ROBERTO TADEI' S CURRICULUM VITAE

PERSONAL DETAILS

Born in Ivrea (TO), Italy, January 26, 1952.

Resident in Turin, Italy.

Married, two children.

Professional appointment: Full Professor in MAT/09-Operations Research.

Work address: Dipartimento di Automatica e Informatica, Politecnico di Torino, Corso Duca degli Abruzzi 24, 10129 Torino, tel. +39 011 0907032, fax +39 011 0907099, mobile: +39 335 6604376 e-mail: roberto.tadei@polito.it,

WHAT OPERATIONS RESEARCH IS

(from http://www.scienceofbetter.org/what/)

"In a nutshell, operations research (O.R.) is the discipline of applying advanced analytical methods to help make better decisions.
By using techniques such as mathematical modeling to analyze complex situations, operations research gives executives the power to make more effective decisions and build more productive systems based on:

- *More complete data*
- *Consideration of all available options*
- *Careful predictions of outcomes and estimates of risk*
- *The latest decision tools and techniques.*

A uniquely powerful approach to decision making

You've probably seen dozens of articles and ads about solutions that claim to enhance your decision-making capabilities.
O.R. is unique. It's best of breed, employing highly developed methods practiced by specially trained professionals. It's powerful, using advanced tools and technologies to provide analytical power that no ordinary software or spreadsheet can deliver out of the box. And it's tailored to you, because an O.R. professional offers you the ability to define your specific challenge in ways that make the most of your data and uncover your most beneficial options.
To achieve these results, O.R. professionals draw upon the latest analytical technologies, including:
Simulation: Giving you the ability to try out approaches and test ideas for improvement
Optimization: Narrowing your choices to the very best when there are virtually innumerable feasible options and comparing them is difficult

Probability and Statistics: Helping you measure risk, mine data to find valuable connections and insights, test conclusions, and make reliable forecasts."

EDUCATIONAL QUALIFICATIONS

Degree in Mathematics, obtained in 1976 at the University of Turin, with first class honors (110/110 cum laude).

PROFESSIONAL CAREER

1990-present: Turin Polytechnic, since 2001 Full Professor in MAT/09-Operations Research.
1987-1990: University of Udine, Associate Professor (non confirmed) in MAT/09- Operations Research.
1978-1987: IRES, Istituto Ricerche Economico-Sociali del Piemonte, Turin (Social-Economical Research Institute of Piedmont), Head of the Research Transport Group.

SCIENTIFIC ACTIVITY

4.1 Main research areas

Prof. Tadei's scientific research has mainly focussed on combinatorial optimization, in particular, in the following areas:

1. *Transport and land use*
2. *Logistics*
3. *Network Design*
4. *Production Scheduling.*

4.2 Other

Prof. Tadei participates and presents papers regularly in the most important international Operations Research conferences. He is often invited to organize special streams and sessions.

He is referee for several international Operations Research journals and has been asked to carry out book reviews for these journals.

TEACHING ACTIVITY

5.1 Current

Turin Polytechnic – Master degree course in Computer Engineering
Decision making and optimization

Turin Polytechnic - Degree course in all Politecnico di Torino Schools
Ottimizzazione per il problem solving

5.2 Previous appointments

Turin Polytechnic - Degree course in Computer Engineering
Operations Research

Turin Polytechnic - Degree course in Computer Engineering
Optimization

Turin Polytechnic - Degree course in Electronic and Telecommunication Engineering
Operations Research

Turin Polytechnic - Tele University Diploma in Computer Engineering, Turin Technology Pole
Operations Research

Turin Polytechnic - Tele University Diploma in Computer Engineering, Alessandria Technology Pole
Operations Research

Turin Polytechnic - Tele University Diploma in Logistics and Production Engineering, Turin Technology Pole
Operations Research

Turin Polytechnic - Tele University Diploma in Logistics and Production Engineering, Turin Technology Pole
Mathematics III

Turin Polytechnic - Degree course in Computer, Electronic and Telecommunications Engineering
Theory of Discrete Systems
(annual course, 1993/94-1994/95-1995/96).

Turin Polytechnic, Ivrea branch - Diploma in Computer Engineering
Operations Research
(six-month course, 1994/95-1995/96).

Turin Polytechnic - Special Purpose School of European Business with Technology, later to become European University Diploma in Industrial Production
Quantitative Methods
(annual course, 1990/91).

Turin Polytechnic-COREP - Masters in "Computer and Control Engineering"
Optimization methods for industrial automation
(annual course, 1991/92).

Udine University - Degree course in Management Engineering
Operations Research (in charge of course)
(annual course, 1987/88-1988/89-1989/90).

Turin Polytechnic - Degree course in Architecture
Town Planning and Urbanistics (visiting professor)
(annual course, 1981/82, 1982/83, 1983/84).

Turin Polytechnic - Degree course in Architecture
Town Planning and Urbanistics (practical work assistant)
(annual course, 1976/77, 1977/78, 1978/79, 1979/80).

ACTIVITIES ABROAD

In the first term of 1988 Prof. Tadei was Visiting Professor at I.M.E.- LATEC, Université de Bourgogne, Dijon, France, where he held doctorate courses on "Combinatorial Optimization Methods" and undertook research on optimum location algorithms.

In 1981 and 1982 he worked as Scholar at IIASA-International Institute for Applied Systems Analysis, Laxenburg, Austria (April-July, 1981 and September-October, 1982), where he carried out research on the Public Facility Location Task, Human Settlements and Services Area, on the optimum size and location of public services.

He has been invited to visit many universities and research centers abroad and give lectures there.

ORGANISATIONAL ACTIVITIES

7.1 Activities in the current job

Since being appointed to his post in the Turin Polytechnic, Prof. Tadei has committed himself to consolidating and expanding the small group of people involved in Operations Research and encouraging new courses in O.R.

In two years (from 1990 to 1992) he succeeded in establishing the ***post of researcher in O.R.*** *and having a* ***new course in O.R.*** *set up in the V year of the Degree course in Electronic Engineering at the II Faculty of Engineering of Vercelli.*

The ***new course in O. R.*** *for the Diploma in Computer Engineering in Ivrea dates from the same period.*

In 1995, after a long period of preparation, he achieved the establishment of ***new course in Optimization*** *in the V year of the Degree course in Computer Engineering at the I Faculty of Engineering in Turin.*

More recently, new O.R. courses has been also set in Telecommunication Engineering.

Prof. Tadei has been member of:

- the Department Executive Committee

- the Teaching Committee for Ph. D. Courses

- Department Commissions

- School Commissions.

*He has been director for many years of the **Master Programme** at the Turin Polytechnic-COREP in "Transport and Sustainable Mobility".*

He has been scientific responsible of many European (Horizon 2020 and others) and national research projects (PRIN and others).

7.2 Activities associated with O.R. in Italy and abroad

Prof. Tadei has been President of:

AIRO - The Italian Society of Operations Research (2001-2006)

FIMA - The Italian Federation of Applied Mathematics (2004-2006).

In 1997 EURO requested Prof. Tadei to organize the XV Euro Summer Institute (ESI XV) on Production Scheduling - Deterministic, Stochastic and Fuzzy Approaches, held at St. Vincent (Aosta, Italy). Young European researchers as well as some of the most important experts at international level participated in the Summer School. A Feature Issue EJOR containing a selection of the papers presented has been edited by Prof. Tadei.

In 1996 the group of researchers at Turin Polytechnic, co-ordinated by Prof. Tadei, won the second prize at the international FARO competition, promoted by the Italian State Railways (Ferrovie dello Stato), relating to the solution of a complex rostering problem.

Since 1991 he has been in charge of research units for MURST 40%, ex-40% projects and co-ordinated MURST projects of relevant national interest.

Since 1990 he has co-ordinated and participated in research projects promoted by European Union (Esprit, Brite-Euram).

Since 1987 he has been member of the CIRO-Interuniversity Center of Operations Research. He has participated regularly in the meetings and activities promoted by the Center and in 1998 was appointed member of the commission for revising the CIRO statute.

In the period 1984-1992 he co-ordinated research units of the Transport Project (Progetto Finalizzato Trasporti) of the Italian National Research Council (CNR), PFT1 and PFT2.

From 1982 to 1990 he was member of the Technical Secretariat of the IASI-CNR Permanent Training Program "Techniques and Models for Regional Planning" (known as "Capri Courses", in which he regularly participates as lecturer).

Since 1977 he has been member of AIRO-The Italian Operations Research Society-Optimization and Decision Sciences and has held various posts: as member of the Executive Council and the Scientific Council, co-ordinator and representative of the Regional Chapter of Turin and, in the period 1996-2001, editor of AIROnews. Since 2001 he is the President of AIRO.

He was involved in the organization of the national AIRO conferences ("Giornate di Lavoro AIRO") in Turin 1981 and Udine 1989.
He organized the Giornate di Lavoro AIRO in St. Vincent 1997.

He proposed and set up specific AIRO projects aimed at making known and strengthening O.R. in the world of business and schools. In particular, he helped to set up the project "O.R. for young people in Upper Middle Schools", which involved Udine University, the University of Trieste, Turin Polytechnic, IRRSAE Friuli-Venezia Giulia, IRRSAE Piemonte and numerous schools and teachers in the two regions.

PUBLICATIONS AND PATENTS

He is author of almost 230 papers published in international journals, conference proceedings and monographs.

Most of them can be found at http://porto.polito.it/cgi/matricola?m=001877

He is co-inventor of the International Patent 04740483.5-1525-EP2004007104 (owner TELECOM ITALIA S.p.A.), De Giovanni L., Della Croce F., Quagliotti M., Tadei R. (2004) "Method and system for network topology updating using topology perturbation".

Turin, August 6, 2021