

## Electrical and Computer Engineering Plagiarism Exercise

### 1. Here is a paragraph quoted from a paper by Chu and Lin titled "Survivability and performance optimization." Please read it carefully.

In this paper, we investigate the survivability of mobile wireless communication networks in the event of base station (BS) failure. A survivable network is modeled as a mathematical optimization problem in which the objective is to minimize the total amount of blocked traffic. We apply Lagrangean relaxation as a solution approach and analyze the experiment results in terms of the blocking rate, service rate, and CPU time. The results show that the total call blocking rate (CBR) is much less sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy; therefore, the more traffic loaded, the less the service rate will vary.

Kuo-Chung Chu and Frank Yeong-Sung Lin, 2006. Survivability and performance optimization of mobile wireless communication networks in the event of base station failure. *Computers and Electrical Engineering* 32: 50-64.

### 2. Here are eight different sentences from other papers that refer to Chu and Lin. Read each one carefully and determine whether it does or does not give paper credit to the paper above. Explain your answer.

1. Results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy.
2. Results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy (Chu and Lin, 2006).
3. Some experimental "results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy." (Chu and Lin, 2006).
4. When the traffic load is light, rather than heavy, results show that the total call blocking rate (CBR) is much less sensitive to the call blocking probability (CBP) threshold of each BS.
5. When the traffic load is light, rather than heavy, results show that the total call blocking rate (CBR) is much less sensitive to the call blocking probability (CBP) threshold of each BS (Chu and Lin, 2006).
6. Traffic load has been proposed to correlate with call blocking probability of base stations.
7. Traffic load has been proposed to correlate with call blocking probability of base stations (Chu and Lin, 2006).
8. Experiments have shown not only a correlation between base station failure, total call blocking rates, and traffic load but, furthermore, that when loads are manageable and a base station fails, fewer calls are blocked (Chu and Lin, 2006).

by Gary Comstock, NC State University: Exercise modeled on work of Charlotte Bronson, Iowa State University

## Electrical and Computer Engineering Plagiarism Exercise **KEY**

1. Results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy.

*Almost everyone agrees that this is plagiarism because the wording is almost identical to that of Chu and Lin and, in addition, there is no citation to give credit for the ideas.*

2. Results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy (Chu and Lin, 2006).

*Almost everyone agrees this is plagiarism because, even though the citation gives proper credit for the ideas, the wording is almost identical to that of Chu and Lin.*

3. Some experimental "results show that the total call blocking rate (CBR) is not as sensitive to the call blocking probability (CBP) threshold of each BS when the load is light, rather than heavy" (Chu and Lin, 2006).

*Almost everyone agrees that this is not plagiarism. However, it is an improper quotation because the words in quotes are not identical to what Chu and Lin wrote. Another point worth discussing is that quotes should only be used when the wording of the original author is so important that the information can not be conveyed in the writer's own words. Quotations should not be used as a substitute for understanding!*

4. When the traffic load is light, rather than heavy, results show that the total call blocking rate (CBR) is much less sensitive to the call blocking probability (CBP) threshold of each BS.

*Almost everyone agrees this is plagiarism because there is no citation to give credit for the ideas. Most readers also recognize that the writer has only reversed the order of Chu and Lin's 1st and 2nd clauses.*

5. When the traffic load is light, rather than heavy, results show that the total call blocking rate (CBR) is much less sensitive to the call blocking probability (CBP) threshold of each BS (Chu and Lin, 2006).

*Most faculty consider this plagiarism, but only about half of graduate students consider it plagiarism. Faculty think it is plagiarism because, although a citation gives credit for the ideas, the wording is only a slight modification of that of Chu and Lin. This example is worth discussing at length because of the disagreement. Many students consider acceptable the rearrangement and substitution of words to make a sentence their own. Note that it was not necessary to understand what Chu and Lin wrote in order to write example 5.*

6. Traffic load has been proposed to correlate with call blocking probability of base stations.

*Depends: Not plagiarism if this information is common knowledge. Plagiarism if not common knowledge because no credit is given for the ideas.*

7. Traffic load has been proposed to correlate with call blocking probability of base stations (Chu and Lin, 2006).

*This is not plagiarism. Note that, to write examples 6, 7 and 8, the writer had first genuinely to understand what Chu and Lin had written.*

8. Experiments have shown not only a correlation between base station failure, total call blocking rates, and traffic load but, furthermore, that when loads are manageable and a base station fails, fewer calls are blocked (Chu and Lin, 2006).

*This is not plagiarism. The writer clearly understands the passage from Chu and Lin and is expressing it in their own words.*

Comments in red are mostly the words of Charlotte Bronson, Iowa State University, adapted slightly by G. Comstock, NC State to apply to this exercise.