

**Short Training Course**  
**“Blockchain Fundamentals and Applications”**

**Date: 13<sup>th</sup> – 17<sup>th</sup> August, 2018**  
**Venue: UR-CST- KIST2-ICTP Block, Computer Lab**

The African Center of Excellence in Internet of Things (ACEIoT) in collaboration with Blockchain EXE from Japan is organizing a Short Course in “Blockchain Applications Development”. It is 5 days comprehensive Blockchain Training Course, targeting experts from Public and Private Institutions including Academia who are interested in understanding the blockchain potentials –how does blockchain work, blockchain basics and its applications with real examples.

**Program**

| <b>Monday, August 13<sup>rd</sup> 2018</b>   |                        |   |   |
|--|------------------------|---|---|
| <b>Session</b>                               | <b>Time</b>            | <b>Activity</b>   | <b>Responsible person</b>   |
| <b>Opening Blockchain Workshop</b>           | 8:00 am-9:00 am        | Registration of Participants  |   |
|  | 9:00 am-9:15 am        | Welcome Remarks   | Dr. Ignace Gatere Principal, UR-CST   |
|  | 9:15 am-9:30 am        | Opening Address   | Prof. Philip Cotton, VC, University of Rwanda.  |
|  | 9:30 am-10:00 am       | About Blockchain EXE  | Mr. Kojiro Hirate   |
|  | <b>10am to 10:30am</b> | <b>Coffee Break</b>   |   |
|  | 10:30 am-11:00 am      | About ACEIoT  | Director, ACEIoT  |
|  | 11:00am - 11:30am      | Introduction to Blockchain  | Mr. Kojiro Hirate   |
|  | 11:30am -12pm          | Status of Blockchain applications in Rwanda   | Prof. Martin Saint CMU-A  |
|  | 12 pm-1 pm             | About Blockchain Implementation status- Smart Africa  | Mr. Nobert Haguma   |
|  | <b>1pm to 2pm</b>      | <b>Lunch Break</b>  |   |
| <b>Foundation of Blockchain</b>              | 2 pm to 5 pm           | <ul style="list-style-type: none"> <li>• What is blockchain? Why it is so important?</li> <li>• The technology behind blockchain</li> <li>• Cryptography aspects</li> </ul> | Mr. Kojiro Hirate   |
|  |                        |   | Assoc.Prof. Santhi Kumaran<br>Prof. Martin saint  |
| <b>Tuesday, August 14<sup>th</sup>, 2018</b> |                        |   |   |
| <b>Blockchain for Payment</b>                | 8am to 10am            | <ul style="list-style-type: none"> <li>• How blockchain will change payment</li> <li>• Introduction to Stellar</li> <li>• Use cases</li> </ul>                              | <ul style="list-style-type: none"> <li>• Mr. Tunde Ladipo, Director of Partnerships at Stellar</li> </ul> |

|  |                        |  |   |
|--|------------------------|--|---|
| <b>Development with Stellar</b>                | 10am to 12pm           | <ul style="list-style-type: none"> <li>● Introduction to blockchain development with Stellar</li> </ul>  | <ul style="list-style-type: none"> <li>● Mr. Peter Oliha, Stellar Integrations Lead at Lightyear</li> </ul>   |
|  | <b>12pm to 1pm</b>     | <b>Lunch Break</b>   |   |
| <b>Prototype Building</b>                      | 1pm to 3pm             | <ul style="list-style-type: none"> <li>● Build a simple prototype with Stellar</li> </ul>  | <ul style="list-style-type: none"> <li>● Mr. Peter Oliha, Stellar Integrations Lead at Lightyear</li> </ul>   |
|  | <b>3pm to 3:30pm</b>   | <b>Coffee Break</b>  |   |
| <b>Prototype Building</b>                      | 3:30pm to 5:30pm       | <ul style="list-style-type: none"> <li>● Build a simple prototype with Stellar</li> </ul>  | <ul style="list-style-type: none"> <li>● Mr. Peter Oliha, Stellar Integrations Lead at Lightyear</li> </ul>   |
| <b>Wednesday, August 15<sup>th</sup>, 2018</b> |                        |  |   |
| <b>Blockchain for Government and Energy</b>    | 8am to 10 am           | <ul style="list-style-type: none"> <li>● Integration of government and energy systems with blockchain</li> <li>● Use cases               <ul style="list-style-type: none"> <li>○ Centaurus Works's legal system</li> <li>○ P2P energy system</li> <li>○ Smart government initiative in Dubai</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>● Mr. Kenichiro Kawasaki, CEO of Centaurus Works (Online)</li> <li>● Mr. Bashar Lazaar, Director of Operations at ConsenSys Middle East &amp; North Africa (Online)</li> </ul>   |
|  | <b>10am to 10:30am</b> | <b>Coffee Break</b>  |   |
| <b>Blockchain for AI</b>                       | 10:30am to 12:00pm     | <ul style="list-style-type: none"> <li>● Integration of AI with blockchain</li> <li>● Use cases               <ul style="list-style-type: none"> <li>○ Storing AI tracking history on blockchain</li> <li>○ Decentralized AI data marketplace</li> </ul> </li> </ul>   | <ul style="list-style-type: none"> <li>● Mr. Kazuaki Ishiguro, Lead Blockchain Developer of Cougar (Online)</li> <li>● Mr. Timo Honsel from Ocean Protocol (Online)</li> </ul>  |
|  | <b>12pm to 1pm</b>     | <b>Lunch Break</b>   |   |
| <b>Short Session</b>                           | 1pm to 2pm             | <ul style="list-style-type: none"> <li>● Introduction to ConsenSys</li> <li>● The journey of a Rwanda-born blockchain product manager, Aimable</li> </ul>  | <ul style="list-style-type: none"> <li>● Mr. Aimable Dusingizimana, Product Manager at ConsenSys</li> </ul>   |
| <b>Blockchain for Identity</b>                 | 2 pm to 4 pm           | <ul style="list-style-type: none"> <li>● Decentralized id management based on uPort</li> <li>● Setting up uPort's identity system on smartphone</li> <li>● Issuing a credential on uPort</li> </ul>  | <ul style="list-style-type: none"> <li>● Ms. Alice Nawfal, Director of Business Operations at uPort (Online)</li> <li>● Mr. Pelle Braendgaard, Engineering Lead at uPort (Online)</li> <li>● Ms. Akila Natarajan, Director at ConsenSys Academy (Online)</li> </ul> |

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|---|-------------------------|--|---|
| <b>Blockchain for IoT</b>                     | 4pm to 5pm              | <ul style="list-style-type: none"> <li>IoT and its applications with blockchain</li> <li>Weeve's IoT data marketplace</li> </ul>   | <ul style="list-style-type: none"> <li>Mr. David Wever, Blockchain Program Manager at Weeve (Online)</li> </ul> |
| <b>Thursday, August 16<sup>th</sup>, 2018</b> |                         |  |   |
| <b>Blockchain for Agriculture</b>             | 8am to 10am             | <ul style="list-style-type: none"> <li>Application of IoT and Blockchain to agriculture</li> <li>Cyber Security and tools</li> <li>Use Cases</li> </ul>                        | <ul style="list-style-type: none"> <li>Ms. Shraddha Chaplot, Mad Scientist at ConsenSys</li> </ul>              |
|   | <b>10am to 10:30 am</b> | <b>Coffee Break</b>  |   |
| <b>Development with Ethereum</b>              | 10:30am - 1pm           | <ul style="list-style-type: none"> <li>Introduction to Ethereum development</li> <li>Development environment settings</li> </ul>   | <ul style="list-style-type: none"> <li>Mr. Aimable Dusingizimana, Program Manager at ConsenSys</li> </ul>       |
|   | <b>12pm to 1pm</b>      | <b>Lunch Break</b>   |   |
| <b>Development with Ethereum</b>              | 1pm - 3pm               | <ul style="list-style-type: none"> <li>Development environment settings</li> <li>Development of a simple application based on Ethereum</li> </ul>                              | <ul style="list-style-type: none"> <li>Mr. Aimable Dusingizimana, Program Manager at ConsenSys</li> </ul>       |
| <b>Mini Ideathon</b>                          | 3pm to 5pm              | <ul style="list-style-type: none"> <li>Form 2 ~ 3 people teams</li> <li>Business idea generation based on Ethereum</li> <li>Prototype development based on Ethereum</li> </ul> | All Participants  |
| <b>Friday August 17<sup>th</sup>, 2018</b>    |                         |  |   |
| <b>Mini Ideathon</b>                          | 8am to 10:30 am         | <ul style="list-style-type: none"> <li>Continue to do the ideation</li> </ul>  | All participants  |
|   | <b>10:30 to 11 am</b>   | <b>Coffee Break</b>  |   |
| <b>Presentation</b>                           | 11:00 am to 1:30 pm     | <ul style="list-style-type: none"> <li>10 minutes presentation for each team</li> </ul>  | ALL participants  |
|   | <b>1:30pm to 2:30pm</b> | <b>Lunch Break</b>   |   |
|   | 2:30pm to 6 pm          | Closing & Networking   | All Participants and Stakeholders   |
| <b>Close of the Short Course</b>              |                         |  |   |