NEW TRENDS IN RINGS AND MODULES I
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RELATIVIZATION, ABSOLUTIZATION, AND LATTICIZATION IN RING AND MODULE THEORY

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Abstract. The aim of this talk is to illustrate a **general strategy** which consists on putting a ring/module-theoretical result into a latticial frame (we call it *latticization*), in order to translate that result to Grothendieck categories (we call it *absolutization*) and module categories equipped with hereditary torsion theories (we call it *relativization*). The renowned *Hopkins-Levitzki Theorem* and *Osofsky-Smith Theorem* from Ring and Module Theory are among the most relevant illustrations of this strategy.

An effort will be made to keep the exposition as self-contained as possible.

References

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[2] T. Albu: *The Osofsky-Smith Theorem for modular lattices, and applications (I)*, Comm. Algebra **39** (2011), 4488-4506.

[3] T. Albu: *The Osofsky-Smith Theorem for modular lattices, and applications (II)*, Comm. Algebra **42** (2014), 2663-2683.

[4] T. Albu: *Chain Conditions in Modular Lattices with Applications to Grothendieck Categories and Torsion Theories*, Monograph Series of the Parana's Mathematical Society No. 1 - 2015, Sociedade Paranaense de Matemática, Maringá, Paraná, Brasil, 2015, 134 pages.

[5] T. Albu: *Relativization, absolutization, and latticization in Ring and Module Theory*, São Paulo J. Math. Sci. **10** (2016), 180-218.

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