## Radicals in classification of commutative reduced filial rings

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**Abstract.** A ring in which every accessible subring is an ideal is called filial. Let  $\mathbb{S} = \{R : \forall_{x \in R} x \in Rx^2\}$  be the class of all strongly regular rings,  $\mathbb{S}_a = \{R : \forall_{x \in R} \exists_{n \in \mathbb{N}} nx \in Rx^2\}$  be the class of all almost strongly regular rings and for a prime p let  $\mathcal{T}_p = \{R : pR = R\}$ .  $\mathbb{S}, \mathbb{S}_a, \mathcal{T}_p$  are radical classes. The aim of the talk is to present properties and applications of above radicals in classification of commutative reduced filial rings.

## References

[1] R.R. Andruszkiewicz, E.R. Puczyłowski, On filial rings. Portugal. Math. 45 (1988), 139–149.

[2] R.R. Andruszkiewicz, The classification of integral domains in which the relation of being an ideal is transitive. *Comm. Algebra.* **31** (2003), 2067–2093.

[3] R.R. Andruszkiewicz, M. Sobolewska, Commutative reduced filial rings. *Algebra and Discrete Math.* **3** (2007), 18–26.

[4] R.R. Andruszkiewicz, K. Pryszczepko A classification of commutative reduced filial rings. *Comm. Algebra.* to apper.

[5] G. Ehrlich, Filial rings. Portugal. Math. 42 (1983/1984), 185–194.

[6] M. Filipowicz, E.R. Puczyłowski, Left filial rings. Algebra Collog. 11(3) (2004), 335–344.

[7] M. Filipowicz, E.R. Puczyłowski, On filial and left filial rings. *Publ. Math. Debrecen.* **66**(3-4) (2005), 257–267.

[8] A.D. Sands, On ideals in over-rings. Publ. Math. Debrecen. 35 (1988), 273–279.

[9] F.A. Szász, Radical of rings. Akademiami Kiado, Budapest 1981.

[10] S. Veldsman, Extensions and ideals of rings. Publ. Math. Debrecen. 38 (1991), 297–309.