Department of Mathematics

Fall 2014 Colloquium Series

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\begin{array}{ccccc}
1 & 2 & 3 & \cdots & n \\
2 & 4 & 6 & \cdots & 2n \\
3 & 6 & 9 & \cdots & 3n \\
\vdots & \vdots & \vdots & \ddots & \vdots \\
n & 2n & 3n & \cdots & n^2
\end{array}
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\begin{array}{ccccc}
1 & 2 & 3 & \cdots & n \\
2 & 4 & 6 & \cdots & 2n \\
3 & 6 & 9 & \cdots & 3n \\
\vdots & \vdots & \vdots & \ddots & \vdots \\
n & 2n & 3n & \cdots & n^2
\end{array}
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"Using Fubini's Principle in Counting Problems"

Dale Oliver, Ph. D.
Humboldt State University

Thursday, September 18, 2014
Behavioral and Social Sciences Building Room 204 4 p.m.

The Fubini principle in Combinatorics (the study of counting) says that if you can't count something directly, try to express the count in two different ways and then set the two expressions equal to one another. This principle bears the name of Guido Fubini, whose theorem in 1907 established conditions in analysis under which it is possible to compute a double integral regardless of the order of integration. (Euler and others know of these conditions for most of the functions encountered by undergraduates, but Fubini established the conditions for more general contexts. In this colloquium, we won't do any analysis – only counting. Expect to engage in some fun problems and to appreciate the power of the Fubini principle in a discrete context.

Dale Oliver is a faculty member of the HSU Department of Mathematics.

We invite you to the Pre-colloquium Tea on the third floor of the BSS building at 3:30 on Thursday.