

导师风采:

戎爱英个人简历

姓名: 戎爱英

职称: 教授

最高学位: 博士

所属硕点: 数学 (运筹学与控制论)

所在系院: 数学与统计学院

联系方式: aiying_rong@163.com

专业方向: 可再生能源系统优化



简介: 戎爱英, 女, 汉族, 海归, 计算机科学(算法)博士, 留欧工作 16 年, 硕导, 现任湖北文理学院数学与统计学院教授。曾在芬兰和丹麦联合指导过 3 名硕士毕业生。从事以运筹学和计算机科学为依托, 解决工程(能源、交通、食品、钢铁和供应链等)领域的系统建模和优化调度已有 20 多年, 先后在三个欧洲国家(芬兰、丹麦和葡萄牙)五个(其中三个所在国家的自然科学基金)高级别项目中担任主研、主持和项目起草工作, 同时也做经典组合优化问题(如背包问题)的算法研究。共发表过 33 篇(30 篇 JCR 一区+2 篇 JCR 二区+1 篇 JCR 三区)国际高级别 SCI 期刊文章, 1 篇会议组委员会指定的开源杂志期刊文章, 2 篇国际书章, 19 篇(4 篇 ISTP 和 1 篇 EI 检索)国际会议文章, 5 篇摘要投稿的国际会议报告, 并有优秀的索引记录。基于 37 篇(33 篇期刊+4 篇会议)SCI 检索的文章, 根据科学网(Web of Science)的报道, 总索引为 1767, 其中 5 篇期刊文章单篇引用次数超 100, 1 篇高被引文章(索引: 265), h-index 为 20 (提取时间: 2021.05.21)。自 2007 年以来, 担任 10 多个国际期刊的审稿人, 平均每年审稿件 15 篇次。

教育背景:

2003/02-2006/06, 图尔库大学(芬兰), 理学院, 信息技术系, 计算机科学博士, 导师: Risto Lahdelma.

2000/09-2002/11, 香港科技大学, 工程院, 工业工程及工程管理系, 硕士, 导师: 刘继印。

1992/09-1995/07, 北京师范大学, 低能核物理研究所, 原子核物理, 硕士, 导师: 张慧星。

1985/09-1989/07, 东北大学, 自动控制系, 工业电气自动化, 学士

科研与学术工作经历 (海外 16 年) :

1. 2020/02-至今, 湖北文理学院, 数学与统计学院, 教授
2. 2009/01-2019/11, 武汉科技大学, 恒大管理学院, 教授
3. 2014/09-2018/11, 阿尔托大学(芬兰), 工程院, 机械工程系, 高级研究员
4. 2009/08-2014/08, 里斯本大学(葡萄牙), 应用数学与经济中心, 自然科学基金研究员
5. 2009/04-2009/07, 图尔库大学(芬兰), 理学院, 信息技术系, 访问学者
6. 2007/04-2009/03, 丹麦技术大学(丹麦), 管理工程学院, 博士后研究员
7. 2006/06-2007/03, 图尔库大学(芬兰), 理学院, 信息技术系, 博士后研究员
8. 2003/02-2006/05, 图尔库大学(芬兰), 理学院, 信息技术系, 研究员
9. 2002/08-2003/01, 东北大学, 系统工程研究所, 研究员
10. 2000/09-2002/07, 香港科技大学, 工程院, 工业工程及工程管理系, 兼职助教(奖学金的一种形式)
11. 1995/07-2000/08, 北京信息科技大学, 自动控制与计算机系, 讲师
12. 1989/07-1992/08, 辽宁省石油化工规划设计院, 电器仪表科室, 助理工程师

主持或参加科研项目 (课题) 及人才计划项目情况:

(1) 省部级及以上项目:

1. 芬兰国家自然科学基金项目, 298317, 可再生能源在大型多联系统中的随机优化, 2016/09-2020/08, 400 万元, 已结题, 起草/主研,

2. 葡萄牙国家自然科学基金项目, POCI2010, 多目标组合优化, 2009/08-2014/08, 400 万元, 已结题, 主持/主研

3. 芬兰国家自然科学基金项目, 104795, 工业问题的随机优化和自适应学习, 2004/01-2006/12, 400 万元, 已结题, 主研,

(2) 其他项目:

1. 湖北文理学院人才计划科研启动资金, kyqdf2020001, 可再生能源纳入热电联产系统的优化, 2020/05-2023/02, 10 万元, 在研, 主持

2. 芬兰阿尔托大学校级大型交叉合作项目, 91002071, 欧洲能源市场的可持续过度, 2014/06-2018/11, 800 万元, 已结题, 主研, 参与

3. 丹麦技术大学校级大型交叉合作项目, Food DTU, 食品供应链管理 2007/04-2009/03, 800 万, 已结题, 主研, 参与

代表性研究论文: (* 通讯作者, 列 SCI 期刊文章)

(1) A. **Rong** *, P. Luh. A dynamic regrouping based dynamic programming approach for unit commitment of the transmission-constrained multi-site combined heat and power System [J]. *IEEE Transactions on Power Systems*, 2018, 33(1): 714-722. IEEE publisher. **SCI索引次数: 18. (JCR一区期刊)**

(2) A. **Rong** *, Y. Su. Polygeneration systems in buildings: A survey on optimization approaches [J]. *Energy and Buildings*, 2017, 151: 439-454. Elsevier Publisher. **SCI 索引次数: 34. (JCR 一区期刊)**

(3) A. **Rong** *, R. Lahdelma. 2017. An efficient model and algorithm for the transmission-constrained multi-site combined heat and power system [J]. *European Journal of Operational Research*, 2017, 258: 1106-1117. Elsevier publisher. **SCI 索引次数: 12. (JCR 一区期刊)**

(4) A. **Rong** *, R. Lahdelma. Role of polygeneration in sustainable energy system development--Challenges and opportunities from optimization viewpoints [J]. *Renewable and Sustainable Energy Reviews*, 2016, 53: 363-372. Elsevier publisher. **SCI 索引次数: 59. (JCR 一区期刊)**

(5) A. **Rong** *, J. Figueira, R. Lahdelma. A two phase approach for the

bi-objective non-convex combined heat and power production planning problem [J]. *European Journal of Operational Research*, 2015, 245: 296-308. Elsevier publisher. **SCI 索引次数: 14. (JCR 一区期刊)**

(6) A. **Rong***, J. Figueira, R. Lahdelma. An efficient algorithm for bi-objective combined heat and power production planning under the emission trading scheme [J]. *Energy Conversion and Management*, 2014, 88: 525-534. Elsevier publisher. **SCI 索引次数: 14. (JCR 一区期刊)**

(7) A. **Rong***, J. Figueira. Dynamic programming algorithms for the bi-objective integer knapsack problem. *European Journal of Operational Research*, 2014, 236: 85-99. Elsevier publisher, **SCI 索引次数: 15. (JCR 一区期刊)**

(8) A. **Rong***, J. Figueira. A reduction dynamic programming algorithm for the bi-objective integer knapsack problem [J]. *European Journal of Operational Research*, 2013., 231: 299-313. Elsevier publisher. **SCI Citations: 11. (JCR 一区期刊)**

(9) A. **Rong***, K. Klamroth, J. Figueira. Multicriteria 0-1 knapsack problem with k-min objectives [J]. *Computers & Operations Research*, 2013, 40: 1481-1496. Elsevier publisher. **SCI 索引次数: 3. (JCR 一区期刊)**

(10) A. **Rong***, J. Figueira. Computational performance of basic state reduction dynamic programming algorithms for bi-objective 0-1 knapsack problems [J]. *Computers & Mathematics with Applications*, 2012, 63: 1462-1480. Elsevier publisher. **SCI Citations: 5. (JCR 一区期刊)**

(11) A. **Rong***, J. Figueira, K. Klamroth. Dynamic programming based algorithms for the discounted {0-1} knapsack problem [J]. *Applied Mathematics and Computation*, 2012, 281: 6921-6933. Elsevier publisher. **SCI 索引次数: 24. (JCR 一区期刊)**

(12) A. **Rong***, J. Figueira, M. V. Pato. A two state reduction based dynamic programming algorithm for the bi-objective 0-1 knapsack problem [J]. *Computers & Mathematics with Applications*, 2011, 62: 2913-2930. Elsevier publisher. **SCI 索引次数: 7. (JCR 一区期刊)**

(13) A. **Rong**, A. Toth, O. S. Nevalainen, R. Lahdelma, T. Knuutila*. Modeling

the machine configuration and line balancing problem of a PCB assembly line with modular placement machines [J]. *International Journal of Advanced Manufacturing Technology*, 2011, 54: 349-360. Springer publisher. **SCI 索引次数: 9.** (JCR 二区期刊)

(14) **A. Rong**, R. Akkerman, M. Grunow*. An optimization approach for managing fresh food quality throughout the supply chain [J]. *International Journal of Production Economics*, 2011, 131: 421-429. Elsevier publisher. **SCI 索引次数: 265** (高被引). (JCR 一区期刊)

(15) **A. Rong***, M. Grunow, A methodology for controlling dispersion in food production and distribution [J]. *OR Spectrum*, 2010, 32 (4): 957- 978. Springer Publisher. **SCI 索引次数: 20.** (JCR 二区期刊)

(16) **A. Rong**. Monthly tour scheduling models with mixed skills considering weekend off requirements. *Computers & Industrial Engineering*, 2010, 59: 334-343. Elsevier publisher. **SCI 索引次数: 19.** (JCR 一区期刊)

(17) **A. Rong**, M. Grunow. Shift designs for freight handling personnel at air cargo terminals [J]. *Transportation Research Part E: Logistics and Transportation Review*, 2009, 45: 725-739. Elsevier publisher. **SCI 索引次数: 19.** (JCR 一区期刊)

(18) **A. Rong ***, H. Hakonen, R. Lahdelma. A dynamic regrouping based sequential dynamic programming algorithm for unit commitment of combined heat and power systems [J]. *Energy Conversion and Management*, 2009, 50: 1108-1115. Elsevier publisher. **SCI 索引次数: 57.** (JCR 一区期刊)

(19) **A. Rong**, H. Hakonen, R. Lahdelma. A variant of the dynamic programming algorithm for unit commitment of combined heat and power systems [J]. *European Journal of Operational Research*, 2008, 190: 741-755. Elsevier publisher. **SCI 索引次数: 36.** (JCR 一区期刊)

(20) **A. Rong***, R. Lahdelma, M. Grunow. An improved unit decommitment algorithms for combined heat and power system [J]. *European Journal of Operational Research*, 2009, 195: 552-562. Elsevier publisher. **SCI 索引次数: 23.** (JCR 一区期刊)

(21) **A. Rong***, R. Lahdelma, P. Luh. Lagrangian relaxation based algorithm for trigeneration planning with storages [J]. *European Journal of Operational Research*, 2008, 188: 240-257. Elsevier publisher. **SCI 索引次数: 52.** (JCR 一区期刊)

(22) **A. Rong***, R. Lahdelma. Fuzzy chance constrained linear programming model for optimizing scrap charge in steel production [J]. *European Journal of Operational Research*, 2008, 186(3): 953-964. Elsevier publisher. **SCI 索引次数: 83.** (JCR 一区期刊)

(23) **A. Rong***, R. Lahdelma. An efficient envelope-based Branch and Bound algorithm for nonconvex combined heat and power production planning [J]. *European Journal of Operational Research*, 2007, 183: 412-431. Elsevier publisher. **SCI 索引次数: 52.** (JCR 一区期刊)

(24) **A. Rong***, R. Lahdelma. An effective heuristic for combined heat and power production planning with power ramp constraints [J]. *Applied Energy*, 2007, 84: 307-325. Elsevier publisher. **SCI 索引次数: 36.** (JCR 一区期刊)

(25) **A. Rong***, R. Lahdelma. CO₂ emissions trading planning in combined heat and power production via multi-period stochastic optimization [J]. *European Journal of Operational Research*, 2007, 176: 1874-1895. Elsevier publisher. **SCI 索引次数: 55.** (JCR 一区期刊)

(26) **A. Rong***, R. Lahdelma. Efficient algorithms for combined heat and power production planning under the deregulated electricity market [J]. *European Journal of Operational Research*, 2007, 176: 1219-1245. Elsevier publisher. **SCI 索引次数: 53.** (JCR 一区期刊)

(27) **A. Rong***, H. Hakonen, R. Lahdelma. An efficient linear model and optimization algorithm for multi-site combined heat and power production [J]. *European Journal of Operational Research*, 2006, 168(2): 612-632. Elsevier publisher. **SCI 索引次数: 44.** (JCR 一区期刊)

(28) **A. Rong***, R. Lahdelma. An efficient linear programming model and optimization algorithm for trigeneration [J]. *Applied Energy*, 2005, 82: 40-63. Elsevier publisher. **SCI 索引次数: 122.** (JCR 一区期刊)

(29) L. Tang, J. Liu*, **A. Rong** and Z. Yang. Modeling and a genetic algorithm solution to the slab stack shuffling problem in implementing steel rolling schedules [J]. *International Journal of Production Research*, 2002, 40(7): 1583-1595. Taylor & Francis Publisher. **SCI 索引次数: 32.** (JCR 一区期刊)

(30) L. Tang, J. Liu*, **A. Rong** and Z. Yang. An effective heuristic algorithm to minimize stack shuffles in selecting steel slabs from the slab yard for heating and rolling [J]. *Journal of the Operational Research Society*, 2001, 52: 1091-1097. Palgrave Macmillan publisher. **SCI 索引次数: 15.** (JCR 三区期刊)

(31) L. Tang, J. Liu*, **A. Rong** and Z. Yang. A review of planning and scheduling systems and methods for integrated steel production [J]. *European Journal of Operational Research*, 2001, 133: 1-20. Elsevier publisher. **SCI 索引次数: 219.** (JCR 一区期刊)

(32) L. Tang, J. Liu*, **A. Rong** and Z. Yang. A multiple traveling salesman problem (MTSP) model for hot rolling scheduling in Baoshan Iron & Steel Complex [J]. *European Journal of Operational Research*, 2000, 124: 267-282. Elsevier publisher. **SCI 索引次数: 189.** (JCR 一区期刊)

(33) L. Tang, J. Liu*, **A. Rong** and Z. Yang. A mathematical programming model for scheduling steelmaking-continuous casting production [J]. *European Journal of Operational Research*, 2000, 120: 423-435. Elsevier publisher. **SCI 索引次数: 149.** (JCR 一区期刊)

奖励和获得的荣誉:

- 1989 年获东北大学自动控制系免试保研资格(120 名毕业生只有 3 个名额)
- 2000 年获香港科技大学奖学金攻读博士学位
- 2002 年获美国康奈狄克大学奖学金攻读博士学位
- 2003 年获芬兰图尔库大学奖学金攻读博士学位