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Education

PhD, Civil Engineering, University of Wisconsin - Madison

Key Interests

Sustainable Construction | Recycled Materials | Resilient Infrastructure | Waste | Industrial By-products | Reclamation

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SELECT PUBLICATIONS

- Gebremariam, F., *et al.* (2020). Evaluation of vertical stress distribution in field monitored GRS-IBS structure. *Geosynthetics International* 27(4), 414-431.
- Ullah, S. and Tanyu, B. F. (2019). Methodology to develop design guidelines to construct unbound base course with reclaimed asphalt pavement (RAP). *Construction and Building Materials* 223, 463-476.
- Abbaspour, A., and Tanyu, B. F. (2018). Tufa precipitation from Recycled Concrete Aggregate (RCA) over geotextile: mechanism, composition, and affecting parameters. *Construction and Building Materials* 196, 317-329.

Research Focus

Developing design and construction methodologies to minimize the use of aggregates produced from natural resources in infrastructures such as but not limited to roads, earth retaining structures, foundations, bridge abutments, embankments, waste containment systems, and underground drainage features. Protecting natural resources and use of recycled materials minimize the impact to the environment and contribute to sustainability. In some instances, use of recycled materials and/or geosynthetics also help resiliency as the infrastructures with such materials become more durable than the ones constructed with natural materials. Such cases also contribute to economic advantages.

Current Projects

- Use of recycled concrete aggregate for road construction
- Use of recycled concrete aggregate for MSE wall construction
- Use of reclaimed asphalt pavement to create aggregate for road construction
- Evaluation of longevity of liner systems in salt ponds
- Stabilization with geosynthetics of foundation soils in roadway systems
- Evaluating the contribution of geotextile to the performance of the roadways