

## CAPSTONE PROPOSAL

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For my capstone project I will be studying Markov bases under the guidance of Dr. Trevor McGuire. Markov bases are a tool used in algebraic statistics and algebraic geometry. I will most likely start by looking at the relationship between Markov bases and numerical semigroups. Dr. McGuire has helped me to identify a few sources that will get me started on my studies. I have attached a list of these.

### REFERENCES

- [1] 4ti2 team. 4ti2—a software package for algebraic, geometric and combinatorial problems on linear spaces. Available at [www.4ti2.de](http://www.4ti2.de).
- [2] S. Aoki, H. Hara, and A. Takemura. *Markov Bases in Algebraic Statistics*. Springer Series in Statistics. Springer New York, 2012.
- [3] Mathias Drton, Bernd Sturmfels, and Seth Sullivant. Lectures on algebraic statistics, 2008.
- [4] J.C. Rosales and P.A. García-Sánchez. *Numerical Semigroups*. Developments in Mathematics. Springer New York, 2009.