Purdue University hosted the 13th Annual Inter-University Symposium on Infrastructure Management (AISIM13) on June 23, 2017 in West Lafayette, IN. AISIM13 provided students with the opportunity to learn more about the research being done by colleagues at institutions from around the United States and in other countries. Students submitted research papers and presented their work using lectern and poster formats. About 40 students, researchers, and practitioners from Purdue and several other institutions, companies, and organizations convened at the Armstrong Hall of Engineering to present their research work, network with others, and share ideas. There were 3 lectern presentation sessions and a day-long poster session. Topics covered a wide variety of infrastructure management functions and generally covered two modes: highway and railway. The papers presented represented a significant contribution to the field of infrastructure management, and to civil engineering in general.

The keynote speaker of the symposium was Dr. Kumares C. Sinha, the Edgar B. & Hedwig M. Olson Distinguished Professor of Civil Engineering at Purdue University, Faculty Fellow of the Hagler Institute for Advanced Study at Texas A&M University, and Guest Lockheed Martin Professor of Engineering at the University of Central Florida. Dr. Sinha’s talk summarized the challenges and opportunities that seem to arise for transportation infrastructure asset management in the new millennium. The keynote speech was followed by the lectern sessions, with lunch and coffee breaks in between. The program schedule is attached as an addendum to this report. The lectern presentations were fully attended by students and others including Mr. Mike Byers, Executive Director of the American Concrete Products Association, and Ms. Kirsten Pauley, Technical Director of the American Asphalt Association of Indiana. The College of Engineering of Purdue University provided poster boards, three 40-person capacity rooms, furniture, and other logistical support.

After the lectern presentations, AISIM attendees traveled to the Steel Bridge Research, Inspection, Training, and Engineering (S-BRITE) Center where they were hosted by Dr. Robert Connor. The S-BRITE outdoor tour covered features including steel bridge specimens from across the country. These specimens are used for research and bridge inspection training purposes by researchers and practitioners. The AISIM attendees next toured the Robert and Terry Bowen Laboratory for Large-Scale Civil Engineering Research, hosted by Dr. Mark Bowman’s research team. This 66,000 sq.ft. facility provides the capabilities for structural health monitoring, structural control, real-time hybrid testing, and the investigation of the behavior of large structural models and elements subjected to extreme loads including earthquakes, blasts, and collisions. Buses for the laboratory tours were provided by College of Engineering of Purdue University. The laboratory tours were followed by a guided walking tour of the Purdue Campus.

The evening reception provided an excellent opportunity for the AISIM attendees to listen to thought-provoking speeches delivered by skilled and highly-regarded speakers, acknowledge AISIM’s generous sponsors, receive awards, and enjoy a relaxing dinner while socializing with colleagues. The featured speakers were Dr. Jon Fricker, Professor of Civil Engineering at Purdue University and member of the Board of Directors of the Greater Lafayette Public Transportation Corporation (GLPTC), and Mr. Mark Holden, CEO of A&R Logistics, Inc. Dr. Fricker’s talk examined the American Society of Civil Engineers (ASCE) Infrastructure Report Card, and discussed the way ASCE develops its rankings for evaluating the different types of infrastructure. Mr. Holden’s presentation focused on the interrelationships between infrastructure and commerce from the perspective of managing a transportation logistics company. Mr. Holden predicted that the logistics industry will be transformed in the near and long terms by population shifts and advances in technology.
During the reception, AISIM’s generous sponsors were acknowledged with plaques of appreciation. The last event of the evening was the presentation of awards for the best papers and presentations. Yohei Ninomiya from Osaka University received the Best Paper Award for his paper titled “Inspection System for RC Slabs of Expressway Bridges Focused on the Frequency of Generation of Potholes”. Javier Carreras from the University of Wisconsin – Madison and Freddie Salado from Virginia Polytechnic Institute and State University were awarded the 2nd and 3rd place prizes, respectively. The best presentation awards were received by Silvia Nunez and Lasisi Ahmed of the University of Delaware, Isaac Oti of Texas A&M University, Ali Hafiz of Portland State University, Miguel Montoya of Purdue University, and Yohei Ninomiya of Osaka University.

The following day, June 24, 2017, AISIM attendees attended an infrastructure tour of Chicago. The contingent left West Lafayette at 8:00AM and reached downtown Chicago two hours later. The events included an architectural boat tour that started from Navy Pier and covered much of downtown Chicago. The AISIM contingent also visited the 360 Observation Deck of the Hancock Tower for panoramic views of the city.

AISIM 13 would not have been possible without the support of our sponsors. The funds received from our sponsors allowed us to cover the costs of registration, symposium stationery, meals, transportation, and educational tours for the participants. Our sponsors, to whom we are deeply grateful for their generous support, include: Kiewit Corporation, A&R Logistics, Indiana Local Technical Assistance Program, Applied Pavement Technology, Asphalt Pavement Association of Indiana, American Concrete Pavement Association of Indiana, Purdue Lyles School of Civil Engineering, Purdue College of Engineering, Energy Center of Purdue Discovery Park, Center for the Environment of Purdue Discovery Park, Purdue Climate Change Research Center, Dr. Kumares Sinha, and Celsus Corporation.

The AISIM 13 organizing Committee consisted of the following individuals: SeyedAli Ghahari, Tariq Usman Saeed, Thomas Hall, Miguel Montoya, Majed Fedhi Alinizzi Sr., Sikai Chen, Warda Ashraf, Yu Qiao, Zongxin Tang, Nathan Shellhamer, Abdullah Jalal Nafakh, and Arash Habibi-Soureh, all of Purdue University, as well as Prashant Ram of Applied Pavement Technology. The faculty hosts were Dr. Samuel Labi of Purdue University and Dr. Sue McNeil of the University of Delaware.