# On Differential Colocalizations on Coalgebras

Indah Emilia Wijayanti

Universitas Gadjah Mada
E-mail: ind_wijayanti@ugm.ac.id

Differential torsion theories have already well known. For a cohereditary torsion theory $\tau$, every derivation on an $R$-module can be lifted uniquely to its module of coquotients. Some concrete examples of cohereditary torsion theory in category of $M$-subgenerated modules $\sigma[M]$ has been given. In this work we will apply it to coalgebras.

## References

[1] Brzezinski, T., Wisbauer, R., 2003, Corings and Comodules, Cambridge University Press.

[2] Bland, P.E., 2006, Differential Torsion Theory, Journal of Pure and Applied Algebra 204, 1-8.

[3] Clark, J., Vanaja, N., Lomp, Ch. and Wisbauer, R., 2006, Lifting modules, Birkhaeuser Verlag, Basel.

[4] Golan, J., 1981, Extensions of derivations to modules of quotients, Communications in Algebra 9 (3), 275-281.

[5] Ohtake, K., 1977, Colocalization and localization, Journal of Pure and Applied Algebra 11, 217-241.

[6] Wisbauer, R., Modules and algebras : bimodule structure and group actions on algebras, Addison Wesley Longman Limited, Essex, 1996.