

# Asian Regional Workshop on SciTinyML: Scientific Use of Machine Learning on Low-Power Devices



**6 - 10 June 2022**  
**Online**

Further information:  
<http://indico.ictp.it/event/9800/>  
[smr3715@ictp.it](mailto:smr3715@ictp.it)

TinyML is a subfield of Machine Learning focused on developing models that can be executed on small, real-time, low-power, and low-cost embedded devices. This allows for new scientific applications to be developed at an extremely low cost and at large scale.

## Directors:

Vijay Janapa Reddi,  
John A. Paulson School of Engineering and Applied  
Sciences, Harvard University, USA

Rosdiadee Nordin,  
Universiti Kebangsaan Malaysia

## Description:

The TinyML process starts with collecting data from IoT devices, then training the collected dataset to extract knowledge patterns, these patterns are then packaged into a TinyML model that considers the target microprocessor's limited resources such as memory and processing power.

The resulting model is then deployed on embedded devices where it is used to evaluate new sensor data in real-time. Typically, power requirements are in the mW range and below which enables a variety of use-cases targeting battery operated devices. TinyML represents a collaborative effort between the embedded power systems and machine learning communities, which traditionally have operated independently.

## Topics:

- ML general concepts
- Introduction to TinyML
- Getting started with the TinyML training kit
- Examples of TinyML applications
- Scientific Applications of ML

## ICTP Scientific Contact:

Marco Zennaro, ICTP

## How to apply:

Online application:  
<http://indico.ictp.it/event/9800/>

Female scientists are encouraged to apply.

## Registration:

Priority will be given to Asian participants that are part of the ICTP TinyML Academic Network.

## Deadline:

**22 May 2022**



Harvard John A. Paulson  
School of Engineering  
and Applied Sciences



The Abdus Salam  
International Centre  
for Theoretical Physics  
[www.ictp.it](http://www.ictp.it)  
Trieste, Italy

