

## PINNING DOWN FAMILIES OF OPEN SETS

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The set  $A$  *pins down* the family of sets  $\mathcal{S}$  if  $A \cap S \neq \emptyset$  for every non-empty  $S \in \mathcal{S}$ . Moreover,

$$pd(\mathcal{S}) = \min\{|A| : A \text{ pins down } \mathcal{S}\}$$

is the pinning down number of  $\mathcal{S}$ .

So, if  $\langle X, \tau \rangle$  is a topological space then  $A \subset X$  pins down  $\tau$  means that  $A$  is *dense* in the space  $\langle X, \tau \rangle$ , and  $pd(\tau) = d(X)$  is called the *density* of  $X$ .

In this talk I intend to present several recent joint results with L. Soukup and Z. Szentmiklssy concerning dense subsets of Hausdorff topological spaces and some variations of them that concern sets pinning down certain families of open sets in such spaces.

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