<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Location</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>08:00-09:00</td>
<td>Hall</td>
<td>Registration</td>
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<tr>
<td></td>
<td>09:00-09:30</td>
<td>R1</td>
<td>Welcome Session</td>
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<tr>
<td></td>
<td>09:30-10:00</td>
<td>R1</td>
<td>Keynote Speaker 1</td>
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<td>10:00-11:20</td>
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<td>11:20-11:40</td>
<td>Hall</td>
<td>Coffee Break</td>
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<td>11:40-13:00</td>
<td>R1</td>
<td>TU1.L1</td>
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<td>13:00-14:30</td>
<td>UA</td>
<td>Lunch</td>
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<td>14:30-16:30</td>
<td>R1</td>
<td>MO2.L1</td>
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<td></td>
<td>16:30-16:45</td>
<td>Hall</td>
<td>Coffee Break</td>
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<td>16:30-18:30</td>
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<td>Poster Session #01</td>
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<tr>
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<td>18:30-19:15</td>
<td>UA</td>
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<td>19:30-21:30</td>
<td>Hotel</td>
<td>Dinner@Hotel Imperial</td>
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<td>Tuesday</td>
<td>09:00-09:30</td>
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<td>14:30-16:30</td>
<td>R1</td>
<td>MO2.L2</td>
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<td>16:30-16:45</td>
<td>Hall</td>
<td>Coffee Break</td>
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<td>16:30-18:30</td>
<td>Hall</td>
<td>Poster Session #02</td>
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<tr>
<td></td>
<td>18:30-20:00</td>
<td>Museum</td>
<td>Museum tour and Music</td>
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<tr>
<td>Wednesday</td>
<td>09:00-09:30</td>
<td>R1</td>
<td>Keynote Speaker 3</td>
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<td>R1</td>
<td>WE1.L1</td>
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<td>11:10-11:40</td>
<td>Hall</td>
<td>Coffee Break</td>
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<td>11:40-13:00</td>
<td>R1</td>
<td>WE2.L1</td>
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<td>13:00-14:30</td>
<td>UA</td>
<td>Lunch</td>
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<td>14:30-16:30</td>
<td>R1</td>
<td>MO3.L1</td>
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<td>16:30-16:45</td>
<td>Hall</td>
<td>Coffee Break</td>
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<td>16:30-17:45</td>
<td>R1</td>
<td>Industrial Pannel</td>
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<td>16:45-17:45</td>
<td>Hall</td>
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<td></td>
<td>18:30-20:00</td>
<td>Museum</td>
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<td></td>
<td>19:30-22:30</td>
<td>Museum</td>
<td>Wine cellar underground museum</td>
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<tr>
<td></td>
<td>19h30-21h30</td>
<td>Hotel</td>
<td>Dinner@Hotel Imperial</td>
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</tbody>
</table>

Be at Rectory @18:30
Bus leave @19:00 Sharp!
## Detail technical Program | Monday 04 Set

### Oral Sessions

#### Room 1

**MO2.1: RFID for healthcare applications**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.2: RFID-BASED EMU DETECTION USING DISPOSABLE ANTENNAS AND AUTO-TUNING IC**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.3: TUNED RF COIL STRUCTURE DETECTING RFID/RFIC TAGS FOR MEDICAL MONITORING PACKETS**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.4: A Robust and reliable, low-cost TAG antenna design for UHF RFID wearable applications**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.5: A CROSS-SENSITIVITY OF A DUAL PORT PONTOUGMETER SENSOR BASED ON AUTO-TUNING FSK**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

#### Room 2

**MO2.6: Wireless Power Transfer and low-power applications**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.7: UHF RFID INTEROPERABILITY FOR WEARABLES WITH MINIATURIZED COils**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.8: PLANAR WAVEFORMING MAGNETIC FIELD ProbeS: A CUBIC STRUCTURE FOR RFID/RFIC APPLICATIONS**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.9: LOW POWER ULTRASOUND WAKE UP THROUGH METAL**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.10: COMPLIANT SELF-REPAIRING RFID TAGS FOR WIRELESS SENSING OF PREMISES AND PROPERTIES PASSIVE LOW-COST FOOD QUALITY MONITORING SYSTEMS**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.11: RFID-enabled implantation systems**
- **Room:** Location 3
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

### Poster Sessions

**MOPD: Poster session #1**
- **Room:** Location 1
- **Session Type:** Poster
- **Track:** Poster applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.13: AN IMPROVED PHASE-MAPPING METHOD FOR UNMAPPED PHASES BASED ON RFID LOCALIZATION**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.14: UNIT-REID TAG CHIP INTEGRATED READER ANTENNA ARRAY**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.15: RAPID ROOM POSITIONING SYSTEM BASED ON RFID TAGS**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.16: AN INTELLIGENT OCCUPANCY DETECTION SYSTEM FOR SMART TOURISM BASED ON RFID PASSIVE TAG ANTENNA ARRAY AND RANDOM FOREST**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.17: OBJECT POSITION DETECTION AND WIRELESS FACILITIES MONITORING SYSTEM USING RFID**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

**MO2.18: EVALUATION AND COMPARISON OF PLANAR PRINTABLE AGR-OVERLAP HARMONIZED RFID TAGS**
- **Room:** Location 1
- **Session Type:** Oral
- **Track:** Emerging RFID applications in healthcare, wearables, animal agriculture, transportation, safety, security, inventory management, logistics, health, retail

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**Room 1**

**Room 2**

**Poster Sessions**
# Oral Sessions

### Room 1

#### TU1.1.1: Transponders for Harsh Environments
- **Details:**
  - Location: Room 1
  - Session Type: Oral
  - Tracks: VLSI, for backscattering
- **Program:**
  - Tue, 5 Sep 11:00 - 11:15 (Portuguese Time UTC +1)
  - Abstract:
    - **TU1.1.1.1:** INVESTIGATION OF PHASE OFFSET CALIBRATION FOR SAR-BASED RFID LOCALIZATION IN HARSH ENVIRONMENTS
      - Andrea Macrì, Claude-Provost, Olivier Rove, Paolo Reppa, University of Pisa, Italy
    - **TU1.1.1.2:** THERMAL CIRCUIT FOR RETRIEVAL OF RFID TAGS ON TIRE RIMS
      - Andrea Macrì, Claude-Provost, Olivier Rove, Paolo Reppa, University of Pisa, Italy
    - **TU1.1.1.3:** Ultra-low power RFID-based Wake-up architectures for wireless sensor networks in industrial plants
      - Anwen Nissen, University of Rome Tor Vergata, Italy; Sara Amedea; Nicola Ojeda; Dario Rovato; Claudio Giordano, University of Rome Tor Vergata, Italy
    - **TU1.1.1.4:** A WIRELESS PASSIVE TEMPERATURE SENSOR BASED ON A HARMONIC TRANSPOSER AND A THRESHOLD
      - Leonardo Pischels, Umberto Pizzuti, Stefano Biondi, Luca Rovati, Fabio Alimenti, Paolo Mazzetti, University of Pisa, Italy
    - **TU1.1.1.5:** MULTIFUNCTIONAL NSG SENSORS BASED ON LOW-WAVE WITH RFID TAGS
      - Pritam Sengupta, Devineni Madhavendra, Sunil Hege, Roberto Altavilla, Laurent Knafo, Michel Helfer, Gielwierczak, Jean-Luc Amsel, Institute for France

#### TU1.1.2: Implementation and measurement of RFID-based systems
- **Details:**
  - Location: Room 1
  - Session Type: Oral
  - Tracks: Chip-on-chip measurements and modeling
- **Program:**
  - Tue, 5 Sep 11:45 - 12:00 (Portuguese Time UTC +1)
  - Abstract:
    - **TU1.1.2.1:** OPEN TESTING AND MEASUREMENT BENCH FOR UAV RFID
      - Nadine Batard, Victor Dejaire, IFR, France
    - **TU1.1.2.2:** FABRICATION AND INITIATION EVALUATION OF HAND-ETCHED RSP DIPOLE ANTENNAS
      - Enrico Tomasi, E. M. M. T. M. A. H. T. M. A. H., University of Regensburg, Germany
    - **TU1.1.2.3:** ENVIRONMENT PREDICTION SCANNING USING IDENTICAL UHF RFID TAGS CONFIGURATION
      - Hai B. Ting Tse, Benedict UC, University of Reading, Reading, France
    - **TU1.1.2.4:** BACKSCATTERING MODULATION 180°: VNA MEASUREMENTS
      - Simon Mommers, Nicole Barbe, UFR, France

#### TU1.1.3: Next-generation RFID systems empowered by location awareness
- **Details:**
  - Location: Room 1
  - Session Type: Oral
  - Tracks: Next-generation RFID applications
- **Program:**
  - Tue, 5 Sep 14:00 - 14:15 (Portuguese Time UTC +1)
  - Abstract:
    - **TU1.1.3.1:** SHOWING PRODUCTS IN A RETAIL STORE DIGITAL TWIN WITH ITEM LOCATION CAPTURED BY AN RFID ROBOT
      - Fabio Picco, Emmanuel Moreno, Sara Amedea, Enrico Tomasi, University of Roma Tor Vergata, Italy
    - **TU1.1.3.2:** MATERIAL DETECTION AND LOCALIZATION IN STORED GRAIN WITH PASSIVE RFID TAG ARRAYS
      - Enrico Tomasi, Nicola Barbe, University of Rome Tor Vergata, Italy
    - **TU1.1.3.3:** INCREASED RANGING ACCURACY OF RFID TAGS IN ETS REGIONS USING SFM/3C WITH DUAL BANDS
      - Fabio Picco, Emmanuel Moreno, Sara Amedea, Enrico Tomasi, University of Roma Tor Vergata, Italy
    - **TU1.1.3.4:** EXPLORING THE ELECTROMAGNETIC COUPLING TO ESTIMATE THE CLOSE MOTION OF UNIT-RFID TAGGED OBJECTS
      - Enrico Tomasi, Nicola Barbe, University of Rome Tor Vergata, Italy
    - **TU1.1.3.5:** RFID-BASED MONITORING OF HUMAN OPERATORS FOR SAFETY IN OUTDOOR WORKING SITES
      - Enrico Tomasi, Nicola Barbe, University of Rome Tor Vergata, Italy

### Room 2

#### TU1.2.1: Wireless technologies for Industrial Applications
- **Details:**
  - Location: Room 2
  - Session Type: Oral
  - Tracks: RFID for Industry 4.0 and for Smart Cities
- **Program:**
  - Tue, 5 Sep 11:00 - 11:15 (Portuguese Time UTC +1)
  - Abstract:
    - **TU1.2.1.1:** A 868 MHz UHF RFID TAG ANTENNA PRODUCED BY DROP-CASING TO CEPC
      - Carl Nilsson, University of British Columbia, Canada; P. A. Bouzas, University of British Columbia, Canada; B. A. Bousfield, University of British Columbia, Canada
    - **TU1.2.1.2:** 3D PRINTED RADIOFREQUENCY SENSING SYSTEM FOR ROBOTIC APPLICATIONS
      - Anca-Diana, University of Bucuresti, Romania; Mihai Teodoriu, Andrei I. T. S. A. A., University of Bucuresti, Romania; Mihai Teodoriu, University of Bucuresti, Romania
    - **TU1.2.1.3:** SPREAD SPECTRUM MODULATED MINI-WAVE TAGS FOR CAR APPLICATIONS
      - Ana L. Correia, Renato Viñoles, Marc Lasue, Dieter Schuh, Universitat Zurich in Zurich, Switzerland
    - **TU1.2.1.4:** SAW-RFID SENSORS FOR INDUSTRIAL APPLICATIONS
      - Daniel N. K. A., Franz Merk, Baudouin Tchouamen, Jordan Maheu, Giulia Bitter, Christian R. S. M. A., Thierry Aubert, Ocean Semtech, Ghent University, Belgium

#### TU1.2.2: Wireless technologies for Industry Applications
- **Details:**
  - Location: Room 2
  - Session Type: Oral
  - Tracks: RFID for Industry 4.0 and for Smart Cities
- **Program:**
  - Tue, 5 Sep 11:45 - 12:00 (Portuguese Time UTC +1)
  - Abstract:
    - **TU1.2.2.1:** A 868 MHz UHF RFID TAG ANTENNA PRODUCED BY DROP-CASING TO CEPC
      - Carl Nilsson, University of British Columbia, Canada; P. A. Bouzas, University of British Columbia, Canada; B. A. Bousfield, University of British Columbia, Canada
    - **TU1.2.2.2:** 3D PRINTED RADIOFREQUENCY SENSING SYSTEM FOR ROBOTIC APPLICATIONS
      - Anca-Diana, University of Bucuresti, Romania; Mihai Teodoriu, Andrei I. T. S. A. A., University of Bucuresti, Romania; Mihai Teodoriu, University of Bucuresti, Romania
    - **TU1.2.2.3:** SPREAD SPECTRUM MODULATED MINI-WAVE TAGS FOR CAR APPLICATIONS
      - Ana L. Correia, Renato Viñoles, Marc Lasue, Dieter Schuh, Universitat Zurich in Zurich, Switzerland
    - **TU1.2.2.4:** SAW-RFID SENSORS FOR INDUSTRIAL APPLICATIONS
      - Daniel N. K. A., Franz Merk, Baudouin Tchouamen, Jordan Maheu, Giulia Bitter, Christian R. S. M. A., Thierry Aubert, Ocean Semtech, Ghent University, Belgium
**Room 1**

**Oral Sessions**

**WEI.1.1: Low-power solutions for EH and RFID applications**
- Wednesday 06 Set 10:00-11:30
- Location: Room 1
- Session Type: Oral
- Track: Energy Harvesting and Wireless Power Transfer

**WEI.1.1.1: NOVEL ENERGY HARVESTING AND SWIFT SYSTEM AT 28 GHZ WITH A SIMPLE PHASED ARRAY**
- Naoki Shikarchi, Beijing University, Japan; Kenji Nishimura, Keio University, Japan
- Wednesday 06 Set 10:00-10:10
- Location: Room 1
- Session Type: Oral
- Track: Energy Harvesting and Wireless Power Transfer

**WEI.1.1.2: HYDRAULIC READ SENSITIVITY RFID SENSOR BASED ON TUNNEL DIODE VOLTAGE-CONTROLLED OSCILLATOR**
- Yves Del, IM Blood, France; Elena Rins, University of Denver, Portugal
- Wednesday 06 Set 10:10-10:20
- Location: Room 1
- Session Type: Oral
- Track: Energy Harvesting and Wireless Power Transfer

**WEI.1.1.3: REALISTIC PERFORMANCE ANALYSIS OF FREQUENCY-DIVERSE ARRAYS RADIATION**
- Tommaso Togni, Enrico Persico, Alessandro Casado, Diego Mastroianni, University of Bologna, Italy
- Wednesday 06 Set 10:20-10:30
- Location: Room 1
- Session Type: Oral
- Track: Energy Harvesting and Wireless Power Transfer

**WEI.1.1.4: A 2.4 GHZ MODULAR ANTENNA SYSTEM FOR TRAIN INTERGENCY AND LOCALIZATION PURPOSE**
- Catalbas Paredes, Enrico Persico, Enrico Tonardo, University of Bologna, Italy; Davide Avanzo, Satarap Pal, B. D. Dings-Mascetti, Alessandro Castello, University of Bologna, Italy
- Wednesday 06 Set 10:30-10:40
- Location: Room 1
- Session Type: Oral
- Track: Energy Harvesting and Wireless Power Transfer

**Poster Sessions**

**WEPP: Poster session #2**
- Wednesday 06 Set 14:30 - 16:15
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.1: IMPACT OF MAIN ON A TEXTILE UHF RFID TAG**
- Red Tintorera-Casas, Universitat Politècnica de Catalunya, Spain; Laura Martins-Estudia, Universitat Politècnica de Catalunya, Spain; Iñigo Baro, Universitat Autònoma de Barcelona, Spain; Ignacio Ort, Universitat Politècnica de Catalunya, Spain
- Wednesday 06 Set 14:30 - 15:15
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.2: HANDS-ON 2.4 GHZ RFID**
- Nicolas Bartol, INRIA, France
- Wednesday 06 Set 15:15 - 16:00
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.3: UTILIZATION OF 3D PRINTING TECHNIQUE FOR MANUFACTURING PLANAR MARCIAND BAUN EA DUHF VIVADL ANTENNA**
- Muhammad Ehsan Saleem, National University of Sciences and Technology, Islamabad, Pakistan; Othman Ilyas, National University of Sciences and Technology, Islamabad, Pakistan
- Wednesday 06 Set 16:00 - 16:45
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.4: DUAL-BAND LOOP ANTENNA FOR UHF RFID AND ISM BAND**
- Udayakumar Solai, Indian Institute of Science, India; Manoj Furdaha, Universidade de Aveiro, Portugal
- Wednesday 06 Set 16:45 - 17:30
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.5: FRACTIONAL DIVERSITY DETECTION FOR UNSTABLE SUBCARRIER-CODED BACKSCATTER LINK**
- Zhen Dan, Jie Meng, Xi An University, China
- Wednesday 06 Set 17:30 - 18:15
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.6: NOVEL FREQUENCY SELECTIVE SURFACE MADE OF LASER-INDUCED GRAPHENE**
- Naimou Hussain, Francisco R. Aromas, Jorge B. Mieres, Universidad de Antioquia, Colombia; Daniel Kadijk, Universidade de Antioquia, Colombia; Francisco J. R. Aromas, Universidad de Antioquia, Colombia
- Wednesday 06 Set 18:15 - 19:00
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.7: CHALLENGES ON THE DESIGN OF LOW-COST RFID CHIPLESS TAG**
- Victor Feres, Rui Monteiro, Universidade de Sao Paulo, Brazil
- Wednesday 06 Set 19:00 - 19:45
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization

**WEPP.8: IMPACT OF MAIN ON A TEXTILE UHF RFID TAG**
- Red Tintorera-Casas, Universitat Politècnica de Catalunya, Spain; Laura Martins-Estudia, Universitat Politècnica de Catalunya, Spain; Iñigo Baro, Universitat Autònoma de Barcelona, Spain; Ignacio Ort, Universitat Politècnica de Catalunya, Spain
- Wednesday 06 Set 19:45 - 20:30
- Location: Poster Area
- Session Type: Poster
- Track: Antenna design and characterization