Abstract: We study invasion percolation in two dimensions. We compare connectivity properties of the origins invaded region to those of (a) the critical percolation cluster of the origin and (b) the incipient infinite cluster. To exhibit similarities, we show that for any $k \geq 1$, the $k$-point function of the first so-called pond has the same asymptotic behavior as the probability that $k$ points are in the critical cluster of the origin. More prominent, though, are the differences. We show that there are infinitely many ponds that contain many large disjoint $p_c$-open clusters. Further, for $k \geq 1$, we compute the exact decay rate of the distribution of the radius of the $k$th pond and see that it differs from that of the radius of the critical cluster of the origin. We finish by showing that the invasion percolation measure and the incipient infinite cluster measure are mutually singular.

Keywords: Invasion percolation, invasion ponds, critical percolation, near critical percolation, correlation length, scaling relations, incipient infinite cluster, singularity.