Abstract (300 words):
The purpose of construction management is to make construction efficient and effective. One of the most frequently studied topics in construction management is construction labor productivity (CLP), which measures productivity as output per person. CLP has been studied extensively in the literature, and often in the form of comparative analysis within a certain region or across regions. One interesting and important comparative study on CLP is to focus on the world’s top two economies by GDP, the U.S. and China. This research first reviews the existing literature with regard to the analysis of CLP, then collects recently published national average productivity data, processes the data, and investigates CLP between the U.S. and China. In order to achieve a comprehensive comparison, productivity data for six major construction activities are analyzed: earthwork, concrete forming, structural steel framing, masonry, roofing, and interior finish work. U.S. labor productivity data is from RSMeans 2018 Building Construction Costs and Chinese labor productivity data is from Shanghai construction quotas. Detailed statistical analyses test the hypothesis that Chinese labor productivity is lower than U.S. labor productivity, confirming previous, but now dated, studies. The place of replication studies in
built environment research is discussed, along with the relationship between academia and industry in this regard. Critical analyses regarding comparison over these specific activities and regional versus national metrics provide direction for future CLP research. Researchers and construction industrial practitioners may rethink the evaluation of CLP between the U.S and China as a result of this study.

Key words: Construction management; Construction labor productivity; Academia; Industry; Comparative studies; United States vs. China; Statistical analysis.

Author(s) Biography (200 words each):
Xi Chen is a Ph.D. candidate in the Built Environment at Stevens Institute of Technology. She earned a master degree in Construction Management at Stevens in 2016. She currently sole teaches Construction Engineering I. She was previously a Teaching Assistant from Fall 2016 to Spring 2018. Her research interest centers on analyzing construction productivity, specifically labor productivity in the U.S. and China. Prior to Stevens, she had three years of pre-construction focused experience on housing resettlement projects in China. She is well versed in contracts, estimating and construction management. She has also worked as a project coordinator for an American construction company, where her duties included drafting contracts, estimating, and coordinating with architects and engineers.

Ellyn Lester is an Associate Professor of Construction Management, Director of Built Environment Programs, and Associate Chair of Graduate Studies for the Civil, Environmental and Ocean Engineering Department at Stevens Institute of Technology. In addition to her teaching and administrative duties, Ellyn Lester serves as the point of contact for the program’s outreach to the professional community. As such, she leads Construction Management Executive Roundtables, organizes professional and company seminars, and negotiates the program’s professional and research relationships with industry. Before joining Stevens, Lester worked at the New School of Architecture and Design in San Diego, was Vice President of Architecture for MBA Management, and was Vice President of Membership Services at the Design-Build Institute of America. Lester has presented her research at numerous regional, national, and international academic and professional conferences, including CIB International Research, ICCF, ASEE, and Amps, as well as ECC International, CMAA National, and AIA
National. Her notable awards include the 2018 Stevens’ Faculty Appreciation Award, 2012 AIA Associate of the Year, and SMPS National’s Striving for Excellence Grand Prize in 2001.

Dr. Linda Thomas is academic unit head for the Department of Integrated Science and Technology (ISAT) at James Madison University in Virginia. She was previously Interim Director of the Civil, Environmental and Ocean Engineering Department and Program Director of the Construction Engineering and Management Program at Stevens Institute of Technology in Hoboken, New Jersey. Thomas spent the last 18 years creating and directing higher education engineering programs. She served as an Active Duty Officer in the US Navy’s Civil Engineer Corps and as Construction Manager for the Atlanta Committee for the 1996 Olympic Games. She has conducted extensive research and published articles in fields such as the Indoor Environment, Construction Engineering, Facilities Management, and Built Environment Law.