The 8th International Conference on Lattice Path Combinatorics and Applications
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Title: **Congruences for the Fishburn Numbers**

Presented by: **George Andrews and James Sellers**

ABSTRACT: This talk will present joint work with James Sellers. The Fishburn numbers, xi(n), have many interpretations (we will describe many of them in the talk). For example, xi(n) equals the number of upper triangular matrices with nonnegative integer entries and without zero rows or zero columns such that the sum of all the entries equals n. Thus xi(3)=5; the relevant five matrices being:

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100    20    10    11    3
010    01    02    01
001
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In addition to discussing the numerous interpretations of xi(n), we will prove an infinite family of congruences for xi(n). The simplest of these being that 5 divides both xi(5n+3) and xi(5n+4).