

IIHCC

Solving problems that exist at, and along, the interdependencies between humans, community, and infrastructure to ultimately improve quality of life.

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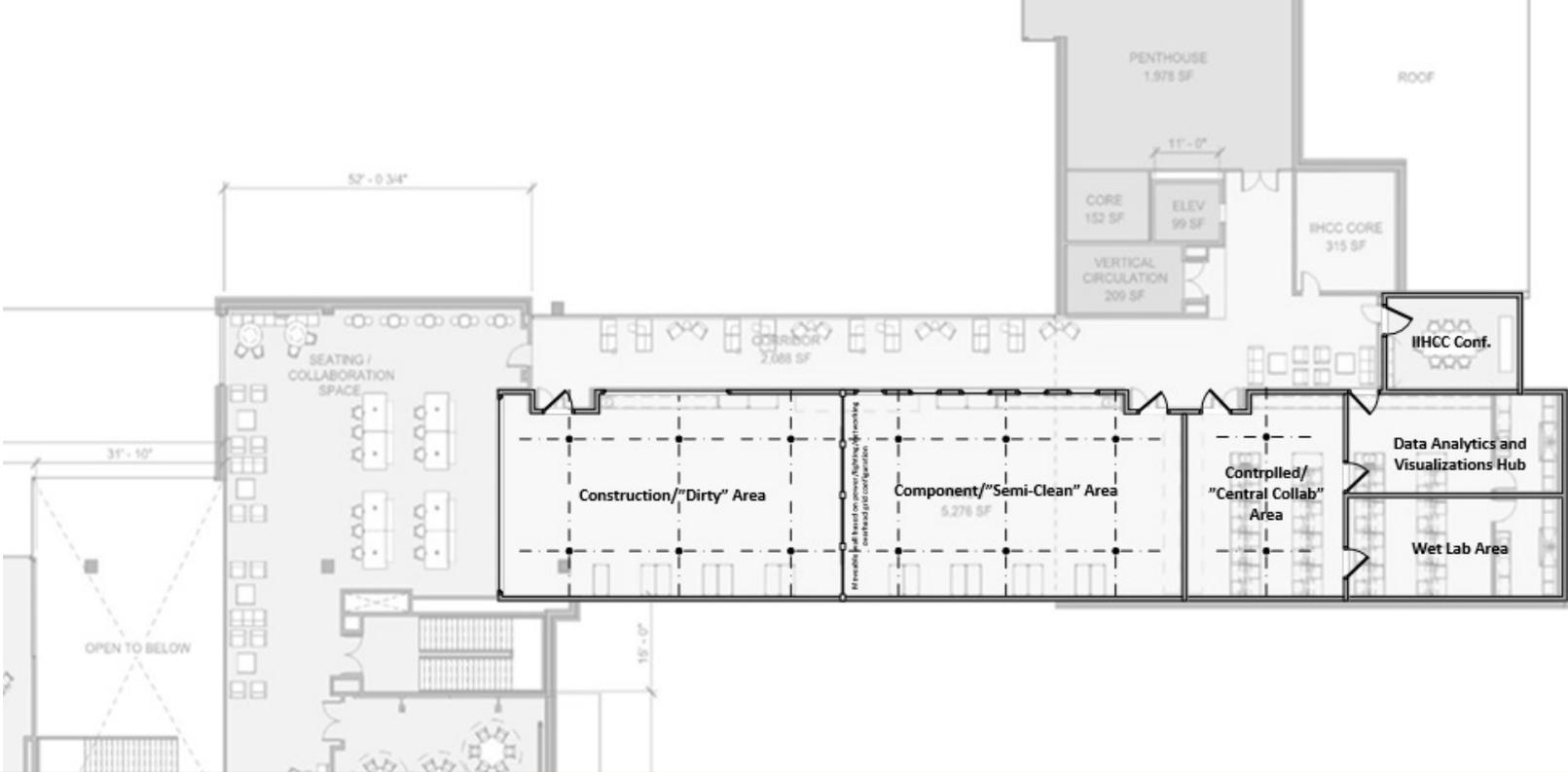
- **10/31** - LSIE Department Heads Meeting: DA/SGA Cluster Hires
- **11/6** - IIHCC Curriculum Meeting
- **11/22** - Happy Thanksgiving
- **11/27** - IIHCC Monthly Stakeholder Update Meeting
- **11/29** - Intelligent Infrastructure Meeting: Hitt Hall and IIC
- **11/29** - Intelligent Infrastructure

If you have any question, comments, or concerns, please contact us:

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For more information about IIHCC, visit our website



TRAIN TALKS

Recently, IIHCC members met with the Human-Centered Communities Working Group (HCCWG) and the Research Working Group (RWG) to discuss ideas for TRAIN Talks. During the meeting, the discussion led to the idea of “setting the goal post,” or defining “intelligent infrastructure” and “human-centered community.” To address this, it was suggested that an expert in the field of either Intelligent Infrastructure or Human-Centered Communities from outside the University come and speak about his or her experiences and research.

This presentation will help attendees gain a better understanding of what drives IIHCC and defines the program’s vision of future research, curriculum, and facilities at Virginia Tech. This first presentation will also set the benchmark for future TRAIN Talks.

The date of the first TRAIN Talk will be in early spring 2019. This will allow enough time to establish a review process for proposals, determine metrics for success, reserve a location, and develop a schedule for the event.

If you have any questions about this event or suggestions that you would like to see, please do let us know at IIHCC@vti.vt.edu.

HITT HALL AND INTELLIGENT INFRASTRUCTURE COMPLEX

Collaborating with Lord Aeck Sargent, the architecture firm working on the HIT Hall and Intelligent Infrastructure Complex, IIHCC has updated plans for space allocation. It has been proposed that there should be three broadly functional areas: a “dirty” construction area, a “semi-clean” area, and a “controlled” area. The “dirty” area would allow for research in areas such as smart design construction, housing innovation, and materials. The “semi-clean” area would be used for research involving robotics and autonomous vehicle systems, energy, and sensors, and as a space for final assembly. The “controlled” area would allocate space for data analytics and visualizations, ubiquitous mobility, sensors, and augmented and virtual reality (AR/VR). Discussions are ongoing to ensure that equipment can be moved in, out, and around the space, and that a framework is provided for sensor placement. IIHCC is working alongside C+I Destination Area and the Institute for Creativity, Arts, and Technology (ICAT) to develop the IDEA Space, an AR/VR lab similar to the Moss Art Center’s Cube. The IDEA Space will house unique equipment, including a crane system working in tandem with the Myers-Lawson School of Construction’s Innovation Space.

RURAL HEALTH RFP

In conjunction with the Learning Systems Innovation and Effectiveness (LSIE) Office, participating Destination Areas (DAs) and Strategic Growth Areas (SGAs), and matching funds from investment institutes, IIHCC participated in and provided funding for a Rural Health RFP. The selection committee identified a total of five proposals to receive funding toward research in rural community health. We look forward to continuing such partnerships to advance the Beyond Boundaries vision.

CURRICULUM

As part of the development of transdisciplinary education with a human-centered focus, this semester IIHCC is piloting a Pathways course, Ethical Perspectives on Intelligent Infrastructure (PHIL 2984). Two new Pathways courses, The Future is Now: Reinventing Community in the 21st Century (STS 2984), and Ethical Perspectives on Intelligent Infrastructure (PHIL 2984), are set for governance in early 2019, to be offered during the fall semester of 2019.

CHOICES AND CHALLENGES

In late spring 2019, IIHCC and the Virginia Tech Department of Science, Technology, and Society (STS) will host the Choices and Challenges Forum, a public outreach program that focuses on topics in science and technology of public concern or controversy. This gathering will bring together experts in technology, the humanities, and the social sciences to engage in a multi-perspective discussion on self-driving vehicles in the New River Valley region.

The event will include a main panel discussion, background sessions, and follow-up sessions. If you are interested in participating, please contact us at IIHCC@vtti.vt.edu.

OAK RIDGE NATIONAL LABORATORY

IIHCC is collaborating with the Oak Ridge Institute for Science and Education (ORISE) program, which provides internship opportunities for undergraduates and graduates. IIHCC is seeking to foster stronger ties between Virginia Tech and ORNL, which provides researchers and students access to distinctive large-scale equipment, facilities, and resources to solve some of the nation's most pressing issues in the fields of science, technology, and materials.

Virginia Tech is offering travel and grant opportunities for faculty seeking to collaborate with ORNL. If you are interested in applying for these funds, please contact Terry Herdman, herd88@vt.edu with the following information:

- Who you will be visiting at ORNL – person or team.
- Which of the six thrust areas outlined by ORNL your research addresses.
- What is the purpose of your visit (e.g., briefly describe what research project the visit could advance and/or what collaboration this will help facilitate).

Faculty members are encouraged to self-organize into small teams that could travel together.



WESTERN PERIMETER ROAD

As part of the University Master Plan, there are ongoing discussions about the Western Perimeter Road which will stretch from the Southgate Drive/Research Center Drive roundabout to Prices Fork Road. This road will further connect areas such as University City Boulevard, Oak Lane, and Duck Pond Drive.

Virginia Tech is working alongside groups such as the Virginia Department of Transportation, the town of Blacksburg, the New River Valley Metropolitan Planning Organization, and Montgomery County to develop this project.

IIHCC is looking into how this project may affect the infrastructure and facilities related to the DA and the opportunities that it presents for future research at Virginia Tech before, during, and after its development.

WORD ON THE STREET *Exploring transdisciplinary and human-centered work around the world*

Harmonizing Photovoltaic Systems and Surrounding Agriculture — A look into efforts taken to decarbonize economic growth and develop renewable energy systems while ensuring the safety and health of ecological cases. Researchers look into the use of photovoltaic technology within the development of urban gardens.

How the Tuberculosis Epidemic Influences Modernist Architecture — An in-depth analysis of how the intersection of the fields of medicine and architecture helped to treat the tuberculosis epidemic, as well as the inspiration it created for an era of architectural design.