia Univ.)*
Co-Chair: Fernandez-Llatas, Carlos *(Univ. Pol. de Valencia)*

18:15-18:30   TuDT1.1

Parameter Estimation of Complex Mathematical Models of Human Physiology Using Remote Simulation Distributed in Scientific Cloud 712-715

Kulhánek, Tomáš (Charles University); Matejak, Marek (Charles University); Šilar, Jan (Charles University); Kofránek, Jiří (Creative Connections s.r.o.)*

18:30-18:45   TuDT1.2

Accuracy Assessment of Different Finger Placements for Cardiopulmonary Resuscitation on Infants 716-719

Park, Jiheum (Seoul National University); Yoon, Chiyul (Seoul National University); Jung, Jae Yun (Seoul National University); Kim, Do Kyun (Seoul National University); Kwak, Young Ho (Seoul National University); Lee, Jung Chan (Seoul National University); Kim, Hee Chan (Seoul National University)*

18:45-19:00   TuDT1.3

Predicting Disability Levels of Community Dwelling Older Individuals Using Single Wrist Mounted Accelerometer 720-723

Sankar Pandi, Sathish k (Newcastle University); Dlay, Satnam (Newcastle University); Woo, Wai Lok (Newcastle University); Catt, Michael (Newcastle University)*

19:00-19:15   TuDT1.4

Monte Carlo Simulation of Diabetic Macular Edema Changes on Optical Coherence Tomography Data 724-727

Correia, António Luís (AIBILI); Pinto, Luís (CMUC, Dept. of Mathematics, Faculty of Science and Technolo); Araújo, Adérito (Faculty of Science and Technology, University of Coimbra); Barbeiro, Sílvia (Faculty of Science and Technology, University of Coimbra); Caramelo, Francisco (IBILI, FMUC); Menezes, Paulo (ISR - Institute of Systems and Robotics, Dept. of Electrica); Morgado, Miguel (IBILI - Institute for Biomedical Imaging and Life Sciences); Serranho, Pedro (Mathematics Section, Dept. of Science and Technology, Unive); Bernardes, Rui (IBILI, Faculty of Medicine, University of Coimbra)*

19:15-19:30   TuDT1.5

3-D Half-Spheroid Models for Transcranial Doppler Ultrasound Propagation Channels 728-731

Weir, Alexander James (NHS Greater Glasgow and Clyde); Wang, Cheng-Xiang (Heriot-Watt University); Parks, Stuart (Medical Devices Unit)*

19:30-19:45   TuDT1.6

Combining Brain Imaging Data with Electronic Health Records to Non-Invasively Quantify [11C]DASB Binding 732-735

Mikhno, Arthur (Columbia Univ.); Zanderigo, Francesca (Columbia Univ.); Ogden, Todd (Columbia Univ.); Mikhno, Michelle (Rutgers Univ.); Nagendra, Harry (New York State Psychiatric Institute); Mann, J John (Columbia Univ.); Laine, Andrew (Columbia Univ.); Parsey, Ramin (Columbia Univ.)*

Data Mining and Machine Learning V (Regular Session)
Chair: Acosta, Dionisio *(Univ. Coll. London)*
Co-Chair: Karlsen, Randi *(UiT - The Arctic Univ. of Norway)*

18:15-18:30   TuDT2.1

Compact Unsupervised EEG Response Representation for Emotion Recognition 736-739

   Zhuang, Xiaodan* (Raytheon BBN Technologies); Rozgic, Viktor (Raytheon BBN Technologies);
   Crystal, Michael (Raytheon BBN Technologies)

18:30-18:45   TuDT2.2

Verification of Effectiveness on Position Correction System Using HRV Analysis with
Obstructive Sleep Apnea 740-743

   Choi, Byeong cheol (Choonhae college of health science); Ye, Soo Young (Pusan National University);
   Park, Sung Yun (Dongguk University); Kim, Sung Min* (Dongguk University)

18:45-19:00   TuDT2.3

On the Sensor Choice and Data Analysis for Classification of Elementary Upper Limb Movements 744-747

   Biswas, Dwaipayan* (University of Southampton); Cranny, Andy (University of Southampton); Rahim, Ahmed
   (University of Southampton); Gupta, Nayaab (University of Southampton); Harris, Nick (University of
   Southampton); Maharatna, Koushik (University of Southampton); Ortmann, Steffen (IHP Gmbh)

19:00-19:15   TuDT2.4

Tail-Clamping Stimulation Increases Phase-Locking Neurons in the Hippocampus of Anaesthetized Rat 748-751

   Wang, Yang (Zhejiang University); Zheng, Xiaojing (Zhejiang University); Feng, Zhouyan* (Zhejiang University)

19:15-19:30   TuDT2.5

Mixtures of Independent Component Analyzers for Microarousal Detection 752-755

   Safont, Gonzalo* (Universitat Politècnica de València); Salazar Afanador, Addisson (Universidad Politecnica
   de Valencia); Vergara Dominguez, Luis (Universidad Politecnica Valencia); Gomez, Enriqueta (Hospital
   Universitario La Fe, Valencia); Villanueva, Vicente (Hospital Universitario La Fe, Valencia)

Special Session Towards Interpretable Machine Learning in Biomedicine and Health (Special Session)
Chair: Martin, Jose D. *(Univ. of Valencia)*
Co-Chair: Vellido, Alfredo *(Dept. de Llenguatges i Sistemes Informatics, Univ. Pol. de Catalunya)*

18:15-18:30   TuDT3.1

Machine Learning for Predicting Astigmatism in Patients with Keratoconus after
Intracorneal Ring Implantation 756-759

   Valdés-Mas, María Angeles (Universitat Politècnica de València); Martin, Jose D.* (University of Valencia);
   Rupérez, María J. (Universitat Politècnica de València); Peris, Cristina (Fundación Oftalmologica del
   Mediterraneo); Monserrat, Carlos (Universitat Politècnica de València)

18:30-18:45   TuDT3.2

Genetic Algorithms for Estimating the Biomechanical Behavior of Breast Tissues 760-763

   Lago, Miguel Ángel (Universitat Politècnica de València); Rupérez, María J.* (Universitat Politècnica de
   València); Martínez-Martínez, Francisco (Universitat Politècnica de València);
   Monserrat, Carlos (Universitat Politècnica de València)

18:45-19:00   TuDT3.3

Visual Interpretation of Class C GPCR Subtype Overlapping from the Nonlinear Mapping of
Transformed Primary Sequences 764-767

   Cárdenas, Martha-Ivón* (Universitat Politècnica de Catalunya 08034, Barcelona - Spain);
   Vellido, Alfredo (Dept. de Llenguatges i Sistemes Informatics, Universitat Politec);
   Giraldo, Jesús (Systems Pharmacology and Bioinformatics, Institut de Neurociènci)

19:00-19:15   TuDT3.4

Using the Kinect for Detecting Tremors: Challenges and Opportunities 768-771

   Sooklal, Shellyann* (University of the West Indies); Mohan, Permanand (The University of the West Indies);
   Teelucksingh, Surujpal (University of The West Indies)

19:15-19:30   TuDT3.5

Learning Scale-Space Representation of Nucleus for Accurate Localization and
Segmentation of Epithelial Squamous Nuclei in Cervical Smears 772-775
   Karri, Sri Phani Krishna (Indian Institute of Tech. Kharagpur); Garud, Hrushikesh* (Indian Institute of Tech.
   Kharagpur); Sheet, Debdoot (Indian Institute of Tech. Kharagpur); Chatterjee, Jyotirmoy (Indian Institute of
   Tech. Kharagpur); Chakraborty, Debjani (Indian Institute of Tech. Kharagpur); Ray, Ajoy Kumar (Indian Institute
   of Tech., Kharagpur); Mahadevappa, Manjunatha (Indian Institute of Tech.)

19:30-19:45   TuDT3.6

Blood Loss Severity Prediction Using Game Theoretic Based Feature Selection 776-780
   Razi, Abolfazl (Duke University); Afghah, Fatemeh (North Carolina A&T State University);
   Belle, Ashwin (University of Michigan); Ward, Kevin (Virginia Commonwealth University);
   Najarian, Kayvan* (University of Michigan - Ann Arbor)

TuDT4: 18:15-19:45   Baco
Current Challenges of VPH in Healthcare, Disease Management and Prevention and Data Quality
Assessment of Clinical and Biomedical Datasets (Special Session)
Chair: Fico, Giuseppe (Tech. Univ. of Madrid)

18:15-18:30   TuDT4.1

Multilevel and Multiscale Modeling Approach for VPH-Based Prediction of Oral Cancer
Reoccurrences. Results of the FP7 NeoMark Project 781-784
   Martinelli, Elena* (Azienda Ospedaliero Universitaria di Parma); Poli, Tito (Azienda Ospedaliero Universitaria of
   Parma); Exarchos, Konstantinos (University of Ioannina); Steger, Sebastian (Fraunhofer IGD)

18:30-18:45   TuDT4.2

Temporal Abstractions to Enrich Activity-Based Process Mining Corpus with Clinical Time Series 785-788
   Fernandez-Llatas, Carlos* (Universidad Politecnica de Valencia); Sacchi, Lucia (University of Pavia);
   Benedí, Jose Miguel (ITI - Universidad Politecnica de Valencia); Dagliati, Arianna (University of Pavia, Italy);
   Traver, Vicente (Institute ITACA); Bellazzi, Riccardo (University of Pavia)

18:45-19:00   TuDT4.3

A proposal of architecture to share patients data out of healthcare settings for research purposes 789-792
   Hernandez, Liss (Universidad Politécnica de Madrid); Onieva, Jorge (Universidad Politécnica de Madrid); Fico,
   Giuseppe* (Technical University of Madrid); Cancela, Jorge (Universidad Politécnica de Madrid); Dagliati,
   Arianna (University of Pavia, Italy); Bucalo, Mauro (BIOMERIS); Sacchi, Lucia (University of Pavia); Bellazzi,
   Riccardo (University of Pavia); Arredondo, María Teresa (Technical University of Madrid)

19:00-19:15   TuDT4.4

TILDA Signal Processing Framework (SPF) for the Analysis of BP Responses to Standing in
Epidemiological and Clinical Studies 793-796
   Soraghan, Christopher* (St James's Hospital); Fan, Chie Wei (St James's hospital); Hayakawa, Tomoaki
   (Beaumont Hospital); Cronin, Hilary (The Irish Longitudinal Study On Aging (TILDA), Lincoln Gate, Tri); Foran,
   Tim (St.James's Hospital); Boyle, Gerard (St. James's Hospital); Kenny, Rose Anne (Trinity College Dublin);
   Finucane, Ciaran (St James's Hospital)

19:15-19:30   TuDT4.5

A Pragmatic Approach for Measuring Data Quality in Primary Care Databases 797-800
   Tate, Rosemary* (University of Sussex); Beloff, Natalia (University of Sussex); Puri, Shivani (MHRA);
   Boggon, Rachael (MHRA); Williams, Dr Timothy (MHRA); Dungey, Sheena (CPRD)

TuDT5: 18:15-19:45   Sofia Auditorium
Workshop: Computational Modelling of Behaviors (Special Session)
Chair: Saranummi, Niilo (VTT Tech. Res. Centre)
Co-Chair: Traver, Vicente (Inst. ITACA)

18:15-18:30   TuDT5.1

Habit Change As a Learning Process: Design Framework for Mobile Interventions 801-804
   Vainio, Janne* (Tampere University of Technology); Kaipainen, Kirsikka (VTT Technical Research
   Centre of Finland); Korhonen, Ilkka (Tampere University of Technology)

18:30-18:45 TuDT5.2
Health Coaching in Finland – a Market Study 805-808
Hiekkanen, Antti* (Tampere University of Technology); Nieminen, Hannu (Tampere University of Technology); Korhonen, Ilkka (Tampere University of Technology)

18:45-19:00 TuDT5.3
Patient Similarity Using Network Structure Properties in Online Communities 809-812
Chomutare, Taridzo* (Norwegian Center for Integrated Care and Telemedicine)

19:00-19:15 TuDT5.4
The Role of Computational, Multiscale Models in Behavioral Informatics 813-816
Pavel, Misha* (Oregon Health & Science University)

19:15-19:30 TuDT5.5
Dynamic User Models for Tailoring Health Behavior Interventions 817-820
Jimison, Holly* (Oregon Health & Science University)