

## Editorial

# I International Congress of Science and Technology Morona Santiago CICTMS ESPOCH 2020

**Ing. Miguel Angel Osorio Rivera, MSc., General Coordinator of the I International Congress of Science and Technology Morona Santiago CICTMS ESPOCH 2020**

The Higher Polytechnic School of Chimborazo Morona Santiago Headquarters has the honor to present this collection of research papers. This conference was a platform for national and international teachers, researchers and scientists to demonstrate the results of their experience, as well as their research projects.

The research compiled in this Special Issue has a particular focus on environmental health and sustainability, exploring topics such as how best to measure and promote the quality of water and air, alternative fuels and maximizing energy efficiency, and innovative solutions for re-using or producing useful products from agricultural and industrial byproducts and waste. Other research areas include investigations into improving the effectiveness of agricultural practices.

The purpose of this Special Issue is to establish a forum accessible to all professionals and interested parties so that they can be exposed to and share their academic, scientific, healthcare, educational and technological experiences, which will enrich the scientific heritage. Importantly, this research also proposes feasible alternative solutions for some of the major challenges we face today, in particular concerning food security and environmental sustainability.

We are infinitely grateful for the effort and dedication of the researchers who have presented their articles and all those who have managed to develop and capture in this report the knowledge developed in their research.

---

La Escuela Superior Politécnica de Chimborazo Sede Morona Santiago tiene el honor de presentar el Libro de memorias del “I CONGRESO INTERNACIONAL DE CIENCIA Y TECNOLOGIA MORONA SANTIAGO CICTMS 2020”, mismo que se enmarca en las líneas de investigación institucionales, siendo un producto de la recopilación de artículos científicos de las conferencias que se realiza anualmente, y que son una plataforma para que los docentes, investigadores y científicos nacionales e internacionales, evidencien los resultados de su experiencia, así como también, de sus proyectos de investigación.

Este trabajo editorial tiene como propósito establecer un foro accesible a todos los profesionales e interesados para que expongan y comparten sus experiencias académicas, científicas, asistenciales, educativas y tecnológicas, las cuales permitirán

 OPEN ACCESS



no sólo enriquecer el acervo científico, sino de manera importante plantear con factibilidad, alternativas de solución para los principales problemas con los que nos enfrentamos.

Agradecemos infinitamente el esfuerzo y dedicación de los investigadores que han presentado sus artículos y todos quienes han logrado desarrollar y plasmar en esta memoria el conocimiento desarrollado en sus investigaciones.

## **Scientific Committee:**

Ing. Marcelo Navarro. PhD  
MATRIZ

Ing. Rafael Pérez. PhD  
MATRIZ

Ing. Miguel Osorio  
SEDE MORONA SANTIAGO

Ing. Andrea Paola Goyes  
SEDE MORONA SANTIAGO

Ing. Jessica Arcos  
SEDE MORONA SANTIAGO

Ing. William Ibáñez  
SEDE MORONA SANTIAGO

Ing. Christian Camacho  
SEDE MORONA SANTIAGO

Ing. Karla Morales  
SEDE MORONA SANTIAGO

Ing. Segundo Shagñay  
SEDE MORONA SANTIAGO

Ing. Tamia Noboa  
SEDE MORONA SANTIAGO

Ing. Byron Huera  
SEDE MORONA SANTIAGO

Ing. Ximena Rashell Cazorla  
SEDE MORONA SANTIAGO