



## HANCHEN WANG [hanchenw.com](http://hanchenw.com)

Genentech and Stanford University, Joint Postdoc, with Prof. Aviv Regev & Prof. Jure Leskovec '23 - '26, Bay Area, US  
Research Interest: AI for Science, specifically on single-cell biology and novel therapeutics.

### EDUCATION

The University of Cambridge Ph.D. Machine Learning, with Prof. Joan Lasenby '19 - '22, Cambridge, UK  
Nanjing University B.Sc. Physics, GPA 3.88/4.00, admitted at age 15, Valedictorian '14 - '18, Nanjing, China  
Suzhou High 2<sup>nd</sup> Prizes in Biology and Physics Olympiads, obtained after college admission '12 - '14, Suzhou, China

### ACADEMIC REFERENCES (TENTATIVE) in Alphabetical Order

Anima Anandkumar (Caltech CS), Yoshua Bengio (MILA CS), Joan Lasenby (Cambridge CS), Jure Leskovec (Stanford CS), Chao Tang (Peking Biophysics), Aviv Regev (Genentech & MIT Biology), Marinka Zitnik (Harvard Bioinformatics)

### ACADEMIC SERVICES [\[More\]](#) >

#### Teaching Assistant, Demonstrator, and Grader, all at Cambridge

Statistical Inference ('20, '21), Lab: Spectrum Analysis ('20), Statistical Signal Processing ('19, '20)

#### Reviewer:

**Workshop Event Proposal:** NeurIPS and ICML; **Conference and Workshop Paper:** ICLR, ICML, NeurIPS, CVPR, KDD, AACL, etc.; **Journal:** Nature Machine Intelligence, Nature Electronic, TPAMI, IJCNN, Pattern Recognition, etc

#### Co-organizer:

Workshops on "AI for Science" @ NeurIPS ('21, '22), ICML ('22), Workshop on "ML for Materials" @ ICLR ('23)

### SELECTED PUBLICATIONS [\[Full List\]](#) >

- "Scientific Discovery in the Age of Artificial Intelligence," Hanchen Wang et al., **Nature** (in press)
- "Open Problems in Federated Digital Health," Hanchen Wang & James Zou, **Nature Machine Intelligence** (in revision)
- "Machine Learning Systems: Design and Implementation", **Tsinghua University Press** (in press)
- "Deciphering Batch Effects in Single-cell Transcriptomics with Concept Bottlenecks," Hanchen Wang et al., **working**
- "Evaluating Self-supervised Learning for Molecular Graph Embeddings," Hanchen Wang et al., **arXiv 2022**
- "Matching Point Sets with Quantum Circuits Learning," Hanchen Wang et al., **ICASSP 2022** (with travel award)
- "Advancing COVID-19 Diagnosis with Privacy-Preserving Collaboration in Artificial Intelligence," Prof. Xiang Bai\*, Hanchen Wang\*, Liya Ma\*, Yongchao Xu\*, Jiefeng Gan\* et al., **Nature Machine Intelligence 2021**
- "Iterative Teaching by Label Synthesis," Weiyang Liu\*, Zhen Liu\*, Hanchen Wang\* ..., **NeurIPS 2021** (Spotlight)
- "Unsupervised Point Cloud Pre-training via Occlusion Completion," Hanchen Wang et al., **ICCV 2021**
- "Negative Capacitance 2D MoS<sub>2</sub> Transistors with Sub-60mV/dec Subthreshold Swing over 6 Orders, 250  $\mu$ A/ $\mu$ m Current Density, and Nearly-Hysteresis-Free", Zhihao Yu\*, Hanchen Wang\* et al., **IEDM 2017** (Oral, NJU's first IDEM)
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### PAST EXPERIENCE (SELECTED)

Several Institutions Multiple Locations. '16 - '23

Visiting Researcher / RA: Peking University, with Chao Tang, Beijing; Caltech, with Anima Anandkumar, California; UC Berkeley and Lawrence Berkeley National Lab, with Ali Javey, California; Nanjing University, with Xinran Wang, Nanjing.

Several Companies Multiple Locations. '18 - '22

Intern (mainly in tech and finance industries): Entos, with Matt Welborn, California; BioMap, with Le Song, Beijing; Amazon Alexa AI, with Emine Yilmaz, London; Google Daydream, California; CICC AM, with Haiyang Zheng, Shanghai.

Cantab Care Cambridge, UK. '19

Co-Founder, CTO.

### MISCELLANEOUS [\[More\]](#) >

3<sup>rd</sup> level National Athlete in 400-metre; 10<sup>th</sup> level of Erhu; ZhenRep Fellow @ ZhenFund.



王瀚宸 hanchenw.com

基因泰克新药研发部门、斯坦福大学计算机系

2023 - 2026 硅谷

联合博士后研究员，导师: **Aviv Regev** 院士、**Jure Leskovec** 教授

研究方向: **AI for Science**, 将人工智能等技术应用在基因学、临床医学等领域

## 教育背景

剑桥大学工程系

2019 - 2022 剑桥

机器学习工学博士，研究方向: 弱监督下的几何表示学习，导师: **Joan Lasenby** 教授 (三一学院、系副主任)

- 受到剑桥大学海外基金会，**徐新** (今日资本总裁)，剑桥大学先进光电中心，剑桥哲学学会等资助

南京大学匡亚明学院

2014 - 2018 南京

物理理学学士，绩点: 3.88/4.00，毕业时作为学生代表发言

- 在加州大学伯克利分校物理系、电子与计算机系以及日本明治大学日语系进行学期交换学习

苏州中学 高中奥林匹克竞赛物理学二等奖和生物学二等奖 (在 15 岁保送本科之后)

2012 - 2014 苏州

**学术推荐人 (拟)** 依据姓氏排序, 包括中国科学院院士、美国科学院院士、加拿大科学院院士和图灵奖得主

Anima Anandkumar (Caltech CS), Yoshua Bengio (MILA CS), Joan Lasenby (Cambridge CS), Jure Leskovec (Stanford CS), Chao Tang (Peking Biophysics), Aviv Regev (Genentech gRED & MIT Biology), Marinka Zitnik (Harvard Bioinformatics)

## 代表论文[全部论文列表]>

1. "Scientific Discovery in the Age of Artificial Intelligence," Hanchen Wang et al., **Nature** (in press)
2. "Open Problems in Federated Digital Health," Hanchen Wang & James Zou, **Nature Machine Intelligence** (in revision)
3. "Machine Learning Systems: Design and Implementation," **Tsinghua University Press** (in press)
4. "Deciphering Batch Effects in Single-cell Transcriptomics with Concept Bottlenecks," Hanchen Wang et al., **working**
5. "Evaluating Self-supervised Learning for Molecular Graph Embeddings," Hanchen Wang et al., **arXiv 2022**.
6. "Matching Point Sets with Quantum Circuits Learning," Hanchen Wang et al., **ICASSP 2022** (with travel award)
7. "Advancing COVID-19 Diagnosis with Privacy-Preserving Collaboration in Artificial Intelligence," Prof. Xiang Bai\*, Hanchen Wang\*, Liya Ma\*, Yongchao Xu\*, Jiefeng Gan\* et al., **Nature Machine Intelligence 2021**
8. "Iterative Teaching by Label Synthesis," Weiyang Liu\*, Zhen Liu\*, Hanchen Wang\* et al., **NeurIPS 2021** (Spotlight)
9. "Unsupervised Point Cloud Pre-training via Occlusion Completion," Hanchen Wang et al., **ICCV 2021**
10. "Negative Capacitance 2D MoS2 Transistors with Sub-60mV/dec Subthreshold Swing over 6 Orders, 250  $\mu\text{A}/\mu\text{m}$  Current Density, and Nearly-Hysteresis-Free," Zhihao Yu\*, Hanchen Wang\* et al., **IEDM 2017** (Oral, NJU's first IDEM)
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## 过往经历 (部分)

多所学校访问学者与研究助理

2016 - 2023 多个地点

北京大学前沿交叉学科研究院, 师从**汤超**院士; 加州理工学院计算机系, 师从 **Anima Anandkumar** 教授; 加州大学伯克利分校电子与计算机系、劳伦斯国家实验室, 师从 **Ali Javey** 教授; 南京大学电子系, 师从**王欣然**教授

多家公司实习生

2018 - 2022 多个地点

初创制药公司 **Entos**, 联合创始人 Matt Wellborn 博士指导; 初创制药公司 **百因生科**, 联合创始人宋乐博士指导; **亚马逊 Alexa**, Emine Yilma 教授指导; **谷歌 AR/VR**; **中金公司**, 资管部门执行董事郑海洋博士指导

初创公司 **Cantab Care**

2019 剑桥

联合创始人, 首席技术官, 方向: 医疗 SaaS 系统

## 其它 [更多]>

**400 米田径国家三级运动员**; 担任 Nature Machine Intelligence, PAMI, NeurIPS, ICML, ICLR 等期刊和会议的审稿人; 在 NeurIPS, ICML 上组织 AI for Science 研讨会; 在 ICLR 上组织 ML for Materials 研讨会; 曾任剑桥大学算法交易协会副主席; 九岁二胡十级; 在剑桥大学信息工程系和加州理工学院计算机系担任助教; 真格基金 Fellow