**Title:** The Insanity Behind Combining Aggregates Using the Tarantula Curve

**Speaker:** Marllon “Dan” Cook

**Learning objectives**

* Overview of traditional mixture design methods such as ACI 211.
* Highlight common workability issues associated with aggregate gradations.
* Illustrate the three key components of the Tarantula Curve, as shown in the future publication of ACI 211-I, “Assessing Aggregate Grading”.
* Demonstrate how to use ASTM C33 gradations in a concrete mixture design.
* Helpful suggestions for concrete mixture design submittals with combined gradation plots.

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**Background Summary**

Dr. Dan Cook is a 4th generation concrete finisher and obtained his Ph.D. in Civil Engineering from Oklahoma State University. He grew up working for his family-owned concrete construction company starting as a labor and working through the positions of finisher, foreman, and estimator. Also, Dr. Cook was a technical service engineer for Buzzi Unicem USA and Alamo Cement Company. Dr. Cook is a member of ACI 211 Concrete Mixture Design, ACI 302 Construction of Floor Slabs, and ACI 309 Consolidation of Concrete. He has been a past main voting member of ASTM 04.02 “Concrete and Aggregates”. Currently, Dr. Cook is an assistant professor of practice in Construction Engineering Technology at Oklahoma State University and the director of the Oklahoma DOT Training Center for materials testing & inspecting. Dr. Cook has given more than 70 presentations at both local and national conferences all over the United States.