

# Seminari Informal de Matemàtiques de Barcelona

**Speaker:** David Ruiz.

**Universitat:** Universitetet i Oslo.

**Data:** dimarts 21 de febrer de 2012.

**Hora:** 17:15, cafè i galetes; 17:30, inici.

**Lloc:** Aula IMUB (al terrat), Facultat de Matemàtiques de la UB.

**Títol:** An approach to Mathematical Finance.

**Resum:** Mathematics has become a very important tool for the good management of the economy of a financial or insurance company and the correct way of pricing financial instruments is also of relevance, as well as the good way to manage with the risk of a strategy when investing in a financial market.

In this talk we will have a preliminary introduction on financial concepts such as, financial market, self-financing portfolio, financial contract, the concept of risk, and more. We will also introduce the Black-Scholes-Merton model.

Then, we will talk about pricing theory and introduce a way to price financial contracts following what is known as the arbitrage-free principle. We will explain the concept of arbitrage and show some formulas to price financial options. We will also try to introduce the change of *numéraire* technique.



**Qui som?** El SIMBa és un seminari jove organitzat per estudiants de doctorat de matemàtiques. Està dirigit a estudiants de doctorat, de màster i, fins i tot, dels darrers cursos de grau. El nostre objectiu és donar a conèixer la recerca que estem fent, així com adquirir coneixements d'altres àrees de les matemàtiques diferents de la pròpia.

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