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, $x_i(n)$, have many interpretations (we will describe many of them in the talk). For example, $x_i(n)$ 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 $x_i(3)=5$; the relevant five matrices being:

\[
\begin{array}{cccc}
100 & 20 & 10 & 11 & 3 \\
010 & 01 & 02 & 01 & \\
001 & \\
\end{array}
\]

In addition to discussing the numerous interpretations of $x_i(n)$, we will prove an infinite family of congruences for $x_i(n)$. The simplest of these being that 5 divides both $x_i(5n+3)$ and $x_i(5n+4)$.