Constellation Rearrangement in Cooperative Relay-HARQ Network

***Abstract*—We study the constellation rearrangement (CoRe) problem in a relay-HARQ network to achieve symbol mapping diversity for reliable communication. Specifically, we formulate the bit error rate (BER) maximization into a quadratic three-dimensional assignment problem (Q3AP) and make use of the recent development of numerical method to find the optimal CoRe solution. Performance gains on various channel settings are demonstrated with simulations.**

References

[1] H. L. Koch, "Some personality correlates of sex, sibling position, and sex of sibling among five-and six-year-old children." *Genetic Psychology Monographs*, 1955.