1. **Services around CAV**

Connected and automated vehicles are the clear future of transportation. That future is rapidly approaching and cities must be ready to accommodate it. What new services will CAVs create a need for? How will current services need to adapt to continue to meet the needs of travelers? What models, algorithms, infrastructure, policies, and laws are needed?

2. **Smart Cities – Smart Corridors**

As urban congestion rises and opportunities for increased infrastructure become more limited, cities have been turning to technology to meet their mobility needs. Now, with a variety of solutions available cities must determine which to dedicate resources toward. What can cities do to become “smarter” and where should they be spending resources? How can specific technologies further the mobility objectives of the transportation network, ranging from a single corridor to the city at large?

3. **Green Future**

The effects of Climate Change are expected to become more intense and frequent. Transportation systems contribute to more than 25% of the greenhouse gas (GHG) emissions. Therefore, there is a strong need to explore intelligent transportations technologies and services that can reduce the share of GHG emissions from transportation. How can the existing resources and knowledge be used to ensure a greener future? How can the new and upcoming innovations help us achieve our goals? What are the areas that need short-term, medium-term and long-term focus?

4. **Future issues in IoT and Big Data**

In almost every field, the ability to collect and store data has vastly exceeded our ability to examine and process that data. This applies especially to transportation as various forms of connectivity become more prevalent. What applications does this passive source of information have? How can it be used to better address the objectives of the transportation network? What are the best approaches to ensure the cybersecurity of such systems? How can the information from heterogeneous sources be fused for transportation applications?

5. **AI and Machine Learning in ITS**

In recent years, AI and Machine Learning have found several applications in Transportation e.g. learning in autonomous vehicles, demand prediction in ride-sharing services, and traffic video data analysis. There is a strong potential in other transportation applications e.g. how learning methods can help us in real-time perception and prediction of traffic scenes? How can they be used in the control and coordination of traffic leveraging V2V and V2X infrastructure? Other potential applications include: efficient real-time road user detection, mode detection, vulnerable road user’s intent detection, intelligent decision-making and predictive modelling of risks, accidents, demand etc.

6. **Smart Cooperation**

In most regions, the management of traffic and transportation projects is not limited to a single entity, but is instead a collaborative effort between many private and public organizations, including MPOs, state and federal DOTs, construction contractors, etc. How can these organizations better cooperate to achieve their objectives? Are there opportunities to share resources and/or knowledge? How can projects be planned to complement one another