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# Programme overview

**Wednesday, 4th February 2015**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>14:00 - 16:00</td>
<td><strong>JMP Tutorial</strong> on data exploration, modeling and optimization</td>
</tr>
<tr>
<td></td>
<td><em>(Room K-101)</em></td>
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<tr>
<td>16:30 - 20:00</td>
<td>Pre-conference drink <em>(Agora Caffee)</em></td>
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</table>
## Thursday, 5th February 2015

<table>
<thead>
<tr>
<th>Time</th>
<th>Location</th>
<th>Event Details</th>
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</thead>
<tbody>
<tr>
<td>09:00 - 09:30</td>
<td>K-001</td>
<td>Welcome coffee <em>(Patio next to room K-001)</em></td>
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<tr>
<td>09:30 - 10:45</td>
<td>K-001</td>
<td>Opening session <em>(Room K-001)</em></td>
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<tr>
<td></td>
<td>K-101</td>
<td><strong>Marc Sevaux</strong>: Wireless sensor networks - A survey on maximizing lifetime in sensor coverage problem</td>
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<tr>
<td>10:45 - 11:15</td>
<td>K-001</td>
<td>Coffee break <em>(Patio next to room K-001)</em></td>
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<tr>
<td>11:15 - 12:30</td>
<td>K-101</td>
<td>Data mining I</td>
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<tr>
<td></td>
<td>K-102</td>
<td>OR in technology</td>
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<td></td>
<td>K-201</td>
<td>COMEX: exact methods</td>
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<tr>
<td></td>
<td>K-202</td>
<td>COMEX: integration</td>
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<tr>
<td>12:30 - 13:00</td>
<td>K-103</td>
<td>Lunch break <em>(Patio next to room K-001)</em></td>
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<tr>
<td></td>
<td>K-101</td>
<td>ORBEL board meeting <em>(Room K-103)</em></td>
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<td>13:30 - 15:10</td>
<td>K-101</td>
<td>COMEX: metaheuristics</td>
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<td></td>
<td>K-102</td>
<td>COMEX: scheduling I</td>
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<td>K-201</td>
<td>COMEX: logistics I</td>
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<td></td>
<td>K-202</td>
<td>COMEX: networks</td>
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<tr>
<td>15:10 - 15:40</td>
<td>K-101</td>
<td>Coffee break <em>(Patio next to room K-001)</em></td>
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<tr>
<td>15:40 - 17:20</td>
<td>K-101</td>
<td>Metaheuristics: local search</td>
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<td>K-102</td>
<td>Simulation</td>
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<td>K-201</td>
<td>Supply chain I</td>
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<tr>
<td></td>
<td>K-202</td>
<td>COMEX: operations management</td>
</tr>
<tr>
<td>17:30 - 18:30</td>
<td>K-201</td>
<td>ORBEL general assembly <em>(Room K-201)</em></td>
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<tr>
<td>19:00 - 23:00</td>
<td>K-201</td>
<td>Conference dinner <em>(Spiegelzaal)</em></td>
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<tr>
<td>Time</td>
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<td>Location</td>
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<tr>
<td>09:00 - 09:30</td>
<td>Welcome coffee <em>(Patio next to room K-001)</em></td>
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<tr>
<td>09:30 - 11:10</td>
<td>COMEX: logistics II</td>
<td>Scheduling II</td>
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<tr>
<td>11:10 - 11:30</td>
<td>Coffee break <em>(Patio next to room K-001)</em></td>
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<tr>
<td>11:30 - 12:45</td>
<td>Data mining II</td>
<td>Scheduling III</td>
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<tr>
<td>12:45 - 13:45</td>
<td>Lunch break <em>(Patio next to room K-001)</em></td>
<td></td>
</tr>
<tr>
<td>13:45 - 15:45</td>
<td>ORBEL award and Wolsey award <em>(Room K-001)</em></td>
<td><strong>Nick Street</strong>: Predictive analytics for personalized health care decision making</td>
</tr>
<tr>
<td>15:45 -</td>
<td>Farewell drink <em>(Patio next to room K-001)</em></td>
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Detailed Programme

Wednesday, 4th February 2015

14:00 - 16:00  **JMP Tutorial** on data exploration modeling and optimization  
*Room: K-101*

16:30 - 20:00  **Pre-conference drink**  
*Agora Caffee*
Thursday, 5th February 2015

09:00 - 09:30  **Welcome coffee**
*Patio next to room K-001*

09:30 - 10:45  **Opening session**
**Marc Sevaux:** Wireless sensor networks - A survey on maximizing lifetime in sensor coverage problem
*Room: K-001*

10:45 - 11:15  **Coffee break**
*Patio next to room K-001*

11:15 - 12:30  **Parallel session - Data mining I**
*Session chair: E. Tobback*
*Room: K-101*

Using social network data in a B2B setting: linking board of directors to predict churn
*J. Moeyersoms, V. Vercruyssen and D. Martens ............................... ??*

Nonnegative matrix factorization: applications and algorithms
*N. Gillis ................................................................. ??*

Improving loss given default prediction models: non-linearities and the macroeconomic state
*E. Tobback, D. Martens, T. Van Gestel and B. Baesens ...................... ??*

11:15 - 12:30  **Parallel session - OR in technology**
*Session chair: E.-H. Aghezzaf*
*Room: K-102*

The air distribution network design problem: a complex non-linear combinatorial optimization problem
*S. Jorens, A. De Corte, K. Sörensen, G. Steenackers and I. Verhaert ........ ??*

Modelling and optimizing a sustainable waste management system
*S. Elsaid and E.-H. Aghezzaf ................................................... ??*

The impact of new technologies like 3D printing on supply chains
*A. I. Ionescu Florea ............................................................... ??*
11:15 - 12:30  **Parallel session - COMEX: exact methods**  
**Session chair:** B. Fortz  
**Room:** K-201  

Exact and heuristic solution methods for a VRP with time windows and variable service start time  
**S. Michelini, H. Küçükaydin, Y. Arda and Y. Crama**  

Decomposition-based branch-and-bound for the traveling umpire problem  
**T. A. M. Toffolo, T. Wauters, G. Vanden Berghe and S. Van Malderen**  

A branch-and-price algorithm for the parsimonious loss of heterozygosity problem  
**L. Porretta, D. Catanzaro, B. V. Haldórsson and B. Fortz**  

11:15 - 12:30  **Parallel session - COMEX: integration**  
**Session chair:** T. Stützle  
**Room:** K-202  

Machine decision-makers in multi-objective optimization  
**M. López-Ibáñez**  

An algorithmic framework for the generation of optimal designs for two-stratum experiments  
**D. Palhazi Cuervo, P. Goos and K. Sörensen**  

Improving experimental design for automatic algorithm selection techniques by using a virtual best solver  
**H. Degroote, T. Messelis, P. De Causmaecker**  

12:30 - 13:30  **Lunch break**  
Patio next to room K-001  

12:30 - 13:30  **ORBEL board meeting**  
**Room:** K-103  

13:30 - 15:10  **Parallel session - COMEX: metaheuristics**  
**Session chair:** K. Sörensen  
**Room:** K-101  

Generating music with an optimization algorithm using a Markov based objective function  
**D. Herremans, S. Weisser, K. Sörensen and D. Conklin**  

Evaluating and optimizing metaheuristic algorithms: a step ahead in VRP research  
**J. Corstjens, A. Caris and B. Depaire**  

Metaheuristics for the school bus routing problem with bus stop selection  
**M. S. Fallah Niasar, L. Talarico and A. H. Tayebi**  

A history of metaheuristics  
**K. Sörensen, M. Sevaux and F. Glover**
13:30 - 15:10  **Parallel session - COMEX: scheduling I**  
*Session chair: D. Van Den Dooren*
*Room: K-102*

Minimizing setups and time-related objectives on multiple machines  
*D. Van Den Dooren, T. Sys, G. Vanden Berghe and T. Wauters ................. ??*

A fast greedy heuristic for scheduling modular projects  
*M. Huysmans, K. Coolen, F. Talla Nobibon and R. Leus ....................... ??*

Scheduling serial locks: a combinatorial Benders’ based approach  
*J. Verstichel and G. Vanden Berghe ........................................... ??*

Resource-leveling on a shop floor  
*T. Sys, D. Van Den Dooren, G. Vanden Berghe and T. Wauters .............. ??*

13:30 - 15:10  **Parallel session - COMEX: logistics I**  
*Session chair: A. Caris*
*Room: K-201*

Integrated production-distribution models: a state of the art  
*S. Moons, K. Ramaekers and A. Caris ....................................... ??*

IRP for a single perishable product with stochastic demands  
*Y. Crama, M. Rezaei, M. Savelsbergh and T. Van Woensel ................. ??*

A mixed integer nonlinear programming bi-objective model for intermodal network design  
*M. Mostert, A. Caris and S. Limbourg ....................................... ??*

Solving a bi-objective dial-a-ride problem using multi-directional local search  
*Y. Molenbruch, K. Braekers and A. Caris ................................. ??*

13:30 - 15:10  **Parallel session - COMEX: networks**  
*Session chair: F. C. R. Spieksma*
*Room: K-202*

Cooperative monitoring problem  
*D. Papadimitriou and B. Fortz ................................................. ??*

Evaluating the emission reduction potential of scheduling locks on inland waterways  
*W. Passchyn, D. Briskorn and F. C. R. Spieksma .............................. ??*

A transportation problem with side constraints meets the separable assignment problem  
*A.M.C. Ficker and F. C. R. Spieksma ......................................... ??*

Optimal design of switched ethernet networks implementing the multiple spanning tree protocol  
*B. Fortz, L. Gouveia and M. Joyce-Moniz ................................. ??*

15:10 - 15:40  **Coffee break**  
*Patio next to room K-001*
15:40 - 17:20  **Parallel session - Metaheuristics: local search**  
*Session chair:* A. De Corte  
*Room:* K-101

- Static and dynamic frequency assignment problems  
  *K. Alrjahi and J. Thompson* .................................................. ??
- A decision model to allocate protective safety barriers and mitigate domino effects  
  *J. Janssens, L. Talarico, G. Reniers and K. Sørensen* ......................... ??
- Combining neighborhoods into search strategies  
  *R. De Landtsheer, Y. Guyot and C. Ponsard* .................................... ??
- Iterated local search for water distribution network design optimisation  
  *A. De Corte and K. Sørensen* ................................................... ??

15:40 - 17:20  **Parallel session - Simulation**  
*Session chair:* J. Beliën  
*Room:* K-102

- Classroom games for teaching integer programming  
  *J. Beliën* ................................................................................ .. ??
- Improving length of stay in emergency departments: a real-life case study  
  *R. Carmen, I. Van Nieuwenhuyse and M. Defraeye* ............................. ??
- Economics of microgrids with variable intermittent and storage capacity  
  *K. Milis and H. Peremans* ........................................................... ??
- TSSO: A promising Kriging method for simulation optimization with homogeneous noise  
  *H. Jalali and I. Van Nieuwenhuyse* .............................................. ??

15:40 - 17:20  **Parallel session - Supply chain I**  
*Session chair:* M. Schuster  
*Room:* K-201

- A branch-and-price approach for locating roadside clinics in Africa based on effectiveness and equity objectives  
  *J. Núñez Ares, H. De Vries and D. Huisman* ..................................... ??
- An integrated inventory-location model for a supply chain under stochastic demand and lead time  
  *M. Fathi, D. Claeys and H. Bruneel* ............................................ ??
- The inventory-routing problem with uncertain travel times  
  *W. Lefever, E. H. Aghezzaf and K. Hadi-Hamou* ............................... ??
- Heuristic algorithm for a location-inventory model  
  *M. Schuster and J. S. Tancrez* .................................................. ??
Detailed Programme - Thursday, 5th February 2015

15:40 - 17:20 Parallel session - COMEX: operations management
Session chair: P. De Causmaecker
Room: K-202

Polynomial-time certificate algorithms for oriented tree based posets
P. De Causmaecker, S. De Wannemacker and D. Rebaine

An integrated approach for order picking and flexible workforce planning: a state of the art
T. Van Gils, K. Ramaekers, K. Braekers and A. Caris

A stochastic optimization model for robust surgery admission scheduling in hospitals
W. Vancroonenburg, P. De Causmaecker, F. C. R. Spieksma and G. Vanden Berghe

17:30 - 18:30 ORBEL general assembly
Room: K-201

19:00 - 23:00 Conference Dinner
Spiegelzaal
Friday, 6th February 2015

09:00 - 09:30  **Welcome coffee**
*Patio next to room K-001*

09:30 - 11:10  **Parallel session - COMEX: logistics II**
*Session chair: G. K. Janssens*
*Room: K-101*

The winning approach for the Verolog solver challenge 2014: the swap-body vehicle routing problem  
*T. Wauters, T. A. M. Toffolo, J. Christiaens and S. Van Malderen .............. ??*

Routing barges on inland waterways  
*T. Van Den Bossche, T. Wauters, J. Christiaens and G. Vanden Berghe ......................................... ??*

A GRASP-based approach to the ESICUP problem  
*E. Esprit, T. A. M. Toffolo, T. Wauters and G. Vanden Berghe ......................... ??*

CVRP with sequence based pallet loading and axle weight restrictions with and without dense packing  
*H. Pollaris, K. Braekers, A. Caris and G. K. Janssens ......................... ??*

09:30 - 11:10  **Parallel session - Scheduling II**
*Session chair: P. Vansteenwegen*
*Room: K-102*

A generic method for time-dependent sequencing problems  
*J. Kinable, A. Cire and W.-J. Van Hoeve ........................................ ??*

Scheduling trucks in a tank terminal  
*E.-J. Jacobs, J. Verstichel, T. Wauters and G. Vanden Berghe ......................... ??*

Optimal train rescheduling after conflict detection  
*S. Van Thielen, S. Burggraeve and P. Vansteenwegen .............................. ??*

Sensitivity analysis of line planning of public bus services  
*E. Avila Ordóñez and P. Vansteenwegen ........................................ ??*
Detailed Programme - Friday, 6th February 2015

09:30 - 11:10  **Parallel session - COMEX: economics**  
Session chair: D. Goossens  
Room: K-201

The focus of attention problem  
*D. Goossens, S. Polyakovskiy, F. C. R. Spieksma and G. J. Woeginger*  
Testing stochastic models of preference using column generation  
*B. Smeulders, C. Davis-Stober, M. Regenwetter and F. C. R. Spieksma*  
Dynamic programming for combinatorial auctions with items arranged on rows  
*B. Vangerven, D. Goossens and F. C. R. Spieksma*  
Novel formulations for general Stackelberg and Stackelberg security games  
*C. Casorrán-Amilburu, B. Fortz, M. Labbé and F. Ordóñez*

09:30 - 11:10  **Parallel session - Multi-objective & multi-criteria**  
Session chair: R. Bisdorff  
Room: K-202

On boosting KOHLER’s ranking-by-choosing rule with a quantiles preordering  
*R. Bisdorff*  
The logical dominance method: application on the MO-TSP  
*S. Elaoud and J. Teghem*  
Comparing entropy weighting method and AHP for JIT implementation in a manufacturing system  
*E. Yadollahi, E.-H. Aghezzaf and B. T. H. T. Baharudin*  
Decision support system to minimize the risks of antibiotic prescription using multi criteria support decision method  
*S. Ben Souissi, M. Pirlot, L. Elhiki and M. Abed*

11:10 - 11:30  **Coffee break**  
Patio next to room K-001

11:30 - 12:45  **Parallel session - Data mining II**  
Session chair: A. Vandaele  
Room: K-101

Predicting personal attributes based on online ratings  
*M. Stankova, D. Martens and F. Provost*  
Positive semidefinite factorizations of nonnegative matrices  
*A. Vandaele and N. Gillis*  
Embedded projective nonnegative matrix factorization for image feature extraction  
*M. Tefera Belachew and N. Del Buono*
11:30 - 12:45  **Parallel session - Scheduling III**  
*Session chair: J. Gmys*  
*Room: K-102*

Sequential diagnosis of $k$-out-of-$n$ systems with imperfect tests  
*W. Wei, K. Coolen, F. Talla Nobibon and R. Leus*  

Lower bounds for an integrated task and personnel scheduling problem  
*P. Smet and A. Ernst*  

Towards a GPU-based branch-and-bound algorithm using an integer-vector-matrix data structure  
*J. Gmys, M. Mezmaz, N. Melab and D. Tuytens*  

11:30 - 12:45  **Parallel session - Supply chain II**  
*Session chair: T. Cornelissens*  
*Room: K-201*

Efficient design of a multiproduct batch plant in the chemical blending industry  
*F. Verbiest and T. Cornelissens*  

Facility location and multi-commodity flow decompositions of a lot-sizing problem  
*S. Deleplanque, S. Kedad-Sidhoum and A. Quilliot*  

Solving the absolute $p$-center location problem on large networks  
*H. Calik, B. Y. Kara and B. C. Tansel*  

11:30 - 12:45  **Parallel session - Queueing**  
*Session chair: E. Deiana*  
*Room: K-202*

On the effects of patient unpunctuality in appointment scheduling  
*M. Deceuninck, S. De Vuyst and D. Fiems*  

Performance measures of an Erlangized Markov modulated fluid queue  
*S. Dendievel and G. Latouche*  

Stationary distribution of random walks in the quarter plane  
*E. Deiana, G. Latouche and M-A. Remiche*  

12:45 - 13:45  **Lunch break**  
*Patio next to room K-001*

13:45 - 15:45  **ORBEL award and Wolsey award**  
*Nick Street: Predictive analytics for personalized health care decision making*  
*Room: K-001*

15:45 -  **Farewell drink**  
*Patio next to room K-001*