Delong Chen（陈德龙）

chendelong@hhu.edu.cn

Education

Bachelor degree of Computer Science, Hohai University (HHU) **Sept. 2017 – Jun. 2021**

- Honored as Excellent Graduate Student Nanjing, China
- Honored as Outstanding Graduation Thesis
- GPA: 83/100

Summer Exchange Program, The University of British Columbia (UBC) **Jul. 2018 – Aug. 2018**

- Computation for Natural Language Processing. Score: 97/100 Vancouver, Canada
- Linguistics for Natural Language Processing. Score: 85/100

Work Experiences

Research Assistant **Jun. 2021 – present**

- Hohai University (HHU), with Professor Fan Liu Nanjing, China

Research Intern **Sept. 2021 – present**

- MEGVII (Face++) Research Beijing, China

Research Experiences

Research interests: Multi-modal self-supervised learning, Generative Adversarial Net (GAN) and its applications, Music Information Retrieval (MIR).

Music-driven Conducting Motion Generation **Dec. 2020 – Present**

- Constructed so far the largest conducting motion dataset and designed first deep learning-based music-driven conducting motion generation model [1] Video
- Developed a demo system using 3D animation and pose transfer, awarded as ICME'21 Best Demo [2] Video
- Designed a frequency domain motion decomposition method and extended it to a hydrological application [3]
- Ranked 1st/205 on graduation thesis score, awarded as outstanding graduation thesis of Hohai University, and is currently selected as a candidate for Outstanding Graduation Thesis of Jiangsu Province.

MEP-3M: Multi-modal E-commerce Products Dataset **May. 2021 – Oct. 2021**

- Constructed so far the largest e-commerce products dataset MEP-3M, awarded as Best Dataset Paper [4]
- Extended MEP-3M from several perspective (i.e., fine-grained, hierarchical, transfer learning) [5]

National Level Innovative Training Project | Team Leader **May. 2019 – May. 2020**

- Surveyed deep learning-based single sample per person face recognition [6]
- Studied deep learning-based driver fatigue detection [7]
- Surveyed automated diagnosis of COVID-19 based on scanning images [8]

The 8th China Software Cup Competition | Team Leader **Mar. 2019 – Jun. 2019**

- Implemented a fabric defect recognition system based on Gabor Wavelets and CNN
- Won the third prize in East China Division Finals

Awards and Prizes

- Best Dataset Paper Award at *Long-Tailed Distribution Learning Workshop, IJCAI 2021* Aug. 2021
- Best Demo Award at *IEEE International Conference on Multimedia and Expo (ICME) 2021* Jul. 2021
- Best Presentation Winner at *2021 4th International Conference on Big Data and Artificial Intelligence* Jul. 2021
- Outstanding Graduation Thesis of Hohai University in 2021 Jun. 2021
- Excellent Graduate Student of Hohai University (first class honor, top 1.6%) Jun. 2021
- Excellent Communist Youth League Member of Jiangsu Province May. 2020
- Nomination Award for the Person of the Year in Jiangsu Province in 2019 Oct. 2020

- Hohai University's 2019 Undergraduate Person of the Year — Apr. 2020
- Third Prize of The 8th China Software Cup Competition, East China Division Finals (as team Leader) — Jun 2019
- Best Debater in the 2017 Freshman Cup Debate Competition of the School of Computer and Information, Hohai University — Oct. 2017

Other Experiences

- Head of the of Hohai University Symphony Orchestra — May. 2019 – Sept. 2020
- Elected as a representative of the 27th Congress of the All-China Student Federation — Jul. 2020 – Aug. 2020
- Organized an 11-university symphony orchestra cloud performance: composition, audio mixing, and video editing. Media coverage: Xinhua News Agency, People's Daily, etc. — Feb. 2020 – Mar. 2020

Skills

English

- IELTS (Academic Module): 7.0
- (Chinese) College English Test-6, CET-6: 556

Computer

- Proficient in Python, Pytorch
- Familiar with Tableau, Adobe Premiere, Autodesk MotionBuilder

Music

- Received the diploma in violin performance from Central Conservatory of Music (the highest level)
- Experienced with music composing (Sibelius) and production (Cubase)
- 20+ public performances of composed music
- Basic piano and orchestra conducting skills

Publications (*corresponding author)

[1] (working paper) Fan Liu, Delong Chen*, Xiaoyu Du , Feng Xu. M^2S-GAN: Learning Music-driven Conducting Motion Generation from the Self-Supervision of Music Motion Synchronization. Submitted to *Journal of Computer Science and Technology, JCST* Video

[2] Delong Chen, Fan Liu*, Zewen Li, Feng Xu. VirtualConductor: Music-driven Conducting Video Generation System. *2021 IEEE International Conference on Multimedia & Expo, ICME'21, Demo Track.* **[Best Demo]** Video

[3] Delong Chen, Fan Liu, Zheqi Zhang*, Xiaomin Lu, Zewen Li. Significant Wave Height Prediction based on Wavelet Graph Neural Network. *2021 4th International Conference on Big Data and Artificial Intelligence, BDAI'21.* **[Best Presentation]**

[4] Delong Chen, Fan Liu*, Xiaoyu Du, Ruizhuo Gao, Feng Xu. MEP-3M: A Large-scale Multi-modal E-Commerce Products Dataset. *IJCAI 2021 Workshop on Long-Tailed Distribution Learning.* **[Best Dataset Paper]**

[5] (under review) Delong Chen, Fan Liu*, Xiaoyu Du, Ruizhuo Gao, Feng Xu. MEP-3M: A Large-scale Multi-modal E-Commerce Products Dataset. Submitted to *Pattern Recognition.*

[6] (under review) Fan Liu, Delong Chen*, Zewen Li, Feng Xu. Deep Learning based Single Sample Face Recognition: A Survey. *Artificial Intelligence Review, AIRE.*

[7] (under review) Fan Liu*, Delong Chen, Jun Zhou, Zewen Li, Feng Xu. A Review of Driver Fatigue Detection and Its Advances on the Use of RGB-D Camera and Deep Learning. *Submitted to Artificial Intelligence Review, AIRE.*

[8] Delong Chen, Shunhui Ji*, Fan Liu, Zewen Li, and Xinyu Zhou. A Review of Automated Diagnosis of COVID-19 Based on Scanning Images. *2020 6th International Conference on Robotics and Artificial Intelligence, ICRAI'20.*

[9] Zhibin Chen, Fan Liu*, Delong Chen, Jingyu He, Xiaohan Yan. Weakly Correlated Adversarial Learning for Cognitive Diagnosis System. *2021 IEEE International Conference on Multimedia & Expo, ICME'21, Demo Track.*

陈德龙

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教育背景

河海大学 学士学位 **2017.09 - 2021.06**

- 计算机科学与技术专业，GPA: 83/100 中国，南京
- 河海大学优秀毕业生
- 河海大学 2021 年优秀本科毕业论文，获推荐评选江苏省优秀毕业论文

不列颠与哥伦比亚大学 暑期交换项目 **2018.07 - 2018.08**

- 自然语言处理（语言学方向）：85/100 加拿大，温哥华
- 自然语言处理（算法方向）：97/100

工作经历

科研助理 **2021.06 - 2021.09**

- 河海大学计算机与信息学院，刘凡教授课题组 中国，南京

算法实习生 **2021.09 至今**

- 旷视研究院（MEGVII Technology） 中国，北京

研究经历

自 2019 年 3 月（本科二年级）受刘凡教授指导，主要研究多模态自监督学习、生成对抗网络（GAN）及其应用、音乐信息检索（MIR），深度人脸识别等领域。本科期间共完成 8 篇论文，5 篇论文已录用，其中 3 篇论文分别获得 Best Demo, Best Presentation, Best Dataset Paper 奖项。此外有 2 项一作发明专利受理，2 项一作软件著作权授权。

本科毕业论文 2020.12 - 2021.08

- 构建当前最大规模的指挥动作数据集 *ConductorMotion100*
- 将跨模态自监督学习与 GAN 结合，实现了当前首个基于深度学习的指挥动作生成算法[1]
- 将算法与三维动画渲染、姿态迁移技术结合[2]，获评 Best Demo
- 提出指挥动作的动态频域分解，并将方法运用于水文预报任务[3]，获评 Best Presentaion
- 毕业论文专业排名第 1，获评河海大学优秀本科毕业论文，获推荐评选江苏省优秀毕业论文（评选中）

MEP-3M 多模态电商商品数据集 2021.05 - 2021.08

- 构建了当前最大规模的多模态电商商品数据集 MEP-3M[4]，获 Best Dataset Paper Award
- 设计基于文本相似度的多源类目合并方法
- 训练多个 Baseline 模型，包括 LSTM，VGG，Inception-v3 等

国家级大学生创新创业训练计划项目 | 团队负责人 2019.05 - 2020.05

- 研究基于深度学习的单样本人脸识别[7]，在投 SCI 二区期刊（通讯作者）
- 研究基于深度学习与 RGB-D 相机的疲劳驾驶检测[6]，在投 SCI 二区期刊（第二作者）
- 研究基于扫描图像的新冠肺炎自动诊断[5]，EI 会议录用（第一作者）

第八届"中国软件杯"华东赛区决赛 | 团队负责人 2019.03 - 2019.06

- 实现基于 Gabor 滤波器的瑕疵定位与基于 CNN 的瑕疵分类
- 实现 GUI；撰写软件文档
- 获华东赛区决赛三等奖，1 项软件著作权授权（第一作者）

其他经历

- 担任河海大学管弦乐团团长 2019.05 - 2020.09
- 推选为中华全国学生联合会第二十七次代表大会（全国学联二十七大）代表 2020.07 - 2020.08
- Bilibili 平台音乐区 up 主，2.3w 粉丝，总播放量 200w+ 2020.03 - 2021.09
- 策划组织 11 所高校云合奏《汉阳门花园》，完成作曲、混音、视频制作 2020.02 - 2020.03

  媒体报道：新华社、人民日报 等

专业技能

英语

- IELTS (Academic Module): 7.0
- College English Test-6 (CET-6): 556

计算机

- 掌握 Python，Pytorch，熟悉 C，C++
- 熟悉 Tableau，Adobe Premiere，Autodesk MotionBuilder

音乐

- 中央音乐学院小提琴演奏文凭级，河海大学小提琴特长生
- 有作曲（Sibelius）、编曲（Cubase）经验，作曲作品公开演出 20+次
- 有基础的钢琴演奏与乐团指挥经验

荣誉与奖项

- Best Dataset Paper Award at *Long-Tailed Distribution Learning Workshop, IJCAI 2021.* 2021.08
- Best Demo Award at *IEEE International Conference on Multimedia and Expo (ICME) 2021*. 2021.07
- Best Presentation Winner at *2021 4th International Conference on Big Data and Artificial Intelligence.* 2021.06
- 河海大学 2021 届本科优秀毕业设计 2021.06
- 河海大学 2021 届本科“优秀毕业生”荣誉称号（前 1.6%） 2021.06
- “2019 江苏省大学生年度人物”提名奖 2020.10
- “江苏省优秀共青团员”称号 2020.05
- 2020 年河海大学“海韵风华大学生年度人物”称号（前 0.2%） 2020.04
- 第八届“中国软件杯”大学生软件设计大赛华东分赛区决赛三等奖，团队负责人 2019.06
- 河海大学计算机与信息学院 2017 年新生杯辩论赛“最佳辩手”称号 2017.10

科研成果（*通讯作者）

[1] （在投）Fan Liu, Delong Chen*, Xiaoyu Du , Feng Xu. Self-Supervised Music-Motion Correlation Learning for Music-Driven Conducting Motion Generation. Submitted to *Journal of Computer Science and Technology, JCST.* Video

[2] Delong Chen, Fan Liu*, Zewen Li, Feng Xu. VirtualConductor: Music-driven Conducting Video Generation System. *2021 IEEE International Conference on Multimedia & Expo, ICME'21, Demo Track.* **[Best Demo]** Video

[3] Delong Chen, Fan Liu, Zheqi Zhang*, Xiaomin Lu, Zewen Li. Significant Wave Height Prediction based on Wavelet Graph Neural Network. *2021 4th International Conference on Big Data and Artificial Intelligence, BDAI'21.* **[Best Presentation]**

[4] Delong Chen, Fan Liu*, Xiaoyu Du, Ruizhuo Gao, Feng Xu. MEP-3M: A Large-scale Multi-modal E-Commerce Products Dataset. *IJCAI 2021 Workshop on Long-Tailed Distribution Learning.* **[Best Dataset Paper]** Github

[5] （在投） Delong Chen, Fan Liu*, Xiaoyu Du, Ruizhuo Gao, Feng Xu. MEP-3M: A Large-scale Multi-modal E-Commerce Products Dataset. Submitted to *Pattern Recognition.*

[6] Delong Chen, Shunhui Ji*, Fan Liu, Zewen Li, and Xinyu Zhou. A Review of Automated Diagnosis of COVID-19 Based on Scanning Images. *2020 6th International Conference on Robotics and Artificial Intelligence, ICRAI'20.*

[7] （在投）Fan Liu*, Delong Chen, Jun Zhou, Zewen Li, Feng Xu. A Review of Driver Fatigue Detection and Its Advances on the Use of RGB-D Camera and Deep Learning. *Neuralcomputing*.

[8] （一审修回）Fan Liu, Delong Chen*, Zewen Li, Feng Xu. Deep Learning based Single Sample Face Recognition: A Survey. *Artificial Intelligence Review, AIRE.*

[9] Zhibin Chen, Fan Liu*, Delong Chen, Jingyu He, Xiaohan Yan. Weakly Correlated Adversarial Learning for Cognitive Diagnosis System. *2021 IEEE International Conference on Multimedia & Expo, ICME'21, Demo Track.*