

CCSU
DEPARTMENT OF MATHEMATICAL SCIENCES

COLLOQUIUM

Friday, February 27

3:00 – 4:00 PM

Maria Sanford, Room 101

INTEGRALS

VIA THE METHOD OF BRACKETS

FERYAL ALAYONT

GRAND VALLEY STATE UNIVERSITY

ONLINE PRESENTATION

Abstract: The method of brackets is a technique for evaluating definite integrals over $[0, \infty)$ by converting them into algebraic expressions involving series and Gamma functions. The method generalizes Ramanujan's Master Theorem and was introduced by Ivan Gonzalez in his PhD thesis in the context of integrals arising from Feynman diagrams, with further development by Gonzalez and Moll.

In this talk, we will present the basic framework of the method through concrete examples, emphasizing how it can be applied systematically to families of integrals. We will work through an integral sequence to illustrate how the method leads to concise evaluations that would be more cumbersome using standard techniques. The talk is intended to be accessible to a broad audience, including undergraduate students with a background in calculus.

To join us online use the following link: <https://ccsu.webex.com/meet/gotchev>

For further information: gotchevi@ccsu.edu; 860-832-2839;

<http://mathcolloquium.sites.ccsu.edu/>