

Math/Computer Science Colloquium Series

Multiplication Without Numbers:

A First Look at Groups

Anders Hendrickson

$$\begin{aligned} \vec{r}_1, \vec{r}_2 / r_2 = f^4 = rfrf = e & \quad G = N \rtimes H \\ \vec{a} \times \vec{b} = \vec{c} & \\ ab^{-1}cd^{-1} & \quad AG = \{g^{-1}ag : g \in G\} \\ & \quad x_1 \wedge x_2 \end{aligned}$$

Open a book of advanced mathematics, and you might be surprised at how few numbers there are on the pages. When asked to help split the check at a restaurant, many a professional mathematician has responded, “Ask my friend the engineer; I haven’t used numbers in years.” How is it that so much mathematics has so little to do with numbers? What kind of multiplication involves no numbers at all? Dr. Hendrickson will use this question as an introduction to the fascinating subject of group theory, and he will also provide cookies from his kitchen.

Tuesday, January 26

2:45 p.m.

Ivers 218

Homemade Cookies!