Wednesday, July 15, 2026

Session Chair: Vanessa Zorrilla-Muñoz
                 Miguel Hernandez University, Spain

Session-ACR-6.   **Data Analytics Engineering**
                       08.00-09.20, July 15, 2026 (Remote)

08.00-08.20   A Two-Stage AI Framework for Quality Control: Synthetic Data
                Generation and Predictive Modeling
                Mohammad Shahin[1], **Mazdak Maghanaki**[2], F. Frank Chen[2], and Ali
                Hosseinzadeh[2]
                [1]University of Tennessee at Knoxville, Knoxville, TN 37996, USA
                [2]The University of Texas at San Antonio, San Antonio TX 78249, USA

08.20-08.40   Data Driven SoC Estimation for EV Li-ion Batteries: Recent Trends and
                Open Challenges
                Ranya Azzam, Bassel Soudan, and Talal Bonny
                Dept. of Computer Engineering, University of Sharjah, Sharjah, UAE

08.40-09.00   Impact of Vision-Related Diseases and Comorbidities on Functional
                Abilities and Technology Use in Older Adults with Arthritis
                Vanessa Zorrilla-Muñoz[1,2], Gema Martinez-Navarrete[1,3], Nicanor
                Morales-Delgado[3], Segundo Jimenez-Garcia[4,5], Esther Fernandez-Guill[6],
                María del Carmen Lillo-Navarro[7], Ramon Peral-Orts[8], Eduardo Sáenz-de-
                Cabezón[9], Eduardo Fernandez[1,10], Nicolas Garcia-Aracil[11], and Jose Maria
                Sabater-Navarro[1]
                [1] Bioengineering Institute, Miguel Hernandez University, 03202, Elche,
                Spain
                [2] University Institute on Gender Studies, University Carlos III of Madrid,
                Getafe, 28903 Madrid, Spain
                [3] Alicante Institute for Health and Biomedical Research (ISABIAL),
                03010 Alicante, Spain
                [4] Elda Health Department, Elda University General Hospital, 03550, Elda,
                Spain
                [5] Faculty of Health Sciences, University of Alicante, 03609, Alicante,
                Spain
                [6] Department of Rheumatology, Hospital Morales Meseguer, 30008,
                Murcia, Spain
                [7] Department of Pathology and Surgery, Miguel Hernandez University,
                03550, Sant Joan, Spain
                [8] Department of Applied Mechanical Engineering, Miguel Hernandez
                University, 03202, Elche, Spain
                [9] Department of Mathematics and Computation Department, University of
                La Rioja, 26006, Logroño, Spain

[10] Networking Research Centre of Bioengineering, Biomaterials and Nanomedicine (CIBER-BBN), Spain

09.00-09.20   Using VAEs for Anomaly Detection Utilizing Synthetic Dataset
Mazdak Maghanaki[1], Mohammad Shahin[2], F. Frank Chen[1], and Ali Hosseinzadeh[1]
[1]The University of Texas at San Antonio, San Antonio TX 78249, USA
[2]University of Tennessee at Knoxville, Knoxville, TN 37996, USA

09.20-10.20   **Keynote Speech**: **Towards A necessary and Secure Transition to Post-Quantum Cryptography**

Dr. Luis Hernández Encinas
Institute of Physical and Information Technologies, Spain

10.20-10.40   **BREAK**

Session-ACR-7   **Data Analytics Engineering + Cybersecurity Engineering**
10.40-12.00, July 15, 2026 (In-Person/Remote)

Session Chair: **Manal Gasmi**
Mohammed V University in Rabat, Morocco

10.40-11.00   Vulnerabilities and Exploits in Home IoT Devices
Patrik Jokela and Tapio Frantti
Information Technology, University of Jyväskylä, Finland

11.00-11.20   Vulnerability Categorization and Prioritization with Machine Learning in the Transport Sector
Michela Sbetta and Lejla Islami
DTU Compute, Technical University of Denmark, Denmark

11.20-11.40   EthiMask: A Context-Aware Data Masking Framework for Privacy-Preserving Analytics Using Dynamic Trust Scoring and Differential Privacy
Manal Gasmi and Karim Baïna
Alqualsadi Research Team, Rabat IT Center, ENSIAS, Mohammed V University in Rabat, Rabat 10112, Morocco

11.40-12.00   Comparative Analysis of Preventive Analytics Techniques for Predicting Cardiovascular and Diabetic Diseases
Syed Farhan Ahmed[1] and Mansoor S. Raza[2]
[1]School of Computing and Mathematics, Charles Sturt University (Study Centre), Melbourne, Australia
[2]STEM College, RMIT University, Melbourne, VIC, Australia

| 12.00-01.20 | **LUNCH BREAK (ON YOUR OWN)** |

Session-ACR-8   **Software Engineering + Poster**
01.20-03.00, July 15, 2026 (In-Person)

Session Chair: **Neelam Soundarajan**
Ohio State University, USA

01.20-01.40   Enhancing Privacy and Accountability in Federated Learning for Smart IoT
Zhuotao Lian[1], Qingkui Zeng[2], and Chunhua Su[3]
[1]Hiroshima University, Higashi-Hiroshima, 739-8527, Japan
[2]Tongling University, Tongling, 244061, China
[3]University of Aizu, Aizuwakamatsu, 965-0006, Japan

01.40-02.00   Uncovering Routes to Psychological Ownership in Container Security
Tomi Suomi[1], Maha Sroor[1], Petri Ihantola[1], Rahul Mohanani[2], Tommi Mikkonen[1], and Niko Mäkitalo[1]
[1]University of Jyväskylä, Jyväskylä, Finland
[2]University of Oulu, Oulu, Finland
[2]School of Business Administration, Oakland University, Rochester Hills, Michigan, USA

02.00-02.20   Abduction and Social Cognition, the Keys to Effective Training of Software Professionals
Neelam Soundarajan
Department of Computer Science and Engineering, Ohio State University, United States

02.20-02.40   Software Quality in Machine Learning Systems: A Scoping Review of Smells and Antipatterns
Marcela Mosquera[1], Rodolfo Bojorque[2], and Remigio Hurtadosian[2]
[1]Escuela Politécnica Nacional, Ecuador
[2]Universidad Politécnica, Ecuador

02.40-03.00   An adaptive $O(n \log n)$ algorithm for discretizing 3D parametric spherical curves
Hans Dulimarta[1] and William Dickinson[2]
[1]College of Computing, Grand Valley State University, Grand Rapids, Michigan, USA
[2]Department of Mathematics, Grand Valley State University, Grand Rapids, Michigan, USA

03.00-03.20   **BREAK**

03.20-04.20   **Panel**: **Techniques, Implications, and Challenges of Future Digital Identity**

Moderator: **Irene Kopaliani**, Princeton University, USA

Panelists: **Alberto Arteta**, Troy University. USA
Manuel J. C. S. Reis, University of Trás-os-Montes and Alto Douro, Portugal
Nadav Voloch, Shamir Research Institute, Israel