

---

**DAMANVIR SINGH BINNER**, Simon Fraser University

*Proofs of Berkovich and Uncu's Conjectures on Integer Partitions using Frobenius numbers*

We use techniques from elementary number theory (such as Frobenius numbers) to combinatorially prove four recent conjectures of Berkovich and Uncu (Ann. Comb. 23 (2019) 263284) regarding inequalities between the sizes of two closely related sets consisting of integer partitions whose parts lie in the interval  $s, s+1, \dots, L+s$ . Further restrictions are placed on the sets by specifying impermissible parts as well as a minimum part.