1084-54-79 **I Namioka*** (namioka@math.washington.edu), University of Washington, Department of Mathematics, Box 354350, Seattle, WA 98195. *Separate versus joint continuity.*

Let X, Y, Z be topological spaces, and let $f : X \times Y \to Z$ be a map. The map f is said to be separately continuous if for each $a \in X$ the map $y \mapsto f(a, y)$ is continuous on Y, and for each $b \in Y$ the map $x \mapsto f(x, b)$ is continuous on X. The map f is said to be jointly continuous at $(a, b) \in X \times Y$ if it is continuous with respect to the product topology. Our general problem is: given a separately continuous map f as above, what can one say about the set C of all points in $X \times Y$ where f is jointly continuous ?. One can certainly not expect $C = X \times Y$ even in the simple case of $X = Y = Z = [0, 1]$.

In my talk I will describe what led me to this problem, what was known then, and finally how other mathematicians improved upon what I published in 1974. (Received August 22, 2012)