ON HALL PROPERTIES FOR SUBGROUPS OF FINITE GROUPS

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Let π be a set of primes and π' be its complement in the set of all primes. For a natural number n we denote by $\pi(n)$ the set of prime divisors of n, and for a finite group G by $\pi(G)$ we denote $\pi(|G|)$, where $|G|$ is the order of G.

A subgroup H of a finite group G is called a π-*Hall* subgroup, if $\pi(H) \subseteq \pi$ and $\pi(|G|/|H|) \subseteq \pi'$. Following P.Hall we say that a finite group G satisfies E_π, if it possesses a π-Hall subgroup; G satisfies C_π, if G satisfies E_π and all π-Hall subgroups are conjugate; G satisfies D_π, if G satisfies C_π and each π-subgroup of G is included in a π-Hall subgroup of G.

In our talk we discuss what subgroups of an E_π- (respectively, a C_π-, a D_π-) group satisfy E_π (respectively C_π, D_π).