



**The Abdus Salam
International Centre for Theoretical Physics**



2265-16

**Advanced School on Understanding and Prediction of Earthquakes and
other Extreme Events in Complex Systems**

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**Optimal Development
and Seeds of Change
in Economic Trends**

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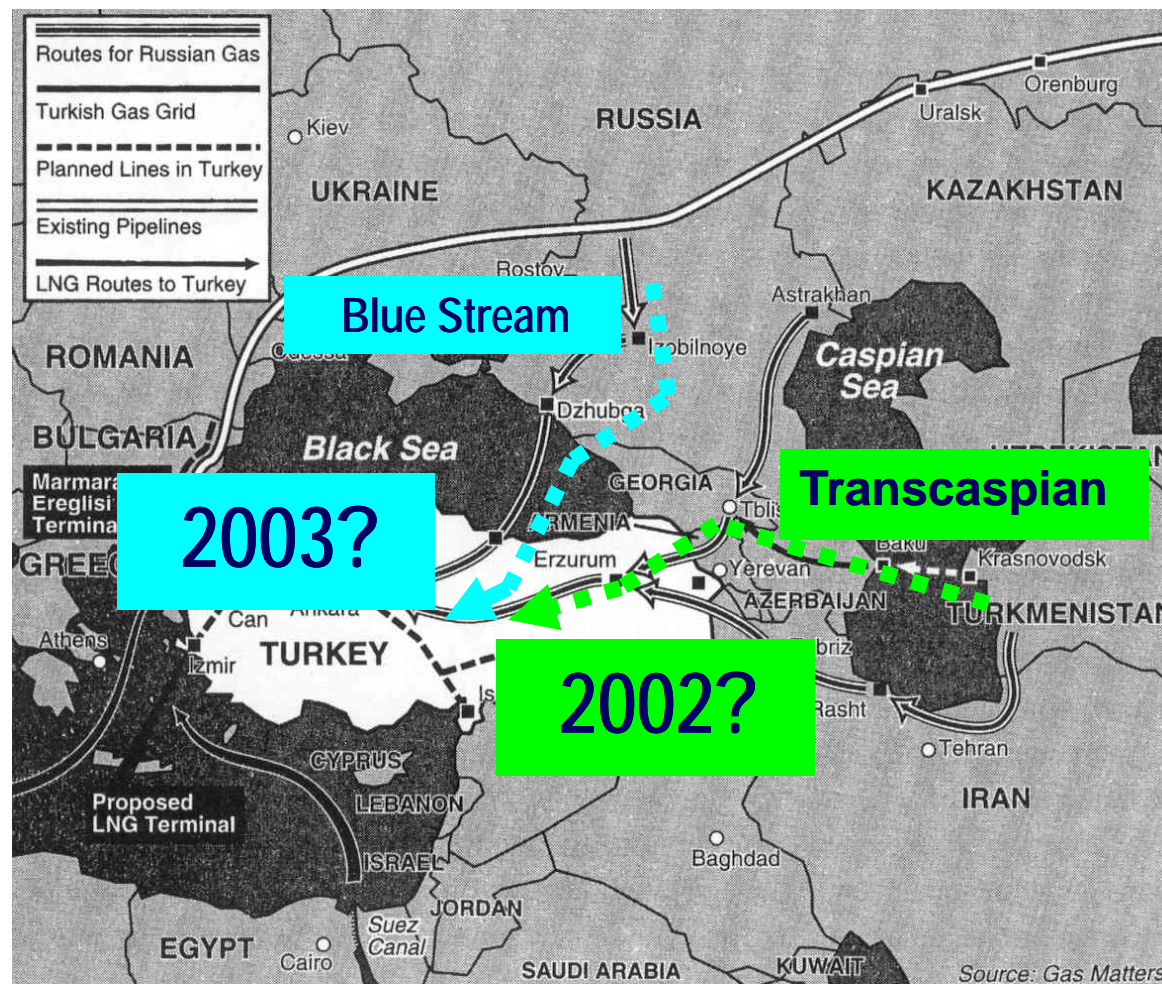
Arkady Kryazhimskiy

Optimal Development and Seeds of Change in Economic Trends

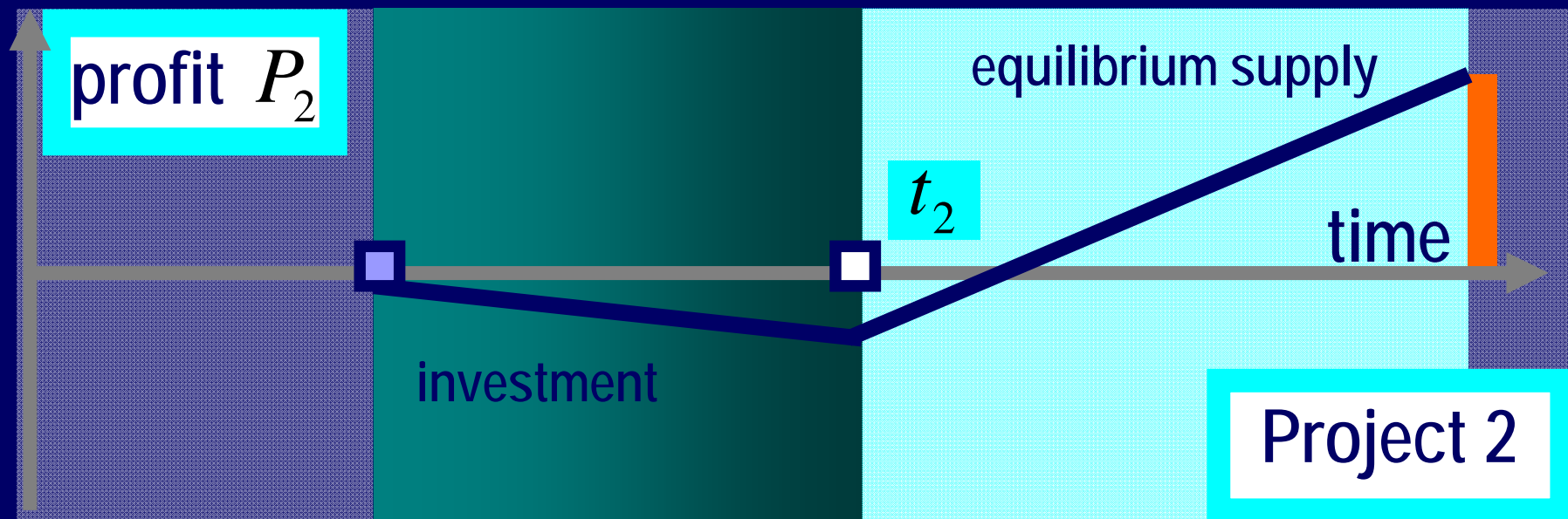
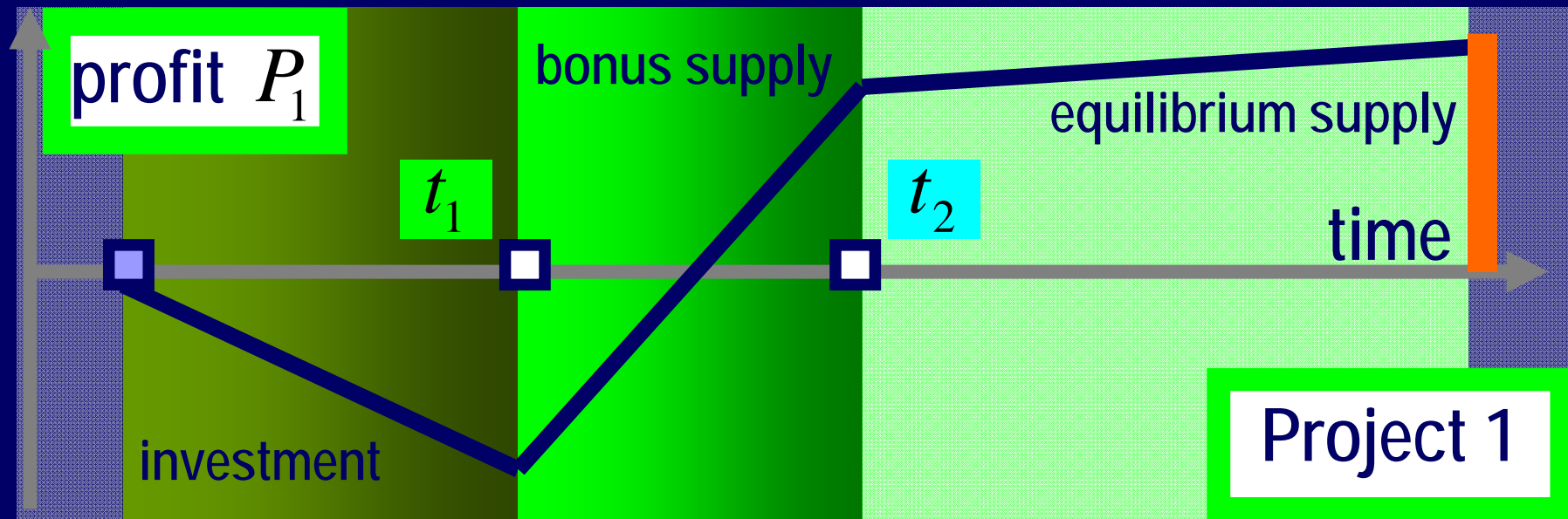
Trieste, October 4, 2011

Competition

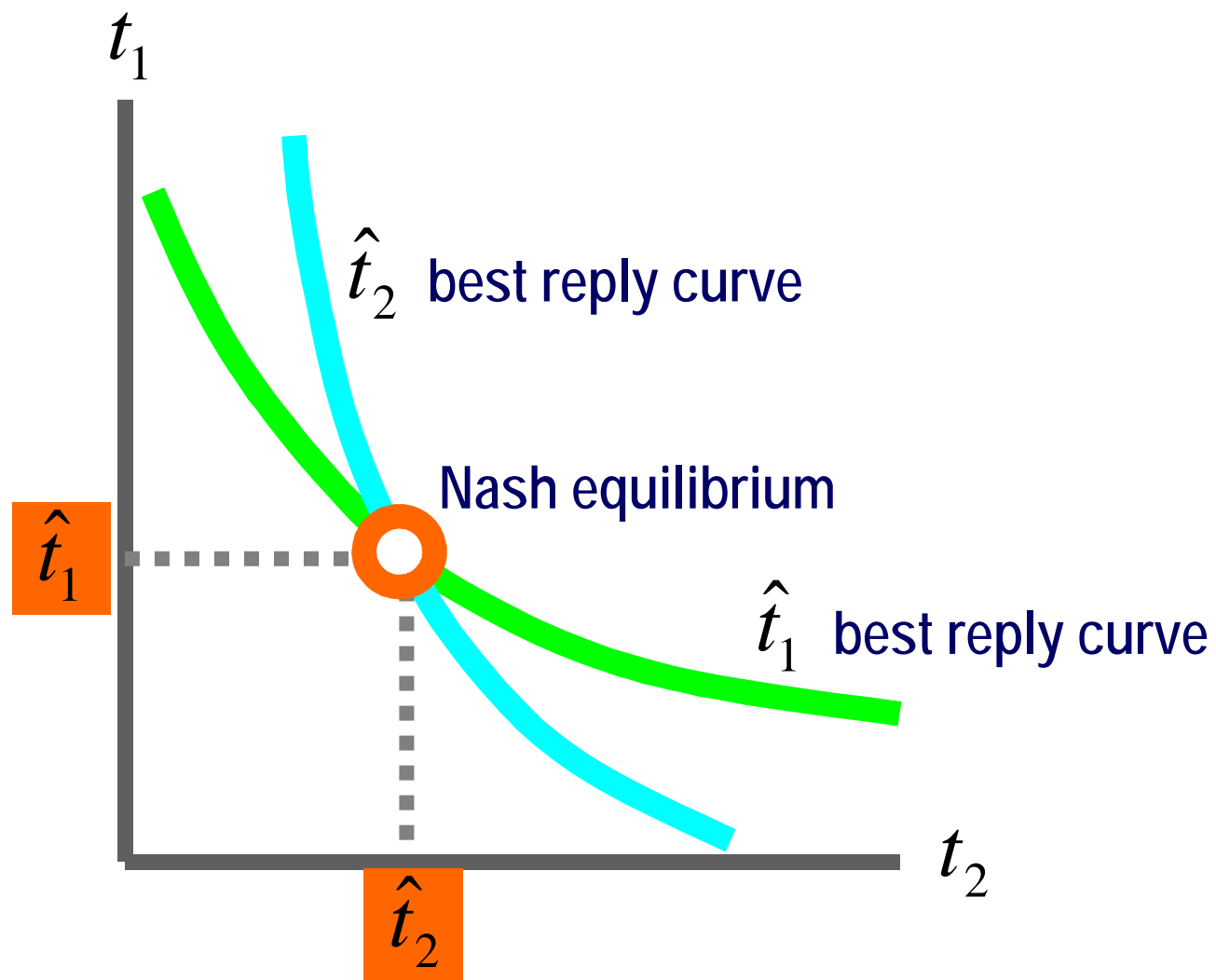
Turkish gas market, 2001



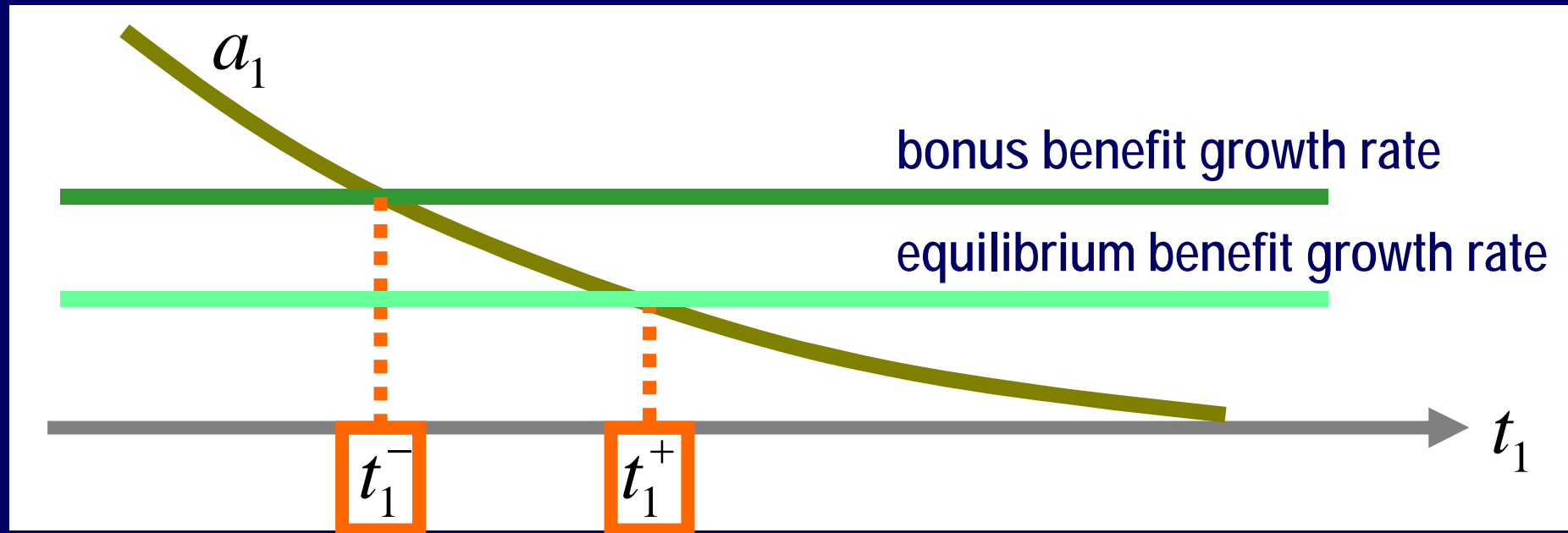
Competition



Competition



Competition



$$P_1 = -C_1(t_1) + B_1(t_1, t_2)$$

cost benefit

$$\partial P_1 / \partial t_1 = a_1(t_1) - b_1(t_1 | t_2)$$

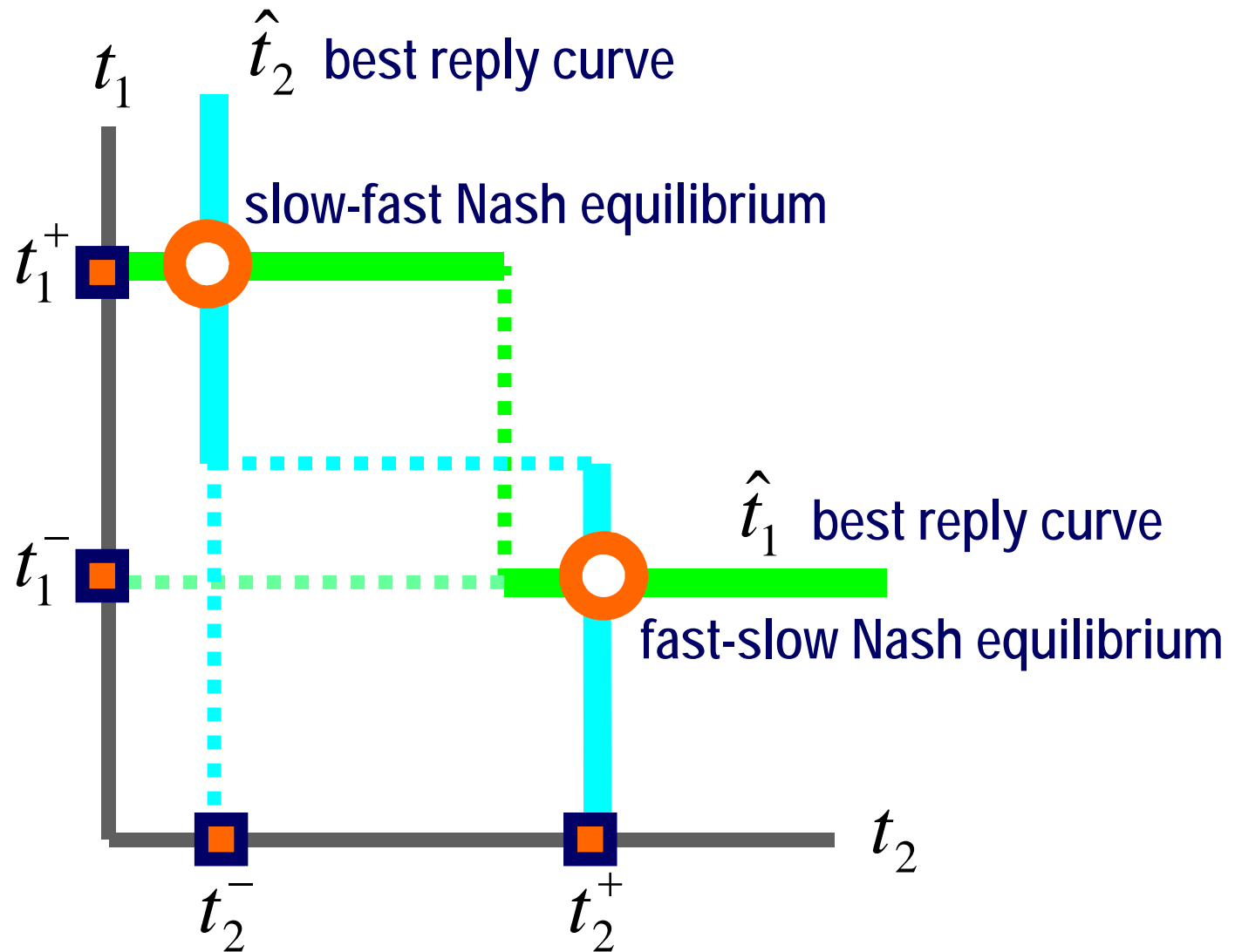
$$C_1(t_1) = C_1^0 - \int_0^{t_1} a_1(t) dt$$

cost reduction rate

$$B_1(t_1, t_2) = \int_{t_1}^T b_1(t | t_2) dt$$

benefit growth rate

Competition



Competition

Turkish gas market, 2001

