# CS 290F HW 2: Paper Reviewing and Analysis

## I. Introduction

In this assignment, we analyze two papers[1], [2]. We will use the below template, or form, for our reviews:

- Familiarity: Rate your familiarity with the topic of the paper.
  - Expert (I conduct(ed) active research work in this topic)
  - Familiar (I am well aware of research work in this topic)
  - Some knowledge (I am marginally aware of research work in this topic)
  - Novice (I am not familiar with research work in this area, and serve as an outsider reviewer)
- Recommendation: Your overall rating
  - Definite accept (top 5%, excellent paper)
  - Likely accept (top 15% but not top 5%, significant contribution)
  - Accept if room (top 30% but not top 15%, borderline)
  - Likely Reject (top 50% but not in top 30%, needs more work)
  - Definite Reject (bottom 50%)
- Strengths: What are the major reasons to accept the paper? [Be brief.]
- Weaknesses: What are the major reasons NOT to accept the paper? [Be brief.]
- Detailed Comments: Please provide detailed comments that will help the TPC assess the paper and help provide feedback to the authors.

## II. Paper 1 Review: Coupons: "A Multilevel Incentive Scheme for Information Dissemination in Mobile Networks"

- Familiarity:
  - Expert (I conduct(ed) active research work in this topic)
  - **Familiar (I am well aware of research work in this topic)**
  - Some knowledge (I am marginally aware of research work in this topic)
  - Novice (I am not familiar with research work in this area, and serve as an outsider reviewer)
- Recommendation:
  - Definite accept (top 5%, excellent paper)
  - **Likely accept (top 15% but not top 5%, significant contribution)**
  - Accept if room (top 30% but not top 15%, borderline)
  - Likely Reject (top 50% but not in top 30%, needs more work)
  - Definite Reject (bottom 50%)
- Strengths:
  - The main reason why I would accept this paper is because of how well-written it is, and how there is a flow in the story.
  - This paper leaves no questions unanswered that I can think of.
  - Excellent citation and discussion of related work. It is clear that all relevant work has been discussed. The contribution of this work is clear and trusted.
  - Very good evaluation of results. All the graphs were meaningful, and served a purpose.
  - Comparison to previous Coupon paper and the discussion of the additional contributions of this paper were extremely useful.
- Weaknesses:
  - The practical application of the Coupon system seems to be exclude, or rather not work for, data transfer in wireless networks where reward points can not really be quantified or given value. This is a weakness because most common data transfers in wireless networks are of that nature (such as file sharing).
  - In Section 5.1, the point system was unclear. What is the operational cost of transmission?
- Detailed Comments:
  - When reading the paper, questions would come up in one section, which seem to be unanswered, then they are answered in the following section. It would be easier for the reader to know that a more detailed explanation would come in the following section. There are multiple instances of this, for example:

    - In section 2, when coupon tranmissions are said to be *periodic*, readers would question whether this periodicity will be addressed, which it is in Section 3.1.
    - In Section 3.1, the discussion of how the two most imporant system parameters, i.e. *node density* and *system saturation*, will be used in the *broadcast frequency algorithm* is relevant to explaining how a complex solution can be replaced with a simpler solution, which is the solution proposed in this paper. However, this idea only comes through in Section 3.2. While reading Section 3.1, the explanation seems too general for two variables that seem important. We only later understand that a higher level explanation level was given to justify a simpler, possibly more effective, method.
    - In Section 3.2, when describing the *Probability-based scheme*, the authors evaluate this scheme using two different rates. It is unclear why those two rates are chosen. Why these values are chosen are later explained in Section 4.1 when discussing the implementation of the scheme.
  - English mistake in the summarizing paragraph in Section 4.3 *First, it is **an efficient** for distributing a....*

## III. Paper 2 Review: "Congestion-Aware Rate Adaptation in Wireless Networks: A Measurement-Driven Approach"

- Familiarity:
  - Expert (I conduct(ed) active research work in this topic)
  - **Familiar (I am well aware of research work in this topic)**
  - Some knowledge (I am marginally aware of research work in this topic)
  - Novice (I am not familiar with research work in this area, and serve as an outsider reviewer)
- Recommendation:
  - Definite accept (top 5%, excellent paper)
  - **Likely accept (top 15% but not top 5%, significant contribution)**
  - Accept if room (top 30% but not top 15%, borderline)
  - Likely Reject (top 50% but not in top 30%, needs more work)
  - Definite Reject (bottom 50%)
- Strengths:
  - The problem and the need for a solution to the problem addressed in this paper are clear and important, which is the need to identify and characterize congestion in wireless networks in order to improve rate adaptation.
  - Comprehensive discussion of the related work and of the rate adaptation schemes over which the proposed solution is built over. We can trust that the authors have done their research.
  - The results are interesting, and the evaluation of the results is comprehensive.
  - Proposed solutions are tested on real-life data, and proposed rate-adaptation scheme is evaluated using an implementation. This increases credibility.
- Weaknesses:
  - Solution is straight-forward. It might not be very convincing or ground-breaking.
  - The conclusion is not good.
- Detailed Comments:
  - It might be a concern that the testbed used to evaluate the rate-adaptation solution is not practical.

## References

[1] A. Garyfalos and K. C. Almeroth, "Coupons: A multilevel incentive scheme for information dissemination in mobile networks," *IEEE Transactions on Mobile Computing*, vol. 7, no. 6, pp. 792–804, Jun. 2008.

[2] P. A. K. Acharya, A. Sharma, E. M. Belding, K. C. Almeroth, and K. Papagiannaki, "Congestion-aware rate adaptation in wireless networks: A measurement-driven approach," in *In Proceedings of IEEE SECON*, 2008.