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研究员 博士生导师

戴瀚程, 北京大学环境科学与工程学院研究员, 博士生导师, 环境管理系系主任。研究方向为能源环境与气候变化经济与政策分析, 针对经济绿色低碳转型路径和成本效益, 以能源—环境—健康—经济系统 (IMED) 综合评估模型为手段开展系统研究。入选北京大学博雅青年学者, 入围斯坦福大学 2020 年度全球前 2% 高被引科学家榜单, 担任中国系统工程学会生态环境系统工程专业委员会常务委员, 城市大气环境综合管理与低碳行动伙伴关系委员, 国际性项目全球疾病负担研究合作者, 联合国环境署《全球环境展望 6: 城市》特别报告主笔作者, IPCC 第六次评估报告贡献作者。主持过国家自然科学基金委青年项目、面上项目、基金委双边合作项目课题、科技部国家重点研发项目课题以及英国 Wellcome Trust 基金项目。在国内外能源环境经济与政策领域核心期刊上发表 70 余篇学术论文, Web of Science 总被引用 2400 余次, H 指数 26, ESI 前 1% 高被引论文 8 篇。基于 IMED 模型发表的期刊文章综述见此: [中文](#)或[英文](#)。最新成果见 [Google Scholar](#) 或 [Researchgate](#)。

教育经历

2009/10 – 2012/12	博士, 日本东京工业大学管理科学与工程学科
2006/10 – 2009/03	硕士, 德国慕尼黑工业大学环境规划与生态工程系
2002/09 – 2006/07	学士, 北京大学环境学院环境科学系

工作经历

岗位

2017/01 – 至今	助理教授 (博士生导师), 北京大学环境科学与工程学院
2017/10 – 2018/10	主任, 未来地球计划亚洲季风区可持续发展集成研究 (MAIRS-FE, Monsoon Asia Integrated Research on Sustainability - Future Earth) 国际项目办公室主任
2013/01 – 2016/12	博士后, 日本国立环境研究所环境经济研究室
2009/04 – 2009/09	科研助理, 日本国立环境研究所环境经济研究室

授课

气候变化经济学	每周 2 小时, 2020-至今
气候变化减缓 与可持续发展 (英文授课)	每周 2 小时, 2021-至今
能源经济与政策	每周 2 小时, 2018-2019
全球环境展望 (英文授课)	每学期 8 小时
环境研究方法	每周 3 小时
环境科学与工程导论	每学期 2 小时

工作经历 (continued)

中国环境挑战 (英文授课)	每学期 2 小时
环境科学与工程前沿	每学期 2 小时
环境管理研究前沿	每学期 2 小时

研究

综合评估模型 开发IMED模型, 即 Integrated Assessment Model of Energy, Environment and Economy for Sustainable Development。IMED模型介绍见此: [中文](#), [英文](#)或[网页](#)。

论文发表

SCI/SSCI 期刊论文: 一作或通讯作者

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- 2 Ren, Ming and Hancheng Dai* et al (2021). Decarbonizing China's Iron and Steel Industry from the Supply and Demand Sides for Carbon Neutrality. In: Applied Energy.
- 3 Jin, Yana, Xiaorui Liu, Xiang Chen and Hancheng Dai* (2020). How carbon emission allowances allocation matters for China's emission trading: a general equilibrium analysis. In: Energy Economics vol. 92, p. 105012. URL: <https://www.sciencedirect.com/science/article/pii/S0140988320303522>.
- 4 Kim, Satbyul Estella, Yang Xie*, Hancheng Dai*, Shinichiro Fujimori, Yasuaki Hijioka, Yasushi Honda, Masahiro Hashizume, Toshihiko Masui, Tomoko Hasegawa, Xinghan Xu, Kan Yi and Ho Kim (2020). Air quality co-benefits from climate mitigation for human health in South Korea. In: Environment International vol. 136, p. 105507. URL: <https://www.sciencedirect.com/science/article/pii/S0160412019319257>.
- 5 Li, Boshu, Yan Chen, Shaohui Zhang, Zheru Wu, Cofala Janusz and Hancheng Dai* (2020). Climate and health benefits of phasing out iron steel production capacity in china: findings from the IMED model. In: Climate Change Economics vol. 11 (3), p. 2041008. URL: <https://www.worldscientific.com/doi/abs/10.1142/S2010007820410080>.
- 6 Liu, Chao, Hancheng Dai*, Lin Zhang and Changchun Feng* (2019). The impacts of economic restructuring and technology upgrade on air quality and human health in Beijing-Tianjin-Hebei region in China. In: Frontiers of Environmental Science and Engineering vol. 13 (5), p. 70. URL: <https://link.springer.com/article/10.1007/s11783-019-1155-y>.
- 7 Su, Qiong, Hancheng Dai*, Yun Lin, Yang Xie, Huan Chen and R. Karthikeyan (2019). General equilibrium analysis of the cobenefits and trade-offs of carbon mitigation on local industrial water use and pollutants discharge in China. In: Environmental Science & Technology vol. 53 (3), pp. 1715–1724. URL: <https://pubs.acs.org/doi/10.1021/acs.est.8b05763>.
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- 9 Wu, Rui, Hancheng Dai*, Yong Geng, Yang Xie and Xu Tian (2019). Impacts of export restructuring on national economy and CO₂ emissions: A general equilibrium analysis for China. In: Applied Energy

- vol. 248, pp. 64–78. URL:
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- 10 Xie, Yang, Hancheng Dai*, Yanxu Zhang*, Tatsuya Hanaoka and Toshihiko Masui (2019). Comparison of health and economic impacts of PM_{2.5} and ozone pollution in China. In: *Environment International* vol. 130, p. 104881. URL:
<https://www.sciencedirect.com/science/article/pii/S0160412019310530?via%3Dihub>.
 - 11 Zhang, Xiang, Yana Jin*, Hancheng Dai*, Yang Xie and Shiqiu Zhang (2019). Health and economic benefits of cleaner residential heating in the Beijing-Tianjin-Hebei region in China. In: *Energy Policy* vol. 127, pp. 165–178. URL:
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 - 13 Hancheng Dai, Yang Xie*, Haibin Zhang, Zhongjue Yu and Wentao Wang (2018). Effects of the US withdrawal from Paris Agreement on the carbon emission space and cost of China and India. In: *Frontiers in Energy* vol. 12.3, pp. 362–375. URL:
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- 30 Tian, Xu, Hancheng Dai*, Yong Geng, Zhen Huang, Toshihiko Masui and Tsuyoshi Fujita (2017). The effects of carbon reduction on sectoral competitiveness in China: a case of Shanghai. In: *Applied Energy* vol. 197, pp. 270–278. URL: <http://www.sciencedirect.com/science/article/pii/S0306261917304221>.
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期刊论文: 非一作或通讯、非 SCI/SSCI

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科研项目

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|-------------------|---|
| 2021/01 – 2024/12 | 国家自然科学基金面上项目，中国省级碳减排与节水目标的协同与互斥效应研究， 主持人 |
| 2020/06 – 2023/05 | 英国 Wellcome Trust 基金会，“Electric vehicles’ health and climate benefits in China and India”， 共同主持人 |
| 2019/12 – 2021/12 | 科技部国家重点研发计划，区域空气质量的调控原理与技术途径， 课题骨干 |
| 2019/01 – 2023/12 | 国家自然科学基金国际合作与交流项目，“中国社会经济绿色低碳发展的规律研究”， 子课题负责人 |
| 2018/01 – 2021/12 | 中爱自然科学基金委员会双边合作项目，“可持续能源转型之路：全球和中爱能源-经济-环境-气候多模型创新集成模拟”，51861135102， 子课题负责人 |
| 2018/01 – 2020/12 | 国家自然科学基金青年科学基金项目，“钢铁水泥行业去产能政策的绿色低碳协同效益研究：基于综合评价模型的分析”，71704005， 主持人 |

科研项目 (continued)

2017/12 – 2021/05	科技部国家重点研发计划, “京津冀及周边地区大气污染联防联控及重污染应急技术与集成示范”, 2017YFC0213000, 课题六参与者: 区域大气污染联防联控机制体制和实施方案研究
	科技部国家重点研发计划, “京津冀及周边地区大气污染联防联控及重污染应急技术与集成示范”, 2017YFC0213000, 课题三负责人: 典型重污染过程成因分析与来源识别技术
2017/09 – 2020/08	国家自然科学基金应急管理项目, “美国退出《巴黎协定》对全球气候治理的影响及我国的应对策略”, 71741011, 课题骨干
2017/01 – 2019/12	北京大学建设世界一流大学学科启动经费, 课题负责人

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学术服务

审稿人	Nature; Nature Climate Change ; Nature Sustainability; Energy Economics ; Environment, Development and Sustainability; International Journal of Energy Research ; Renewable Energy; Journal of Cleaner Production ; Ecological Indicators; Economic Modelling ; Applied Energy; Sustainability ; Journal of Environmental Planning and Management; Science of the Total Environment ; The Energy Journal; Frontiers in Energy (2018 年度优秀审稿人); Natural Hazards; Omega ; Environment International; Resources, Conservation & Recycling (2017 年度优秀审稿人); Environmental Science & Technology; National Science Review ; Geography and Sustainability; Atmospheric Environment ; International Journal of Environmental Research and Public Health; World Development ; Energy for Sustainable Development; Advances in Climate Change Research ; Regional Environmental Change; Environmental Science and Pollution Research ; Atmosphere; Carbon Management ; Energies; Climatic Change ; Sustainability Science; Energy Policy ; 科学通报.
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科学报告作者	UNEP 《全球环境展望 6: 城市》特别报告, 执笔作者, 负责第五章 IPCC 《第六次气候变化评估报告》, 贡献作者, 负责第三卷第二章

《中国碳中和与清洁空气协同路径年度报告》，执笔作者，负责指标 15: “协同治理的健康效益”

《中国气候与生态环境演变：2021》，执笔作者，负责第三卷第二、三章

《柳叶刀健康与气候变化倒计时：中国报告》，协调作者，负责第四章“经济与投资分析”

《全球疾病负担》GBD Collaborator

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