



# Faculty of Computer Science 2005–2006 Seminar Series

“Minimum Cycle Bases of Graphs”

By

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*3:30pm*

*ITC317*

Cycle bases of graphs were introduced by Kirchoff in the mid 1800's.

Any cycle in the graph can be used to produce an equation using his laws.

The equations are complete and not redundant if and only if the cycles form a basis for the cycle space. The smaller the set of cycles, the simpler the set of equations, so we want to find the smallest cycle basis. I found the first polynomial time algorithm in 1987. It has been used in many other fields since then.

Today I will talk on what happens if we consider the minimal cycle basis over something other than just the field of two elements. This is joint work with Franz Berger of the Technical University of Vienna.

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STUDENTS ARE ENCOURAGED TO ATTEND  
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