

彭东亮

+31618189295 · d.l.peng@tudelft.nl · 博士后

基本情况

本人出生于 1987 年 10 月 26 日，湖南浏阳。本人热爱科研教学，乐观向上，工作负责，易于相处。个人网站为www.researchgate.net/profile/Dongliang_Peng。不当之处请多多指教，非常感谢！¹

工作经历

博士后，GIS technology, Delft University of Technology, 荷兰 2018/05–2020/12

课题: Web vario-scale maps

导师: Peter van Oosterom 和 Martijn Meijers

教育背景

博士，Computer Science, University of Würzburg, 德国 2012/10–2017/12

论文: An Optimization-Based Approach for Continuous Map Generalization²

成绩: magna cum laude (优)

导师: Alexander Wolff 和 Jan-Henrik Haunert

硕士，地图制图学与地理信息工程，中南大学，中国 2009/09–2012/05

论文: 面向地图连续综合的线状要素 Morphing 变换方法研究³

成绩: 中南大学优秀硕士学位论文

导师: 邓敏

学士，测绘工程，中南大学，中国 2005/09–2009/06

论文: 基于 AutoCAD 的矢量数据更新方法

成绩: 优

导师: 邓敏

研究兴趣

- 地理信息系统算法，基于最优化的地图制图，地图多尺度表达，地图连续综合，带有平滑渐变的网络地图。

获奖和荣誉

- 地理信息科技进步一等奖（序 11），“多源多尺度空间数据不一致性探测处理的理论与方法”。 2013/09
- 中南大学优秀研究生。 2011/12
- 比亚迪奖学金优秀学生奖。 2011/12
- 彭东亮，邓敏，赵彬彬，“基于 Morphing 的河网多尺度变换方法研究”，2011 年地理信息产业“苍穹杯”青年优秀论文三等奖。 2011/10
- 刘启亮，邓敏，彭东亮，徐震，“基于场论的空间聚类有效性评价方法研究”，“中测新图杯”青年优秀论文一等奖。 2009/10

¹本简历更新于 2020 年 10 月 25 日。

²博士论文开放获取网址为 <https://doi.org/10.25972/WUP-978-3-95826-105-1>。

³硕士论文网址为 <http://cdmd.cnki.com.cn/Article/CDMD-10533-1012478478.htm>。

代表论文

- [1] Dongliang Peng, Alexander Wolff, and Jan-Henrik Haunert. “Finding optimal sequences for area aggregation—A* vs. integer linear programming.” In: *ACM Transactions on Spatial Algorithms and Systems* 7.1 (2020), pp. 1–40. DOI: [10.1145/3409290](https://doi.org/10.1145/3409290).
- [2] Dongliang Peng, Martijn Meijers, and Peter van Oosterom. “Paralleling generalization operations to support smooth zooming: case study of merging area objects.” In: *International Journal of Geographical Information Science* (2020). Improving for resubmitting, pp. 1–26. URL: https://pengdlzn.github.io/parallel-merge-ijgis/parallel_merge-ijgis.pdf.
- [3] Dongliang Peng, Alexander Wolff, and Jan-Henrik Haunert. “Continuous generalization of administrative boundaries based on compatible triangulations.” In: *Proc. 19th AGILE Conference on Geographic Information Science, Geospatial Data in a Changing World*. Ed. by Tapani Sarjakoski, Yasmina Maribel Santos, and Tiina L. Sarjakoski. Lecture Notes in Geoinformation and Cartography. 2016, pp. 399–415. DOI: [10/c5kh](https://doi.org/10.1007/978-3-319-57336-6_27).
- [4] Dongliang Peng and Guillaume Touya. “Continuously generalizing buildings to built-up areas by aggregating and growing.” In: *Proc. 3rd ACM SIGSPATIAL Workshop on Smart Cities and Urban Analytics (UrbanGIS)*. 2017, pp. 1–8. DOI: [10.1145/3152178.3152188](https://doi.org/10.1145/3152178.3152188).
- [5] Min Deng and Dongliang Peng. “Morphing linear features based on their entire structures.” In: *Transactions in GIS* 19.5 (2015), pp. 653–677. DOI: [10.1111/tgis.12111](https://doi.org/10.1111/tgis.12111).

所有论文

- [1] Dongliang Peng, Martijn Meijers, and Peter van Oosterom. “Paralleling generalization operations to support smooth zooming: case study of merging area objects.” In: *International Journal of Geographical Information Science* (2020). Improving for resubmitting, pp. 1–26. URL: https://pengdlzn.github.io/parallel-merge-ijgis/parallel_merge-ijgis.pdf.
- [2] Dongliang Peng, Alexander Wolff, and Jan-Henrik Haunert. “Finding optimal sequences for area aggregation—A* vs. integer linear programming.” In: *ACM Transactions on Spatial Algorithms and Systems* 7.1 (2020), pp. 1–40. DOI: [10.1145/3409290](https://doi.org/10.1145/3409290).
- [3] Martijn Meijers, Peter van Oosterom, Radan Šuba, and Dongliang Peng. “Towards a scale dependent framework for creating vario-scale maps.” In: *ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences* XLII-4 (2018), pp. 425–432. DOI: [10.5194/isprs-archives-XLII-4-425-2018](https://doi.org/10.5194/isprs-archives-XLII-4-425-2018).
- [4] Dongliang Peng and Guillaume Touya. “Continuously generalizing buildings to built-up areas by aggregating and growing.” In: *Proc. 3rd ACM SIGSPATIAL Workshop on Smart Cities and Urban Analytics (UrbanGIS)*. 2017, pp. 1–8. DOI: [10.1145/3152178.3152188](https://doi.org/10.1145/3152178.3152188).
- [5] Dongliang Peng, Alexander Wolff, and Jan-Henrik Haunert. “Using the A* algorithm to find optimal sequences for area aggregation.” In: *Proc. 28th International Cartographic Conference (ICC), Advances in Cartography and GIScience*. Ed. by Michael P. Peterson. Lecture Notes in Geoinformation and Cartography. 2017, pp. 389–404. DOI: [10.1007/978-3-319-57336-6_27](https://doi.org/10.1007/978-3-319-57336-6_27).
- [6] Dongliang Peng, Alexander Wolff, and Jan-Henrik Haunert. “Continuous generalization of administrative boundaries based on compatible triangulations.” In: *Proc. 19th AGILE Conference on Geographic Information Science, Geospatial Data in a Changing World*. Ed. by Tapani Sarjakoski, Yasmina Maribel Santos, and Tiina L. Sarjakoski. Lecture Notes in Geoinformation and Cartography. 2016, pp. 399–415. DOI: [10/c5kh](https://doi.org/10.1007/978-3-319-57336-6_27).
- [7] 赵彬彬, 彭东亮, 张山山, 刘珊珊, 熊旭平, and 戴全发. “顾及空间关系约束的不同比例尺面目标不一致性同化处理.” In: *武汉大学学报·信息科学版* 41.7 (2016), pp. 911–917. DOI: [10.13203/j.whugis20140011](https://doi.org/10.13203/j.whugis20140011).

- [8] 赵彬彬, 邓敏, 彭东亮, and 朱建军. “基于整体极优对应的不同比例尺线目标一致化处理方法.” In: 武汉大学学报·信息科学版 41.8 (2016), pp. 1046–1054. DOI: [10.13203/j.whugis20140430](https://doi.org/10.13203/j.whugis20140430).
- [9] Min Deng and Dongliang Peng. “Morphing linear features based on their entire structures.” In: *Transactions in GIS* 19.5 (2015), pp. 653–677. DOI: [10.1111/tgis.12111](https://doi.org/10.1111/tgis.12111).
- [10] 王晓密, 赵彬彬, 邓敏, and 彭东亮. “不同比例尺地图水系目标变化探测方法研究.” In: 地理与地理信息科学 31.6 (2015), pp. 25–29. DOI: [10.3969/j.issn.1672-0504.2015.06.005](https://doi.org/10.3969/j.issn.1672-0504.2015.06.005).
- [11] Dongliang Peng and Alexander Wolff. “Watch your data structures!” In: *Proc. 22nd Annual Conference of the GIS Research UK (GISRUK)*. Ed. by Jane Drummond. 2014, pp. 371–381. URL: https://www.gla.ac.uk/media/media_401742_en.pdf.
- [12] 彭东亮, 邓敏, and 刘慧敏. “更充分利用独立弯曲结构的线状要素 morphing 变换方法.” In: 测绘学报 43.6 (2014), pp. 637–644. DOI: [10.13485/j.cnki.11-2089.2014.0100](https://doi.org/10.13485/j.cnki.11-2089.2014.0100).
- [13] Dongliang Peng and Min Deng. “A method of measuring shape similarity between multi-scale objects.” In: *Proc. 12th International Conference on GeoComputation*. 2013. URL: <http://www.geocomputation.org/2013/papers/127.pdf>.
- [14] Dongliang Peng, Jan-Henrik Haunert, Alexander Wolff, and Christophe Hurter. “Morphing polylines based on least squares adjustment.” In: *Proc. 16th ICA Workshop on Generalisation and Multiple Representation (ICAGM)*. 2013. URL: https://kartographie.geo.tu-dresden.de/downloads/ica-gen/workshop2013/genemappro2013_submission_6.pdf.
- [15] 彭东亮, 刘慧敏, 邓敏, and 刘斯旸. “线状要素 morphing 变换长度变化规律的探讨.” In: 地理与地理信息科学 29.1 (2013), pp. 22–27. URL: <http://www.dlydlxxkx.cn/html/qkdd/2013/10001.html>.
- [16] Dongliang Peng, Min Deng, and Binbin Zhao. “Multi-scale transformation of river networks based on morphing technology.” In: *Journal of Remote Sensing* 16.5 (2012), pp. 953–960. URL: http://www.jors.cn/jrs/ch/reader/view_abstract.aspx?file_no=r11272&flag=1.
- [17] 彭东亮, 邓敏, and 徐枫. “顾及 BLG 树结构特征的线状要素 morphing 变换方法.” In: 武汉大学学报·信息科学版 37.9 (2012), pp. 1120–1125. URL: <http://ch.whu.edu.cn/article/id/330>.
- [18] 彭东亮, 邓敏, and 赵彬彬. “河网多尺度 morphing 的变换方法研究.” In: 遥感学报 16.5 (2012), pp. 961–968. URL: http://www.jors.cn/jrs/ch/reader/view_abstract.aspx?file_no=r11272&flag=1.
- [19] 邓敏, 彭东亮, 徐震, and 刘慧敏. “一种基于弯曲结构的线状要素 morphing 方法.” In: 中南大学学报 (自然科学版) 43.7 (2012), pp. 2674–2682. URL: http://www.zndxzk.com.cn/paper/paper_30098.html.
- [20] Dongliang Peng, Min Deng, Zhen Xu, and Huimin Liu. “A new morphing method of linear features based on bend structures.” In: *Proc. ISPRS Workshop on Dynamic and Multi-Dimensional GIS*. 2011.
- [21] 刘启亮, 邓敏, 彭东亮, and 王佳璆. “基于力学思想的空间聚类有效性评价.” In: 武汉大学学报·信息科学版 36.8 (2011), pp. 982–986. URL: <http://ch.whu.edu.cn/article/id/623>.
- [22] 刘启亮, 邓敏, 石岩, and 彭东亮. “一种基于多约束的空间聚类方法.” In: 测绘学报 40.4 (2011), pp. 509–516. URL: <http://xb.sinomaps.com/CN/abstract/abstract5266.shtml>.
- [23] 邓敏, 彭东亮, 刘启亮, and 石岩. “一种基于场论的层次空间聚类算法.” In: 武汉大学学报·信息科学版 36.7 (2011), pp. 847–852. URL: <http://ch.whu.edu.cn/CN/Y2011/V36/I8/982>.
- [24] 赵玲, 邓敏, 王佳璆, and 彭东亮. “基于复杂网络理论的城市路网结构特性分析.” In: 地理与地理信息科学 26.5 (2010), pp. 11–15. URL: <http://www.dlydlxxkx.cn/html/qkdd/2010/6521.html>.

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- 邓敏, 彭东亮, 刘启亮, 刘慧敏, 彭思岭, 徐震, 黄雪萍, 张朋东, “空间插值分析软件 (EasyInterpolator)”, 证书号: 软著登字第 0244971 号, 登记号: 2010SR056698, 完成日期: 2010 年 10 月 10 日。

- 邓敏, 刘启亮, 彭东亮, 刘慧敏, 石岩, 李光强, 王佳璐, 梅小明, 赵玲, “空间异常探测软件 (EasyDetector)”, 证书号: 软著登字第 0221873 号, 登记号: 2010SR033600, 完成日期: 2010 年 06 月 04 日。
- 邓敏, 刘启亮, 彭东亮, 李光强, 刘慧敏, “空间聚类分析软件 (EasyCluster)”, 证书号: 软著登字第 0209447 号, 登记号: 2010SR021174, 完成日期: 2010 年 03 月 10 日。

学术交流

会议

- ISPRS TC IV Mid-term Symposium “3D Spatial Information Science—The Engine of Change” (Volume XLII-4). Delft, The Netherlands. 10/01–10/05, 2018
- 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems (ACMGIS’17). Redondo Beach, California, USA. 11/07–11/10, 2017
- 3rd International Workshop on Smart Cities and Urban Analytics (UrbanGIS’17); **oral presentation**. Redondo Beach, California, USA. 11/07, 2017
- 28th International Cartographic Conference (ICC’17); **oral presentation**. Washington DC, USA. 07/02–07/07, 2017
- 20th International Cartographic Association Workshop on Generalisation and Multiple Representation (ICAGM’17). Washington DC, USA. 07/01, 2017
- 19th Association of Geographic Information Laboratories in Europe Conference on Geographic Information Science (AGILE’16); **oral presentation**. Helsinki, Finland. 06/14–06/17, 2016
- 19th International Cartographic Association Workshop on Generalisation and Multiple Representation (ICAGM’16). Helsinki, Finland. 06/14, 2016
- 22th Annual Conference of Geographical Information Systems Research UK (GIS-RUK’14); **oral presentation**. Glasgow, UK. 04/16–04/18, 2014
- 26th International Cartographic Conference (ICC’13). Dresden, Germany. 08/25–08/30, 2013
- 16th International Cartographic Association Workshop on Generalisation and Multiple Representation (ICAGM’13); **oral presentation**. Dresden, Germany. 08/23–08/24, 2013
- The European Workshop on Computational Geometry (EuroCG’13). Braunschweig, Germany. 03/17–03/20, 2013
- 中国地理信息产业大会。中国北京。10/25–10/26, 2011

论坛

- Geomatics Day. Delft, The Netherlands. 06/26, 2020
- Geomatics Day. Delft, The Netherlands. 06/28, 2019
- NCG symposium; **oral presentation**. Enschede, The Netherlands. 11/21, 2019
- Seminar Geo-Information Systems in Action. Delft, The Netherlands. 10/19, 2018
- Geomatics Day. Delft, The Netherlands. 06/22, 2018
- Map generalization and multiple-/vario-scale representations, a seminar to close the STW project Vario-scale Geo-information. Delft, The Netherlands. 06/12, 2017
- 3rd PhD Colloquium of the DGK Section on Geoinformatics and the DGPF Working Group on Geoinformatics. Würzburg, Germany. 03/07, 2017
- 2rd PhD Colloquium of the DGK Section on Geoinformatics and the DGPF Working Group on Geoinformatics; **oral presentation**. Bonn, Germany. 02/23, 2016
- 中南大学第二届测绘研究生学术论坛; 口头报告 (三等奖)。中国长沙。12/22–12/23, 2011
- 中南大学第一届测绘研究生学术论坛; 口头报告 (三等奖)。中国长沙。12/12–12/13, 2009

短期培训

- Geometric Algorithms in the Field; **Poster**. Leiden, The Netherlands. 06/23–26/27, 2014
- EuroGIGA Fall School. Würzburg, Germany. 10/08–10/12, 2012

访问

- Dr. Guillaume Touya, French National Mapping Agency (IGN), Saint-Mandé, France. 09/12–09/23, 2016
- Dr. Jan-Henrik Haunert, University of Osnabrück, Osnabrück, Germany. 03/09–03/13, 2015
- Dr. Jan-Henrik Haunert, University of Osnabrück, Osnabrück, Germany. 07/28–08/01, 2014

审稿

期刊

- 测绘学报
- Computers and Geosciences (2 次)
- International Journal of Digital Earth
- International Journal of Geographical Information Science
- Journal of Spatial Science
- 武汉大学学报 · 信息科学版 (3 次)

会议

- 25th International Symposium on Algorithms and Computation (ISAAC'16)
- 23rd ICA Workshop on Map Generalisation and Multiple Representation (ICAGM'20, 3 篇)

学术活动组织

- 23rd ICA Workshop on Map Generalisation and Multiple Representation, member of Program Committee. Delft, The Netherlands. 11/05–11/06, 2020
- Creating Interactive Online maps, organizer. This workshop is supported by NCG Talent Program 2020. Delft, The Netherlands. 11/05, 2020

教学

- Python Programming for Geomatics (Some lectures: 2019 Q1⁴, 2020 Q1; Tutorials: 2018 Q1, 2019 Q1, 2020 Q1)
- Algorithms for GIS (Tutorials: 2016 SS⁵, 2017 SS)
- Computational Geometry (Tutorials: 2015 WS, 2016 WS)
- Spatial Optimization, under development
- Working on Dutch *University Teaching Qualification*, finished 80 %

⁴Q1: quarter 1 of an academic year.

⁵SS: summer semester; WS: winter semester.

指导帮助毕业论文

硕士

- Helping Charlie Groenewegen, “Locations for low cost large-scale Green Hydrogen production systems in Europe and North Africa”. 2020/09–
- Supervised Konrad Jarocki (as second supervisor), “Parallel step assignment for continuous generalization”. 2019/09–2020/07
- Helped Felipe Reinel, “Multidimensional labor resource visualization for integrated turnarounds”. 2019/01–2019/06
- Helped Yannick Brangers, “Project A-Locate: Using location-allocation modelling to optimise human resources in retail environments”. 2018/09–2019/06

本科

- 帮助王航, “面状要素地图连续综合方法研究”。 2014/03–2014/06
- 帮助谢坤, “以拓扑形变最小为准则的面状要素地图鱼眼视图方法”。 2013/03–2013/06
- 帮助张琦, “基于 ArcEngine 的济南水雨情信息系统研究”。 2012/03–2012/06
- 帮助胡敏, “地图综合中基于结构的线状要素 Morphing 变换方法研究”。 2012/03–2012/06
- 帮助刘海燕, “空间聚类有效性评价方法对比研究”。 2010/03–2010/06

编程语言

- Python, JavaScript, HTML, and WebGL for web vario-scale maps.⁶
- C# with libraries ArcGIS Objects, CPLEX, Eigen, and Clipper for ContinuousGeneralizer.⁷
- 熟悉: Java, Visual Basic .NET, and C.
- 有少许经验: C++, XML, Matlab, and R.

常用工具

- Apache, ArcMap, ArcGIS Pro, FME, Git, Inkscape, Ipe, LaTeX, ParaView, PostgreSQL, QGIS

语言

- 中文, 母语
- 英语, B2 according to CEFR⁸, 测试于 2018 年 9 月 26 日
- 德语, A2 according to CEFR, 测试于 2014 年 7 月 11 日

爱好

- 运动: 足球, 壁球, 滑雪, 滑冰, 游泳, 乒乓球, 羽毛球, 桌球, 电子竞技等
- 桌游: 象棋, 围棋, Magic 等

参考人

- Prof. Dr. **Peter van Oosterom**. Section GIS technology, Faculty of Architecture and the Built Environment, Delft University of Technology, The Netherlands. Email: P.J.M.vanOosterom@tudelft.nl, Homepage: www.gdmc.nl/oosterom/.
- Prof. Dr. **Alexander Wolff**. Chair of Algorithms, Complexity, and Knowledge-Based Systems, Faculty of Mathematics and Computer Science, University of Würzburg, Germany. Email: alexander.wolff@uni-wuerzburg.de, Homepage: www1.informatik.uni-wuerzburg.de/wolff.

⁶A web map of parallel smooth merging is at <https://pengdlzn.github.io/webmaps/2020/09/color-adapt/top10nl-0.01.html>.

⁷The project of my prototype *ContinuousGeneralizer* is open access on GitHub; see <https://github.com/IGNF/ContinuousGeneralisation>.

⁸CEFR: the Common European Framework of Reference for Languages

- Prof. Dr. **Jan-Henrik Haunert**. Institute of Geodesy and Geoinformation, Faculty of Agriculture, University of Bonn, Germany. Email: haunert@igg.uni-bonn.de, Homepage: www.geoinfo.uni-bonn.de/haunert.