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**Pagnoncelli, Bernardo K.; Schnoor, Miguel A.K.; Palmeira, Carlos F. B.; Cayres, Rafael**  
**Cournot equilibrium: modern techniques applied to an old problem.**

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Summary: The Cournot oligopoly model was introduced in the 19th century, and has been extensively studied since then. Most textbooks in economics treat simplified cases only, with 2 or 3 firms competing for the market. Here we show how the use of linear algebra in a level above undergraduate courses can lead to the description of long term behavior for the more general situations. Several modelling issues are considered such as discrete or continuous time periods and constant or linear marginal costs.

*Classification:* M45

*Keywords:* oligopoly problem; eigenvalues; Sherman-Morrison's formula

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