

22nd Annual International Conference

Real Options

Theory Meets Practice

Organized by
Real Options Group
WHU – Otto Beisheim School of Management

In cooperation with
King's College London
Northwestern U. and
U. of California at Los Angeles

Main Sponsor
Bank of Cyprus Chair/U. of Cyprus

June 21 – 23, 2018
Düsseldorf, Germany

Program Sessions Summary Guide

DAY 1 – THURSDAY JUNE 21

	TRACK I (MANAGERIAL)	TRACK II
8:15 – 8:55	Registration/Coffee & President’s Welcome	
9:00 – 10:15	Environment	Petroleum
10:45 – 12:00	Infrastructure	VC, Technology & Health
12:00 – 2:00	Luncheon	
2:00 – 3:15	Resources	Investment & Valuation
3:45 – 4:30	Keynote Address by Arnd Huchzermeier (WHU)	
4:30 – 5:20	Panel Discussion: State of Practice & Future Prospects	
5:30 – 7:00	Barbeque & Networking	

DAY 2 – FRIDAY JUNE 22

	TRACK I	TRACK II
9:00 – 10:15	Competition & Games	Modeling & Estimation
10:45 – 12:00	Infrastructure & Capacity Investment	(Dis-)Investment, Timing & Risk
12:00 – 2:00	Luncheon	
2:00 – 3:15	Debt & Capital Structure	Uncertainty & Ambiguity
3:45 – 5:00	Modeling & Computation	Supply Chains & Contracts

DAY 3 – SATURDAY JUNE 23

	TRACK I	TRACK II
9:00 – 10:15	Switches, Runs, Caps & Collars	Best Student Papers Session
11:00 – 12:00	Panel Discussion: State of Theory & Future Prospects	

Program Sessions

Day 1 – Thursday June 21

8:15-8:45 REGISTRATION/COFFEE

8:45-8:55 PRESIDENT’S WELCOME

9:00 – 10:15 TRACK I (MANAGERIAL)

ENVIRONMENT

Chairperson: Luiz E. Brandao (PUC-Rio, Brazil)

Valuing Economic Resilience: Understanding the Dynamics of Deforestation in Laos

T. Sanderson, T. Capon (CSIRO) and G. Hertzler (U. of W. Australia & CSIRO, Australia)

Renewable Energy Certificate (REN) Digital Coin Offers

L. Gomes and L.E. Brandao (PUC-Rio, Brazil)

Blending Under Uncertainty: Ethanol Plants and Biofuels Mandates

H. Ghodusi (Stevens Institute of Technology, USA)

9:00 – 10:15 TRACK II (ACADEMIC & MANAGERIAL)

PETROLEUM

Chairperson: Lenos Trigeorgis (U. of Cyprus & King’s College London)

Sustainability Option: Application to BP’s Deepwater Horizon Case

M. Pedol (Assicurazioni Generali S.p.A., Italy)

Real Options Evaluation and Decision-making in Petroleum Exploration and Production

L. Xu (Oklahoma State U.), J. Dyer (U. of Texas at Austin), B. Simkins (Oklahoma State U.)
and K. Sepehrnoori (U. of Texas at Austin, USA)

Evaluating Flexibility for Oil Well Construction Services

H. Fagundes and R. Nogueira (State U. of Northern Rio de Janeiro, Brazil)

10:15 – 10:45 MORNING COFFEE BREAK

10:45 – 12:00 TRACK I (MANAGERIAL)

INFRASTRUCTURE

Chairperson: Yuri Lawryshyn (U. of Toronto, Canada)

Bidding for the Rio de Janeiro International Airport: A Case of Option Overvaluation?

N. Marques, L.E. Brandão and L. Gomes (PUC-Rio, Brazil)

Bound Options in Road Infrastructure Concession Delivery: A Case Study in Vietnam

T.A. Nguyen and D. Carmichael (U. of New South Wales, Australia)

Option Valuation of a Geothermal Power Project: A Case Study in Indonesia

B. Mudiantoro and X. Liang (U. of Edinburgh, UK)

10:45 – 12:00 TRACK II (ACADEMIC & MANAGERIAL)

VC, TECHNOLOGY & HEALTH

Chairperson: Kuno Huisman (Tilburg U., Netherlands)

Real Options in the Health Sector

M. Rocha and M. Gonçalves (Federal U. of Minas Gerais, Brazil)

Valuing Investments in Digital Business Transformation

R. Schneider and J. Imai (Keio U., Japan)

Corporate Venture Capital (CVC) Investments and Acquisition Decisions

L. Salahaldin (ESCE International Business School, France) and

B. Siyahhan (Telecom School of Management, France)

12:00 – 2:00 LUNCHEON

2:00 – 3:15 TRACK I (MANAGERIAL)

RESOURCES

Chairperson: Verena Hagspiel (NTNU, Norway)

Mitigating Hydropower Generation Risk

G. Fernandes, L. Gomes and L.E. Brandao (PUC-Rio, Brazil)

Valuing a Gold Mining Project with Multiple Uncertainties

C. Armando Mejía and C. Andres Zapata (Universidad Externado de Colombia, Colombia)

Green Investment under Policy Uncertainty and Bayesian Learning

P.A.O. Dalby, G.R. Gillerhaugen, V. Hagspiel, T. Leth-Olsen (Norwegian U. of Science and Technology, Norway) and J. Thijssen (U. of York, UK)

2:00 – 3:15 TRACK II (ACADEMIC & MANAGERIAL)

INVESTMENT & VALUATION

Chairperson: Tarik Driouchi (King's College London, UK)

The Option Value of Mortgage Interest Tax Deductibility

H. Ghodduzi and M. Afkhami (Stevens Institute of Technology, USA)

Is the Brucellosis Vaccine Competition Prize Right? Innovative Financing for the Developing World

L. Peters (U. of Antwerp, Belgium)

Value Relevant Information Beyond Analysts' Forecasts

M. Chen, C. Clubb and T. Driouchi (King's College London, UK)

3:15 – 3:45 AFTERNOON COFFEE BREAK

3:45 – 4:30 KEYNOTE ADDRESS BY ARND HUCHZERMEIER (WHU)

4:30 – 5:30 PANEL DISCUSSION: STATE OF PRACTICE & FUTURE PROSPECTS

Moderator: Dean Paxson (U. of Manchester, UK)

Panelists Include:

Luiz Brandão (PUC-Rio, Brazil)

Tailan Chi (U. of Kansas, USA)

Arnd Huchzermeier (WHU, Germany)

Kuno Huisman (ASML & Tilburg U., Netherlands)

Yuri Lavryshyn (U. of Toronto, Canada)

5:30 – 7:00 BARBEQUE & NETWORKING

SPONSORED BY ROG

Day 2 – Friday June 22

9:00 – 10:15 TRACK I

COMPETITION & GAMES

Chairperson: Peter Kort (Tilburg U., Netherlands)

Adoption of New Technologies in a Duopoly

A. Azevedo (Aston U.) and D. Paxson (U. of Manchester, UK)

Investing in a Random-start American Option Under Competition

P. Pereira (U. of Porto) and A. Rodrigues (U. of Minho, Portugal)

Cooperative-Competitive Value in Option Games Among Asymmetric Firms

E. Rychłowska-Musiał (Poznań U. of Economics and Business, Poland)

9:00 – 10:15 TRACK II

MODELING & ESTIMATION

Chairperson: Gordon Sick (U. of Calgary, Canada)

A General Two-factor Investment Model: Estimating Option Value and Partial Derivatives

R. Adkins (U. of Bradford) and D. Paxson (U. of Manchester, UK)

Commodity Price Forecasts, Futures Prices and Pricing Models

G. Cortazar, C. Millard, H. Ortega (Pontificia Universidad Catolica de Chile, Chile) and E. Schwartz (UCLA, USA)

Real Option Valuation Using Simulation and Exercise Boundary Fitting

A. Bashiri (U. of Toronto), M. Davison (U. of Western Ontario) and Y. Lawryshyn (U. of Toronto, Canada)

10:15 – 10:45 MORNING COFFEE BREAK

10:45 – 12:00 TRACK I

INFRASTRUCTURE & CAPACITY INVESTMENT

Chairperson: Paulo Pereira (U. of Porto, Portugal)

Capacity Investment and Volume Flexibility under Uncertainty
D. De Giovanni and I. Massabò (U. of Calabria, Italy)

Agency Problems in PPP Infrastructure Investment
F. Silaghi (Universitat Autònoma de Barcelona, Spain) and S. Sarkar (McMaster U., Canada)

Public Port Capacity Investment under Congestion and Uncertainty
M. Balliauw, H. Meersman, E. Van de Voorde, T. Vanellander (U. of Antwerp, Belgium)
and P. Kort (Tilburg U., Netherlands)

10:45 – 12:00 TRACK II

(DIS-)INVESTMENT, TIMING & RISK

Chairperson: Elizabeth Whalley (U. of Warwick, UK)

Voluntary Delisting Timing: Theory and Evidence
I. El Kalak (Cardiff U.), A. Azevedo (Aston U.) and R. Tunaru (U. of Kent, UK)

When the Sign (of Exposure) Matters: Abatement and Risk Aversion
E. Whalley (U. of Warwick, UK)

Decision Horizon and Idiosyncratic Risk
K. Jin Choi (U. of Calgary, Canada), M. Kwak (Hankuk U. of Foreign Studies, South Korea),
G. Shim (Ajou U., South Korea) and W. Wei (U. of Calgary, Canada)

12:00 – 2:00 LUNCHEON

2:00 – 3:15 TRACK I

DEBT & CAPITAL STRUCTURE

Chairperson: Gordon Sick (U. of Calgary, Canada)

Optimal Debt Financing and Investment Timing with Heterogeneous Beliefs
N. Koussis (Frederick U., Cyprus) and S. Martzoukos (U. of Cyprus, Cyprus)

Real Options and Performance-Sensitive Debt
B. Chavalier-Roignant (King's College London, UK), A. Bensoussan and A. Rivera (U. of Texas at Dallas, USA)

Capital Structure Choice and Investment Timing

P. Kort (Tilburg U., Netherlands) and R. Hartl (U. of Vienna, Austria)

2:00 – 3:15 TRACK II

UNCERTAINTY & AMBIGUITY

Chairperson: Motoh Tsujimura (Doshisha U., Japan)

Differential Effects of Exogenous and Endogenous Uncertainty on a Joint Venture

T. Chi, A. Huang (U. of Kansas) and A. Seth (Virginia Polytechnic, USA)

Selling Real Assets: Idiosyncratic Project Risk in an Uncertain Auction Environment

L. Di Corato (Università degli Studi di Bari) and M. Moretto (UNIPD, Italy)

Capital Investment under Demand Ambiguity

M. Tsujimura (Doshisha U., Japan)

3:15 – 3:45 AFTERNOON COFFEE BREAK

3:45 – 5:00 TRACK I

MODELING & COMPUTATION

Chairperson: Tailan Chi (U. of Kansas, USA)

How Do Solutions for Two-factor Real Options Models Compare?

D. Paxson (U. of Manchester) and R. Adkins (Bradford U., UK)

Value Enhancing Pre-investment Activities under Uncertainty

T. Olsen and V. Hagspiel (Norwegian U. of Science and Technology, Norway)

M&A Games under Threat of Hostile Takeovers

E. Lukas (U. of Magdeburg, Germany), P. Pereira (U. of Porto, Portugal) and A. Rodrigues (U. of Minho, Portugal)

3:45 – 5:00 TRACK II

SUPPLY CHAINS & CONTRACTS

Chairperson: Arnd Huchzermeier (WHU, Germany)

Supply Chains, Investments with Vertical Relations and Agency Conflicts

D. Zormpas (U. of Padova, Italy)

Option Value of Renewable Identification Numbers (RINs)

H. Ghodduzi and M. Afkhami (Stevens Institute of Technology, USA)

Feed-in Tariff Contract Schemes in Oligopoly

L. Barbosa (MIT Portugal Program and U. of Lisbon), A. Rodrigues (U. of Minho) and A. Sardinha (INESC-ID and U. of Lisbon, Portugal)

Day 3 – Saturday June 23

9:00 – 10:15 TRACK I

SWITCHES, RUNS, CAPS & COLLARS

Chairperson: Dean Paxson (U. of Manchester, UK)

Structural Estimation of Switching Costs for Peaking Power Plants

S.-E. Fleten (Norwegian U. of Science and Technology, Norway), E. Haugom (Inland Norway U. of Applied Sciences, Norway), A. Pichler (Chemnitz U. of Technology, Germany) and C. Ullrich (James Madison U., USA)

Investment Decisions with Finite-lived Collars

R. Adkins (Bradford U., UK), D. Paxson (U. of Manchester, UK), P. Pereira (U. of Porto, Portugal) and A. Rodrigues (U. of Minho, Portugal)

Market Imperfections and Competitive Runs under Uncertainty

Y. Maoz (Open U. of Israel, Israel) and L. Di Corato (Università degli Studi di Bari, Italy)

9:00 – 10:15 TRACK II

BEST STUDENT PAPERS SESSION

Chairperson: Stein-Erik Fleten (NTNU, Norway)

The IPO Valuation Premium "Puzzle" for an Entrepreneur's Exit Choice

Y. Imai (Normandy U., France)

Effects of Policy Withdrawal on Investment Timing and Size

R. Nagy (Norwegian U. of Science and Technology, Norway) and P. Kort (Tilburg U., Netherlands)

Optimal Stopping and Real Options under Volatility Ambiguity

Q. Couanau (Université Paris 1, France)

10:15 – 11:00 MORNING COFFEE BREAK

11:00 – 12:00 PANEL: STATE OF THEORY & FUTURE PROSPECTS

Moderator: Gordon Sick (U. of Calgary, Canada)

Panelists Include:

Stein-Erik Fleten (NTNU, Norway)

Peter Kort (Tilburg U., Netherlands)

Paulo Pereira (U. of Porto, Portugal)

Motoh Tsujimura (Doshisha U., Japan)

Elizabeth Whalley (U. of Warwick, UK)

12:00 BEST STUDENT PAPER AWARD & CLOSING REMARKS

CONFERENCE CONCLUDES

Conference Venue and Logistics

Venue The conference will take place at the WHU campus in Düsseldorf, Germany, with its excellent executive education facilities. Address: WHU - Otto Beisheim School of Management, Erkrather Str. 224a, 40233 Düsseldorf, Tel.: +49 211 44709 – 601. Düsseldorf is an international financial, commercial and arts center, renowned for its fashion industry, boutique shops, trade fairs and art scene. It has activities that appeal to every member of a family.

Fees & Registration Fees are €470 if register by April 18. Registration fees go up by 20% to €565 afterwards. Registration should be made online via the conference website www.realoptions.org

Important Administrative Information Registration fees include the conference program, coffee breaks, lunches and a reception. Cancellations made in writing by May 15 can be refunded, except for a 15% service charge. Only registrations paid by April 18 are guaranteed and included on the list of participants. For registration and other general-type conference-related inquiries contact Eugenia at e-mail conference.registration@realoptions.org, Tel. +357 22893605. For information on local logistics regarding WHU or Düsseldorf contact Kerstin.Wickel@whu.edu, Tel. +49 261 6509 382.

Hotels, Airport and Transport For information about recommended hotels and other logistics see the conference website www.realoptions.org under Venue, Hotels and Transport. Reservations should be made directly with the hotels using the provided booking forms. The closest airport is Düsseldorf International Airport (DUS). WHU's campus is a 25 min ride (10 km) from DUS. One-way taxi fare is about €35. From Düsseldorf Hbf (main train station) the taxi fare is €9. Please give the taxi the address and the name "Schwanenhöfe." Rental cars can be booked at Düsseldorf Airport and at Düsseldorf Central Station via Europcar. For taking public transport from Düsseldorf Hbf to WHU campus see <https://www.whu.edu/en/campus/campus-duesseldorf/directions/>. It is recommended to book the tickets online beforehand. Please make advance provisions to obtain a timely Schengen visa for Germany.

Organizers Lenos Trigeorgis (U. of Cyprus, King's College London & ROG) and Arnd Huchzermeier (WHU); *VP Program*: Gordon Sick (U. of Calgary).