

"March 2021 – PhD student Marija Krstic awarded ACI's Construction Award bestowed specifically for *“Development of applications for use of recycled post-consumer glass as SCM for concrete,”* as co-author of the paper titled *Field Application of Recycled Glass Pozzolan for Concrete.*"

Marija Krstic, currently is a Postdoctoral Researcher at the Department of Civil Engineering, CCNY where she completed her Ph.D. (2020) under the advisement of professor Julio F. Davalos. Her research is related to development and characterization of a Post-consumer Recycled Glass as a pozzolanic material for concrete. Due to the scarcity of fly-ash, (a byproduct of coal-burning power plants that are shutting down or converting to a natural gas), there is a need for an alternative sustainable cement replacement. Production of cement is an energy intense process (1.2 tons of cement produces 1 ton of CO₂). The objective of her research was to produce low-carbon concrete with enhanced strength and durability properties. Her work included development of concrete mix designs, macro-level testing and microstructure novel evaluations, applications in projects in NYC, and development of ASTM standards. A comprehensive and multidisciplinary study was achieved with participation of two labs, in the USA (CCNY) and in the Netherlands (TU Delft) and an industry / government collaborative team. Marija's doctoral research is truly transformative for both the glass-recycling and concrete industries, as probably the most revolutionary development for both of these industries in the last 3 decades. Her work was applied in sidewalks and high-rise buildings in NYC and it is gaining an interest to be applied globally. The pioneering project of a sidewalk construction has resulted in publishing a paper in the ACI Journal of Materials titled: Field Application of Recycled Glass Pozzolan for Concrete, July 2019. The paper was awarded the ACI Construction Award at the ACI Convention on March 31st 2021.