

**UNIVERSITY COMMITTEE ON RESEARCH POLICY**  
**Institute for Transportation Studies - MRU Review**  
Monday, February 12, 2018

**Meeting Minutes****Welcome, introductions, and goals for the review**

UCORP Chair Jeff Richman welcomed the Directors and Systemwide Coordinator for the Institute for Transportation Studies and UCORP members introduced themselves. Chair Richman asked for the subcommittees to be prepared with a first draft of their report sections by the next UCORP meeting on March 12.

**ITS-Talk 1:** Overview and research program; research goals and accomplishments; highlight joint achievements across campuses; roadmap of current research; productivity and impact.

The first ITS presentation, by UCLA Director Brian Taylor, provided an overview of the Institutes and their research programs. Professor Taylor highlighted research accomplishments in the areas of autonomous vehicles, electric vehicles for transit agencies, HOV lanes, transit ridership, and the use of cell phones as mobile sensors.

Collaborative achievements across campuses include the prototype design of the Low Carbon Fuel Standard, which was developed by ITS Berkeley and ITS Davis in 2007, and adopted with very few changes by the California Air Resources Board. UC Davis researchers have continued to provide technical assistance for refinements of the standard, which impacts the investment of billions of dollars in the state, nationally, and globally. ITS was a recipient of UCOP's Multi-campus Research Programs and Initiatives (MRPI) award for work on sustainable transportation. The MRPI award laid the groundwork for securing additional funding. The UC Pavement Research Center at Berkeley and Davis provides data, analysis, tools, and recommendations for agencies and local governments about all things pavement-related, including environmental impact, asset management, pavement design, materials selection and construction quality. Director Taylor gave more examples of the Institutes' research productivity and impact, and described collaborations with external partners.

**Discussion**

UCORP members asked about the benefits that come from collaboration. The multi-campus research project funded by MRPI enabled ITS to attract more funding and broaden its research, which in turn helps researchers to be more visible and attract more funding.

While much of the work of ITS involves individual projects such as modeling, simulations, and data gathering, there is often collaborative analysis. There is some cross-campus opportunity for students and post-docs, who might also move from one campus to another as their careers progress. ITS has organized joint conferences and other events over the years.

The ITS history is one that started with collaboration, but then the Institutes became more independent. In recent years the campus branches have become more collaborative once again, partly in response to the UCOP Portfolio Review Group review in 2014. The Institutes participate in many

cooperative, regional, and subject-based partnerships, such as with University Transportation Centers and Cal State campuses.

**ITS-Talk 2:** Education and training; student and postdoc involvement in research; mentorship, careers and opportunities; outreach and communication to the public.

Joan Walker, the Acting Director of ITS-Berkeley, talked about the education and training aspects of the Institutes. ITS is a research unit, not an academic program. It is multi-disciplinary, and its faculty hold appointments in a variety of fields, including civil and environmental engineering, urban planning, and electrical engineering and computer science. ITS also interacts with schools of environmental design, law, business, public affairs, public health, and social ecology. UC Davis and UC Irvine have interdisciplinary graduate transportation programs. There is no widely accepted ranking of transportation programs, as they tend to be an interdisciplinary part of larger programs. Evaluation of the success of the program needs to be found through other metrics, such as the rankings of associated programs, placement of graduates and post-docs, ability to secure extramural funds for research, citations of research, and the application of the Institutes' findings and analysis in the real world. A count in 2015 showed that over a third of transportation faculty at planning programs nationwide received their PhDs from UCLA and UC Berkeley. UC Berkeley and UCLA transportation planning programs are consistently ranked in the top five programs.

While not an academic unit, ITS researchers do teach classes and involve students in research, seminars, conferences, etc. The Institutes engage undergraduate researchers via affiliations with academic departments and other centers. ITS branches engage in professional development and training via the "tech transfer" program and others. These also provide service to public sector employees and other professionals. The Institutes do outreach in the community to try to bring more women and underrepresented minorities into the field.

### **Discussion**

Committee members asked about ITS faculty and graduates' involvement in start-up companies, and whether the Institutes were connected to the Innovation and Entrepreneurship initiative at UCOP. The Directors responded that they are seeing more graduates from quantitative subject areas who go to work for small, private companies like Uber rather than public agencies. The shift has not been documented. Because of the amount funding it receives, the ITS branches attract scholars from a wide array of departments.

In terms of publications, the Directors said that [Access Magazine](#) had been the primary communications publication of the federally-funded Region 9 University Transportation Centers (UTC), of which the ITS branches were members. The magazine was edited and published at Berkeley from 1992-2008, and at UCLA from 2008 to 2017. The UTC has started a new publication, and UC Berkeley has taken over publication of Access Magazine.

ITS has worked in conjunction with the federally-funded University Transportation Centers since 1994.

**ITS-Talk 3:** Resources, Management, and Partnerships: funding, advisory board, relationship with Caltrans, funding agencies, Council of Directors, operations, staff, planning mechanisms

In the third presentation of the day, UC Davis ITS Director Dan Sperling talked about the funding from SB1, which comes from longstanding ITS engagement with state legislature, state agencies, local and regional government, the Governor's office, industry, NGOs, and community groups. ITS has strong partnerships with industry, government, and NGOs around the world. SB1 funding provides UC ITS with \$5 million annually for ten years. 5% of the total goes toward non-ITS UC research; 5% goes toward support of central activities. The research must address California policy and must identify a state client. The research projects are selected through a competitive RFP process. ITS uses a **bottom up** process to solicit input from UC transportation researchers on the priorities identified by stakeholders and an ad-hoc **top-down** approach that invites stakeholder agencies to nominate research topics. Sperling noted that research using SB1 funds will be in line with ITS priorities and projects of the past, and that the faculty review system ensures high quality.

In the first year of SB1 funding, the structure is just coming together. The Board of Advisors, which includes representatives from state agencies, the legislature, and nonprofit organizations, will meet annually. The Board will be presented with a summary ITS research from the prior year and an initial set of recommended research priorities for the next year, as solicited from stakeholders. The Board may then offer its priorities and provide input on which proposals to fund. All ITS branches have their own Board of Advisors, some of whom also serve on the SB1 Board.

The recent hire of Laura Podolsky as statewide coordinator is also the result of SB1 funding. Podolsky will be based in Sacramento and serve as a liaison to the legislature and administration, as well as facilitate systemwide coordination, communication, and engagement activities. She will be involved in creation of new initiatives, drafting proposals, and administering cross-campus funding. As the systemwide point of contact, Podolsky will be able to expedite the connecting of experts with those looking for information.

In addition to the California Department of Transportation (CalTrans), ITS works with numerous other state and regional agencies and local governments. One example is the Connected Corridors Project in Southern California, which brings together multiple jurisdictions, agencies, facilities, and types of data. ITS is also involved in consortia with members from the public and private sector. These consortia, such as ITS-Davis' Sustainable Transportation Energy Pathways Consortium and ITS-Berkeley's DeepDrive, provide funding for research projects for graduate students and faculty. Looking ahead to the future, ITS intends to focus on local government and transit. Local governments will need help to implement the many changes that innovation will bring.

With less funding coming directly from road users (e.g., via gas tax revenue) the state is exploring other ways of generating revenue, such as direct charging for roads. Many ideas that have been explored in academia, and are being put into practice. ITS can have a role in the decisions of the California Air Resources Board, which spends millions of dollars on incentives and wants to be sure they are the right ones. ITS brings people together in Sacramento for lunchtime policy forums on specific topics. The impacts of ITS research and outreach are felt at local level.

## **Discussion**

UCORP members asked for more detail on the decision-making process for new research. ITS tries to steer the topics, with input from legislative analyst office and others. They want to keep the work focused on research and avoid becoming consultants. The Advisory Board, with representatives from many sectors, also helps to guide direction. With SB1 funding, Sacramento is more aware of ITS and the branches are getting more requests.

Committee members thought that ITS research could be used to demonstrate to Sacramento the impact of UC research. A recurring theme seems to be that the legislature does not understand the role of research in the UC system and its contribution to the state. The contributions of graduate student researchers to the work of ITS also seems exemplary.

Other UC campuses do not have the numbers of transportation faculty, but they still get some money from the SB1 funding to work with ITS on certain projects and are part of consortia.

In response to a question about where the Institutes would advocate for more funding, the Directors thought that funding toward education and enriching the graduate student experience would be well used.

#### **ITS-Talk 4: Challenges, solutions, and vision**

UCLA ITS Director Brian Taylor gave the final presentation about the challenges, solutions and future vision for ITS.

In response to the recommendations of the 2014 PRG review, ITS has established a multi-campus structure, including funding at non-ITS campuses; increased the number of multi-campus projects; increased the integration of management functions (although administration and finances remain largely campus-based); and tried to address apparent inequities across campuses with the formula for SB1 allocations. Increased funding has allowed resources to flow to all campuses.

The Directors would like to leverage the SB1 funding to increase funding. California is a leader in transportation innovation, and ITS is a big contributor to that. ITS is seeking funding for two proposals: 1) a large-scale multi-campus collaboration on innovative mobility and 2) a “rapid response” research program to serve immediate research needs of state and local governments. The latter would provide for a scholar or analyst that could pull together data, synthesis, summarize, and deliver to legislators.

The cross-campus collaborations and broad involvement of other contributors helps to attract funding from a wider array of sources. UCOP assisted ITS with securing funding from the state legislature for a past project, and that type of help would again be appreciated for these two projects.

Regarding UCOP’s support for ITS, the Directors said that the key needs now are securing office space in Sacramento for the statewide coordinator, expediting state funding to campuses, and support for state funding augmentation for the two new proposed initiatives.

#### **Discussion**

While the Institutes do not have a defined “roadmap,” there are processes and procedures in place for determining the direction of research. Many stakeholders provide input, including the government and other funders. The four branch Directors have some influence in directing the areas of research. With such a broad scope, there are hundreds of researchers within UC working on transportation-related research. When funding is available, faculty can “bid” on specific elements and integrate it into what they want to do. While SB1 is getting a lot of attention, there are plenty of areas of ITS that won’t be using SB1 funding.

Vice President for Research and Graduate Studies Art Ellis expressed appreciation for the different perspectives expressed during the meeting. ITS operates differently and serves a different function from traditional departments. It's an illustration of how UC research is "making the whole more than the sum of its parts." VP Ellis will solicit feedback on the review process once it is completed.

**Next steps:**

Committee members are expected to provide a first draft of the sections of the report in time for the March 12 UCORP meeting. Further instructions will be sent via email.