



CENTRA 4:
Connecting Data, Applications and People in Smart Cyberinfrastructure and IoT
Meeting Agenda

Sunday, April 21, 2019

Travel day. Arrival in Jeju.

Monday, April 22, 2019

09:00 AM: Registration (and Poster Setup).

09:30 – 10:30 AM: Plenary Opening and Flyby Session.

Session Chair: Woojin Seok.

Welcome remarks: Heeyoon Choi (President, KISTI, Korea)

Opening talk/keynote: “P4: Its Concept and Applications to Data Science”,

Sangheon Pack (Korea University, Korea).

Presentation: “CENTRA 4: Objectives, Partners and Desired Outcomes”,

José Fortes (U. Florida, USA),

Kum Won Cho (KISTI, Korea),

Fang-Pang Lin (NCHC, Taiwan),

Rui Oliveira (INESC TEC, Portugal),

Shinji Shimojo (NICT, Japan).

10:30 – 10:45 AM: Group Photo.

10:45 – 12:15 PM: Plenary Dive-in Session 1: Ongoing Projects (15 mins each).

Session Chair: Shinji Shimojo.

Project review: “Dynamically Aggregating Smart Community Sensors, Edge and Cloud Resources with Overlay VPNs”,

Renato J. Figueiredo, Ken Subratie, Saumitra Aditya, Vahid Daneshmand (Univ. of Florida, USA),

Eiji Kawai, Hiroaki Yamanaka, Naomi Terada (NICT, Japan),

Glenn Ricart (US Ignite, USA),

Hyuk-Jae Lee (Seoul National University, South Korea),

Jingtao Sun, Tomoya Tanjo (NII, Japan),

Kohei Ichikawa (NAIST, Japan),

Ryousei Takano (AIST, Japan),

Susumu Date, Takuda Yamada, Yoshiyuki Kido (Osaka University).



Project review: “SDN-IP Peering for IoT Data Transmission”,

Te-Lung Liu, Grace Hui-Lan Lee, Jen-Wei Hu (NCHC/NARLabs, Taiwan),
Shinji Shimojo, Naomi Terada, Yoshihiko Kanaumi, Eiji Kawai (NICT, Japan),
Yasuaki Shinzato, Fukumasa Morifuji, Hirofuyu Noguchi (OOL, Japan),
Chu-Sing Yang (NCKU, Taiwan),
Chien-Chao Tseng (NCTU, Taiwan),
Joe Mambretti, Jim Chen, Fei Yeh (iCAIR, USA),
Jelina Tetangco, Jay Combinido, Peter Banzon, Christian Matira, Jon Perdon (ASTI, Philippines),
Linh Truong Dieu, Binh Minh Nguyen, Ngo Hong Son (HUST, Vietnam),
Phạm Dinh Lam (VNU, Vietnam),
Chalernpol Charnsripinyo (NECTEC, Thailand),
Luke Jing Yuan (MIMOS, Malaysia).

Project Review: “AVAU Applications for Smart Agriculture”,

Ming-Der Yang, Hui Ping Tsai, Cloud Tseng, Yu-Chun Hsu (National Chung Hsing Univ., Taiwan),
Christopher Stewart (Ohio State University, USA).

Project Review: “Edge-Net.org”,

Glenn Ricart, Rick McGeer (US Ignite, USA),
Justin Cappos (NYU, USA),
Timur Friedman (UPMC Sorbonne Universités, France),
Albert Rafetseder (Universität Wien, Austria),
Ada Gavrilovska (Georgia Tech, USA),
John Kubiawicz (UC Berkeley, USA),
Matt Hemmings (U. Victoria, Canada),
Bithika Khargharia (US Consultant, USA),
Aki Nakao (U. Tokyo, Japan).
with inspiration and consultation from Toshio Asai (NICT), Charlie Catlett (Argonne Nat’l Lab), Eiji Kawai (JGN-X), Renato Figueiredo (UFL), Jason Haga (AIST), Ken Subratie (UFL), Ling-Jyh Chen (Academica Sinica), Matthew Delcambre (UL Lafayette), Maxine Brown (UIC), Felix Wu (UC Davis), Shinji Shimojo (Osaka U.), Tho Nguyen (UVA).

Project Review: “IT for Natural Disaster Management & Visualization Alliance”,

Jason Haga (AIST, Japan),
Jason Leigh (University of Hawaii, USA),
Maxine Brown (University of Illinois, Chicago, USA)
Bill Chang (University of Hawaii, USA).

Project review: “Collaborative Lifemapper”,

James Beach, Aimee Stewart (University of Kansas, USA),
Hsiu-Mei Chou, Fang-Pang Lin (NCHC, Taiwan),
Jason Leigh (University of Hawaii, USA),
Michael Elliott (University of Florida, USA).



12:00 – 1:00 PM: Lunch.

1:15 – 2:30 PM: Plenary Dive-in Session 2: Ongoing Projects and New Projects (15-mins each).

Session Chair: Shava Smallen.

Project review: “AirBox: a participatory ecosystem for PM2.5 monitoring”,

Ling-Jyh Chen (Academia Sinica, Taiwan)

Shyhtsun Felix Wu (UC Davis, USA)

Shava Smallen (San Diego Supercomputer Center, USA)

Lim Hock Beng (Singapore University of Technology and Design, Singapore)

Charlie Catlett (Argonne National Laboratory, USA).

Project review: “Privacy-preserving Cloud Computing for IoT”,

João Paulo, Rogério Pontes, Ricardo Macedo, Tânia Esteves (INESC TEC, Portugal),

Woojin Seok (KISTI, Korea).

Proposed project: “ScienceLoRa: The Wireless IoT Network & Service in KREONET for IoT Applications in Science”,

Joobum Kim, Woojin Seok, Jaeseung Kwak, Kiwook Kim, Jeonghoon Moon (KISTI, Korea).

Proposed project: “Semi-Automated Emergency Response Systems”,

Tam Chantem, Ryan Gerdes, and Kevin Heaslip (Virginia Tech, Virginia, USA)

Pamela Murray-Tuite (Clemson University, South Carolina, USA).

Proposed Project: “Data Science Platform for Scaling Collaborative Research”

Alípio Jorge, Susana Barbosa, Nuno Moniz, Helder Oliveira, João Vinagre (INESC TEC, Portugal).

2:30 – 3:00 PM: Break

Posters will be on display for viewing by attendees and presentation by their authors.



3:00 – 4:30 PM: Plenary Dive-in Session 3: New Projects (15-mins each).

Session Chair: Rui Oliveira.

Proposed project: “Development of a low-cost camera system for object recognition/tracking and its applications”,

Hyuk-Jae Lee (Seoul National University, Korea),

Jinsung Kim and Kyujoong Lee (Sunmoon University, Korea).

Proposed project: “Smart and Connected Communities Testbed”,

Glenn Ricart (US Ignite, USA).

Proposed project: “HPC Demand Response”,

Jason Liu (Florida International University, USA),

Xingfu Wu (University of Chicago, USA).

Proposed project: “SCALE3: A resilient IoT data gathering and real-time data processing for safe community alerting”,

Kyungbaek Kim (Chonnam National University, Korea),

Nalini Venkatasubramanian (UC Irvine, USA),

Cheng-Hsin Hsu (National Tsing Hua University, Taiwan).

Proposed project: “Secure Data Collaborations Using GFFS”,

Courtney Hill, Andrew Grimshaw, Tho Nguyen (University of Virginia, USA)

Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI, USA),

Indiana University, USA;

Water Resources University (Vietnam),

Vietnam National University – International University (VNU-IU, Vietnam),

Department of State - Mekong Water Data Initiative (USA).

Researcher introduction: “Social-Edge CPS: Social-Cyber-Physical Systems Meet Edge Computing,”

Hana Khamfroush (U. of Kentucky, USA).

4:30 — 5:00 PM: Tea break and Group formation for Ongoing and New Projects

Attendees interact and declare intention to join existing and/or new projects. Writing boards are provided for researchers to write their names under the proposed projects. Project elaborations, planning and discussions by the resulting collaboration groups take place in the second and third day of the agenda.

5:30 PM – Dinner.



Tuesday, April 23, 2019

08:30 – 10:00 AM: Panel: “What is good about CENTRA and how to make it better”,

Panelists: Joobum Kim (KISTI, Korea),
João Paulo (INESC TEC),
Eiji Kawai (NICT Japan),
Aimee Stewart (U. Kansas, USA)
Ming-Der Yang (NCHU, Taiwan),
Subratie Kensworth (U. Florida, USA).

Panel Chair: Renato Figueiredo (U. Florida, USA).

10:00 – 10:15 AM – Break.

10:30AM – 12:00 PM: Catch-a-project-and-group concurrent breakout sessions.

Participants of different projects gather in distributed rooms to continue the formulation and advancement of collaborations around existing and proposed projects.

12:00 – 1:00 PM: Lunch.

1:15– 2:30 PM: Concurrent group breakout sessions.

Participants of different projects gather in distributed rooms to continue the formulation and advancement of collaborations around existing and proposed projects.

2:30 – 3:30 PM: Group reports.

Session Chair: Fang-Pang Lin.

Plenary session with three-minute reports by each project leader.

3:30 – 3:45 PM: Break

3:45 – 5:00 PM: Panel – “Sustaining and growing CENTRA towards CENTRA 10”,

Panelists: Minsun Lee (Chungnam National University, Korea),
Hiroaki Harai (NICT, Japan),
Rui Oliveira (INESC TEC, Portugal),
William Chang (U. Hawaii, USA),
Peter Arzberger (U. California San Diego, USA).

Panel Chair: Beth Plale (Indiana U.).

5:00 —6:00 PM: Demo Session

Demo 1 (10min): SAGE2 Visualizer for Edge Computing, Image Processing, and Object Recognition.

Demo 2 (10min): Virtual Time Machine for Reproducible Network Emulation.

Demo 3 (10min): FPGA implementation of a Simplified YOLO algorithm for real-time object detection.

6:30 PM – Dinner.



Wednesday, April 24, 2019

09:30 AM – 10:00 AM: Plenary Session.

Session Chair: Joobum Kim.

Invited talk: “Management of Crops Using On-site Measurements”,

Kwang Soo Kim (Seoul National University, Korea).

10:00 AM – 10:30 AM: Break

10:30 AM – 12:00 PM: Catch-a-project-and-group concurrent breakout sessions.

Participants of different projects gather in distributed rooms to continue the formulation and advancement of collaborations around existing and proposed projects.

12:00 – 1:00 PM: Lunch.

1:30 – 3:00 PM: Concurrent planning sessions for each project.

Participants of different projects gather in distributed rooms to identify and plan technical tasks, deliverables, outcomes and meetings to accomplish before CENTRA 5.

3:30 – 4:30 PM: Plenary Take-away session.

Plenary session with three-minute reports by each project leader on plans for follow-up work before CENTRA 5.

4:30 – 5:00 PM: Announcements for Future CENTRA Events and Closing Remarks.

“CENTRA 5 Announcement”, Rui Oliveira (INESC TEC, Portugal).

“Closing Remarks”, José Fortes (U. Florida, USA).

5:00—6:00 PM: CENTRA Advisory Board and Steering Committee meeting.

For invited participants.

6:30 PM – CENTRA Farewell & PRAGMA Welcome Dinner.