

# EKATERINA ALEKSEEVA'S CURRICULUM VITAE

## Sobolev Institute of Mathematics Russia



### EDUCATION

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2004 – 2007 **PhD in Physics and Mathematics**

Sobolev Institute of Mathematics, Siberian Branch of Russian Academy of Sciences, Novosibirsk, Russia. **Operations Research department**

Dissertation title: “*Local search algorithms for the bilevel  $p$ -median problem with user preferences*”

Scientific supervisors:

Doctor Vladimir Beresnev (<http://www.math.nsc.ru/LBRT/k5/beresnev.html> )

Doctor Yuri Kochetov ( <http://www.math.nsc.ru/LBRT/k5/kochetov.html> )

1998 – 2003 **Master of Science in Mathematics**

Novosibirsk State University, Russia. Mechanics and Mathematics Department

1996 – 1998 **General qualification for university, Economics and Computer Science**

High College of Computer Science, Novosibirsk, Russia

### RESEARCH EXPERIENCE

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Since 2001 SOBOLEV INSTITUTE OF MATHEMATICS, Novosibirsk, Russia. **Research assistant.**  
Tenured position since 2008 year.

### TEACHING EXPERIENCE

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#### LECTURER

NOVOSIBIRSK STATE UNIVERSITY, Russia, Mechanics and Mathematics Department

Discrete Decision Making Problems course. One academic year 2009 – 2010.

NOVOSIBIRSK STATE UNIVERSITY, Russia, Information Technology Department  
Operations Research course. One academic year 2008 – 2009.

HIGH COLLEGE OF COMPUTER SCIENCE, Novosibirsk, Russia.  
Discrete mathematics course. December, 2007.

#### ASSOCIATE PROFESSOR

SIBIRIAN STATE UNIVERSITY OF TELECOMMUNICATIONS AND INFORMATICS, Russia, Mathematical Models of Business Process Department  
Mathematical Logic and Fundamentals course. One academic year 2008 – 2009.

Numerical Computation course. Academic years since 2008 year.

Introduction to Management Science. Academic years since 2008 year.

#### ASSISTANT PROFESSOR

NOVOSIBIRSK STATE UNIVERSITY, Russia, Information Technology Department  
Operations Research and Optimization Methods seminars. Academic years since 2003  
year.

## AWARDS

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Winner in competition “The Best Young Lecturer”, awarded by Vladimir Potanin’s  
charitable foundation. June, 2009

Third degree diploma at the International Students Conference. May, 2004

## SCIENTIFIC GRANTS

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Research grants from the Russian Foundation for Basic Research

Travel grants from the Novosibirsk State University, Russia

## PUBLICATIONS

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- E. Alekseeva, N. Kochetova, Y. Kochetov, A. Plyasunov Heuristic and exact methods for the discrete  $(r/p)$ -centroid problem. **Proceedings of the 12th European Conference, EvoCOP 2010**, Istanbul, Turkey, April 2010, p. 11-22
- E. Alekseeva, A. Plyasunov, O. Kutnenko. Computational methods. **Tutorial for Information Technology department students**. 2008. 128 pages. (in Russian)
- E. Alekseeva, Yu. Kochetov, A. Plyasunov. Complexity of local search for the  $p$ -median problem. **European Journal of Operational Research**, 191, 2008, P. 736–752.
- E. Alekseeva, Yu. Kochetov, T. Levanova, M. Loresh. Large neighborhood local search for the  $p$ -median problem. **Yugoslav Journal of Operations Research**. 2005. Vol. 15 (1). P.53–63.
- E. Alekseeva, Yu. Kochetov. Genetic local search for the bilevel  $p$ -median with users preferences problem. **Journal of Discrete Analysis and Operations Research**. 2007, Ser. 2, Vol. 14 (1), P.3–31. (in Russian).
- E. Alekseeva. Pivoting rules in local search algorithm for the  $p$ -median problem. **Proceedings of the Institute of Computational Mathematics and Mathematical Geophysics SB RAS**. 2006. Ser. Informatika, Issue 6. P. 5–11. (in Russian).
- E. Alekseeva and Yu. Kochetov. Large neighborhood search for the  $p$ -median problem. **Proceedings SYM-OP-IS 2003**, Herceg-No

## CONFERENCE PRESENTATIONS

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- E. Alekseeva, Yu. Kochetov, Al. Plyasunov An exact method for the  $(r/p)$ -centroid problem. **The 20th International Symposium of Mathematical Programming (ISMP)**. Chicago, Illinois. USA. 2009
- E. Alekseeva, Yu. Kochetov, N. Kochetova Upper and lower bounds for the  $p$ -median problem with foresight. **International Conference Operations Research**. Augsburg, Germany. 2008
- E. Alekseeva, A. Orlov. A memetic algorithm for the competitive  $p$ -median problem. **The 14th international workshop. Mathematical Programming**. Irkutsk, Russia, 2008. (in Russian)
- E. Alekseeva, N. Kochetova. Upper and lower bounds for the competitive  $p$ -median problem. **The 14th international workshop. Mathematical Programming**. Irkutsk, Russia, 2008. (in Russian)
- E. Alekseeva, Yu. Kochetov. A memetic algorithm for the  $p$ -median problem with users preferences. **22nd European Conference on Operational Research EURO XXII**. Prague, Czechia, 2007
- E. Alekseeva. The pivoting rules in local search for the  $p$ -median problem. **Optimization Problems and Economic Applications**. Omsk, Russia. 2006. (in Russian)

E. Alekseeva, Yu.Kochetov, A. Plyasunov. Complexity of local search for the  $p$ -median problem. **XVIII Mini-Euro conference on Variable Neighborhood Search**. Tenerife, Spain, 2005

E. Alekseeva. The average case behavior of local search for the  $p$ -median problem. **The 13<sup>th</sup> international workshop. Mathematical Programming**. Irkutsk, Russia, 2005. (in Russian)

E. Alekseeva, Yu. Kochetov, A. Plyasunov. Genetic algorithm for the bilevel  $p$ -median problem. **Discrete Analysis and Operations Research Conference**. Novosibirsk, Russia, 2004. (in Russian)

E. Alekseeva, Yu.Kochetov, A. Plyasunov. The bilevel  $p$ -median problem with user preferences. **Operational Research Conference**. Tilburg, The Netherlands, 2004.

E. Alekseeva, Yu. Kochetov. Large neighborhood local search for the  $p$ -median problem. **International Symposium on Operations Research SYM-OP-IS-2003**. Montenegro, 2003.

#### **PARTICIPATION IN INTERNATIONAL SEMINARS**

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V RUSSIAN-GERMAN SCHOOL ON PARALLEL PROGRAMMING AND HIGH PERFORMANCE COMPUTER SYSTEMS, Novosibirsk State University and University of Stuttgart, Russia, 2008

45th SESSION OF SEMINAIRE DE MATHEMATIQUES SUPERIEURES/NATO ADVANCED STUDY INSTITUTE COMBINATORIAL OPTIMIZATION: METHODS AND APPLICATIONS. Montreal, Canada, June-July, 2006.

MICROSOFT ACADEMIC DAYS IN RUSSIA. Moscow, April, 2006.

#### **PROJECTS**

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| April, 2010         | Development of a mathematical model for optimization of Russian Railways.  |
| June – August, 2009 | Development of a mathematical model for optimization of the location of bicycle stations.  |
| June – August, 2008 | Took part in the project for BASF company. Some modifications of an algorithm solving a production planning problem.               |
| June – August, 2005 | Development of the decision support system for John Deere's company. A mathematical model, an algorithm and optimization software. |

#### **ADDITIONAL INFORMATION**

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**Age:** born in Russia, on September 12, 1981

**Languages:** native Russian; English fluently; French elementary

**e-mail:** [katerina.alekseeva@gmail.com](mailto:katerina.alekseeva@gmail.com)

**Home page:** <http://www.math.nsc.ru/LBRT/k5/alekseeva.html>

**Computer skills:** Microsoft Office, LaTeX, Adobe Photoshop, GAMS, Delphi, Pascal.

**Hobbies/Interests:** Sports, dance, fitness, skates, roller skates, numismatist.

**Musical Education:** Musical School (from 1987 to 1994) piano, domra.