

# Joint undergraduate courses for smart energy management systems



## Events: C1: SP-HE-IST & C2: SP-HE-IPL

1st pilot lecture on "Introduction to the Internet of Things (IoT) and Smart Devices"

**Monday, September 20<sup>th</sup> 2021 – Friday, September 24<sup>th</sup> 2021**

University of Western Macedonia,  
Department of Electrical and Computer Engineering

Karamanli & Ligeris, Kozani, Greece 50100

### Meeting links:

Day 1: <https://us06web.zoom.us/j/82926234804?pwd=M0xlb0cxekRXKzY3N2dVbjhsZVISUT09>

Day 2: <https://us06web.zoom.us/j/83742571810?pwd=VmxRYytMZDNZU3lnRTdkQIZtOXZUQT09>

Day 3: <https://us06web.zoom.us/j/82445415895?pwd=d0lqenlXaXdvdTNzN29lUGdqNVhNUT09>

Day 4: <https://us06web.zoom.us/j/86510026264?pwd=K1MyMzJNak1zQkdGWU5hdzhHZktLdz09>

Day 5: <https://us06web.zoom.us/j/88443452458?pwd=UGdkeUs1SmxIOTd3MGRHM2FITkdndz09>

(Time zone: Eastern European Summer Time (EEST))

### Contact Details:

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# Agenda

Monday, 20 September 2021 (Day 1)		
Time	Lecture	Responsible Person
<b>10:15 – 11:00</b>	<b>Introduction to IoT</b> <ul style="list-style-type: none"> <li>• Definition of IoT</li> <li>• IoT pillars</li> <li>• IoT architecture</li> </ul>	Alexander Simov (SC)
<b>11:00 – 11:15</b>	<i>Break</i>	
<b>11:15 – 12:00</b>	<b>Introduction to IoT</b> <ul style="list-style-type: none"> <li>• Main technologies and protocols in IoT</li> <li>• IoT application domains</li> <li>• IoT software &amp; hardware</li> <li>• Open issues and research challenges</li> </ul>	Alexander Simov (SC)
<b>12:00 – 12:15</b>	<i>Break</i>	
<b>12:15 – 13:00</b>	<ul style="list-style-type: none"> <li>• Questions</li> <li>• Discussion</li> <li>• Personal Slides (if applicable)</li> </ul>	Alexander Simov (SC)

Tuesday, 21 September 2021 (Day 2)		
Time	Lecture	Responsible Person
<b>10:15 – 11:00</b>	<b>IoT Architectures and Concepts</b> <ul style="list-style-type: none"> <li>• IoT layers</li> <li>• Cloud computing</li> <li>• Edge computing</li> </ul>	Ms Sofia Giannakidou (K3Y)
<b>11:00 – 11:15</b>	<i>Break</i>	
<b>11:15 – 12:00</b>	<b>IoT Architectures and Concepts</b> <ul style="list-style-type: none"> <li>• Containerization</li> <li>• Virtualization</li> <li>• IoT Platforms</li> </ul>	Ms Sofia Giannakidou (K3Y)
<b>12:00 – 12:15</b>	<i>Break</i>	
<b>12:15 – 13:00</b>	<ul style="list-style-type: none"> <li>• Questions</li> <li>• Discussion</li> <li>• Personal Slides (if applicable)</li> </ul>	Ms Sofia Giannakidou (K3Y)

Wednesday, 22 September 2021 (Day 3)		
Time	Lecture	Responsible Person
<b>10:15 – 11:00</b>	<b>Wireless Sensor Networks</b> <ul style="list-style-type: none"> <li>• Introduction to WSNs</li> <li>• WSN protocols<sup>1/2</sup></li> </ul>	Dr Thomas Lagkas (IHU)
<b>11:00 – 11:15</b>	<i>Break</i>	
<b>11:15 – 12:00</b>	<b>Wireless Sensor Networks</b> <ul style="list-style-type: none"> <li>• WSN protocols<sup>2/2</sup></li> <li>• WSN architectures</li> </ul>	Dr Thomas Lagkas (IHU)
<b>12:00 – 12:15</b>	<i>Break</i>	

<b>12:15 – 13:00</b>	<ul style="list-style-type: none"> <li>• Questions</li> <li>• Discussion</li> <li>• Personal Slides (if applicable)</li> </ul>	Dr Thomas Lagkas (IHU)
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<b>Thursday, 23 September 2021 (Day 4)</b>		
<b>Time</b>	<b>Lecture</b>	<b>Responsible Person</b>
<b>10:15 – 11:00</b>	<b>Industrial Control Systems and Sensors</b> <ul style="list-style-type: none"> <li>• Sensors</li> <li>• Actuators</li> </ul>	Mr Christos Dalamagkas (PPC)
<b>11:00 – 11:15</b>	<b>Break</b>	
<b>11:15 – 12:00</b>	<b>Industrial Control Systems and Sensors</b> <ul style="list-style-type: none"> <li>• SCADA &amp; Industrial Devices</li> <li>• Raspberry Pi4</li> <li>• IoT Operating Systems</li> </ul>	Mr Christos Dalamagkas (PPC)
<b>12:00 – 12:15</b>	<b>Break</b>	
<b>12:15 – 13:00</b>	<ul style="list-style-type: none"> <li>• Questions</li> <li>• Discussion</li> <li>• Personal Slides (if applicable)</li> </ul>	Mr Christos Dalamagkas (PPC)

<b>Friday, 24 September 2021 (Day 5)</b>		
<b>Time</b>	<b>Lecture</b>	<b>Responsible Person</b>
<b>10:15 – 11:00</b>	<b>IoT Protocols</b> <ul style="list-style-type: none"> <li>• Application layer protocols</li> <li>• IoT-specific application layer protocols</li> </ul>	Ms Anna Triantafyllou (UOWM)
<b>11:00 – 11:15</b>	<b>Break</b>	
<b>11:15 – 12:00</b>	<b>IoT Protocols</b> <ul style="list-style-type: none"> <li>• Application layer protocols utilized for Industrial purposes</li> <li>• Multi-layered IoT protocols</li> </ul>	Ms Anna Triantafyllou (UOWM)
<b>12:00 – 12:15</b>	<b>Break</b>	
<b>12:15 – 13:00</b>	<ul style="list-style-type: none"> <li>• Questions</li> <li>• Discussion</li> <li>• Personal Slides (if applicable)</li> </ul>	Ms Anna Triantafyllou (UOWM)