郑策

个人信息

职位：博士后研究员
工作单位: 巴黎理工–巴黎高等电信学院 (QS 38^{th})
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出生地: 山东，中国
出生日期: 1991 年 10 月 15 日

工作经历

巴黎理工—巴黎高等电信学院 2023.07 - 至今
博士后研究员

索尼中国研究院 2021.08 - 2023.06
无线研究员/研究科学家（科学家岗）
国际标准组织 3GPP SA2 代表（Delegate）
研究方向：联邦学习，XR，Sidelink 等

法国科学研究院（CNRS） 2017.10 - 2020.10
研究员

博士课题

"Impulsive and Dependent Interference Modeling in IoT Networks", funded by ARBurst

教育背景

里尔大学，法国，博士 2017.10 - 2020.10
导师：Laurent CLAVIER, Malcolm EGAN, Jean-Marie GORCE

奥尔堡大学，丹麦，项目交换 2019.09 - 2019.12
导师：Troels PEDERSEN, Petar POPOVSKI (IEEE Fellow)

西安交通大学，中国，硕士 2013.09 - 2016.07
导师：罗新民

哈尔滨工业大学，中国，本科 2009.09 - 2013.07
导师：赵洪林

访学经历

CITI-LAB, INSA Lyon，里昂，法国 2018.12
1st Winter School on Information Theory and Signal Processing for Internet of Things

德岛大学，德岛，日本 2014.07 - 2014.08
The Electrical and Information Science Course Program

加州大学洛杉矶分校，洛杉矶，美国 2014.02 - 2014.03
American Language Center Intensive English Communication Program

奖励荣誉

Mobility Grant，欧盟 2019
支持本人在丹麦奥尔堡大学访问的费用

IRACON 5th TS Grant，欧盟 2019
支持本人在 INSA Lyon 访问的费用

研究生奖学金, 中国 2016-2019
免除三年学费及生活费支持

学术论文

在投:

Ce Zheng, Shiyao Ma, Chen Sun, "How to Use Machine Learning to Aid Federated Learning: Exploiting Metadata in UE Selection", *In 2023 IEEE Communication Letters* (To be submitted)

期刊:

Ce Zheng, Malcolm Egan, Laurent Clavier, Gareth W. Peters, Jean-Marie Gorce, "On the interference arising from random spatial fields of interferers utilizing multiple subcarriers", *In: EURASIP Journal on Wireless Communications and Networking. 2022 ; Vol. 2022.*

Ce Zheng, Malcolm Egan, Laurent Clavier, Petar Popovski, Anders Ellersgaard Kalør, "Stochastic Resource Optimization of Random Access for Transmitters with Correlated Activation", *In 2021 IEEE Communication Letters*

Egan Malcolm, Laurent Clavier, **Ce Zheng**, Mauro De Freitas, Jean-Marie Gorce. "Dynamic interference for uplink SCMA in large-scale wireless networks without coordination" *EURASIP Journal on Wireless Communications and Networking* 2018, no. 1 (2018): 213.

会议：

Chen Sun, Shiyao Ma, **Ce Zheng**, Songtao Wu, Tao Cui, Wenqi Zhang. "Federated Learning with CSMA based User Selection for IoT Applications". (accepted in IEEE ICC conference)

Yunda Li, Le Zhao, Chen Sun, Haojin Li, **Ce Zheng**, "An Iterative Joint Tx-Rx Hybrid Beamforming Method for Vehicular Networks", In 2023 IEEE 98th Vehicular Technology Conference (VTC2023-Fall), 1-6

Qiong Liu, Chenhao Wang, **Ce Zheng**, "Distributed Decisions on Optimal Load Balancing in Loss Networks", *In 21st International Symposium on Modeling and Optimization in Mobile, Ad Hoc, and Wireless Networks (WiOpt)*, Singapore, Singapore, 2023, pp. 464-471

Tianming Zang, **Ce Zheng** (corresponding author), Wei Chen, Shiyao Ma, Chen Sun, "A General Solution for Straggler Effect and Unreliable Communication in Federated Learning", *In ICC 2023 - IEEE International Conference on Communications (ICC),* Rome, Italy, 2023, pp. 1194-1199

Ce Zheng, Malcolm Egan, Laurent Clavier, Petar Popovski, Anders Ellersgaard Kalør, "Stochastic Resource Allocation for Outage Minimization in Random Access with Correlated Activation", *In 2022 IEEE Wireless Com-*

munications and Networking Conference (WCNC). (pp. 1-6), Austin, US

Ce Zheng, Malcolm Egan, Laurent Clavier, Troels Pedersen and Jean-Marie Gorce. "Linear Combining in Dependent α-Stable Interference", *In 2020 IEEE International Conference on Communications (ICC)* (pp. 1-6), Dublin, Ireland.

Ce Zheng, Egan Malcolm, Laurent Clavier, Gareth W. Peters, Gorce, Jean-Marie. "On the Validity of Isotropic Complex α-Stable Interference Models for Interference in the IoT" *In 2019 GRETSI, Groupe d'Etudes du Traitement du Signal et des Images.*

Ce Zheng, Egan Malcolm, Laurent Clavier, Gareth W. Peters, Gorce, Jean-Marie. "Copula-Based Interference Models for IoT Wireless Networks" *In 2019 IEEE International Conference on Communications (ICC)* (pp. 1-6), Shanghai, China.

Ce Zheng, Jiancun Fan, and Xinmin Luo. "Spectrum and energy efficiency analysis of ultra dense network with sleep." *2016 8th IEEE International Conference on Communication Software and Networks (ICCSN)*.

专利 & 标准化

郑策, 孙晨. "（一种分层树状联邦学习下的用户选择及资源分配方法）". 申请号：202310513237.9

郑策, 孙晨. "用于无线通信系统的电子设备、方法和存储介质（一种联邦学习中，基于 sidelink 增强的性能提升方案及用户选择机制）". 申请号：202310436139.X

郑策, 孙晨. "用于分割学习的电子设备和方法、计算机可读存储介质（分割学习下，sidelink 增强的用户选择、用户执行顺序选择和模型传输链路选择方案）". 申请号：202310116586.7

郑策, 孙晨. "用于无线通信的电子设备和方法、计算机可读存储介质（SL-aided FL–分割学习辅助的联邦学习网络）". 申请号：202310342408.6

陈巍，刘远瑞，**郑策**，孙晨. "用于模型推理的电子设备、方法和存储介质（D2D 辅助下的用户与网络间的模型分割）". 申请号：202211502760.3

陈巍，刘远瑞，**郑策**，孙晨. "用于模型推理的电子设备、方法和存储介质"
— 该专利主要内容为："D2D 辅助下的用户与网络间的模型分割.
专利公开号：CN118102475A

郑策, 孙晨. "用于无线通信的电子设备和方法、计算机可读存储介质"
— 该专利主要内容为：联邦学习下的服务保障机制.
专利公开号：CN117917907A

郑策, 孙晨. "分层联邦学习网络中的切换".
—- 该专利主要内容为：一种分层联邦学习下的切换服务保障机制
专利公开号：CN117560722A.

陈巍，吴俊杰，**郑策**，孙晨. "用于无线通信的电子设备和方法、计算机可读存储介质".
—- 该专利主要内容为：联邦学习的 V2X 边缘链路性能提升方案
专利公开号：CN117454952A.

陈巍，谢瞻远，**郑策**，王晓雪，孙晨. "用于无线通信的电子设备和方法、计算机可读存储介质". 专利公开号：CN117177209A.
—- 该专利主要内容为：基于中继传输节点的车辆位置信息传输方法及系统

学术报告

2023.05.29, *A General Solution for Straggler Effect and Unreliable Communication in Federated Learning*, IEEE International Conference on Communications，罗马，意大利

2022.04.11, *Stochastic Resource Allocation for Outage Minimization in Random Access with Correlated Activation*, IEEE Wireless Communications and Networking Conference, 线上

2022.11.30, *Choosing a proper starting point in SGD by exploiting dependence between features — an intuition from resource allocation in event triggered communication*, Sony AI Conference, 线上

2022.05.22, *Linear Combining in Dependent α-Stable Interference*, IEEE International Conference on Communications, 线上

2019.11.29, *Choosing a proper starting point in SGD by exploiting dependence between features — an intuition from resource allocation in event triggered communication*, 索尼 AI 大会, 索尼

2019.11.13, *Copula Theory in Communication Society*, invited talk and hosted by Professor Petar POPOVSKI and Professor Troels PEDERSEN, Department of Electronics, 奥尔堡大学, 奥尔堡, 丹麦

2019.09.30, *Modeling Impulsiveness and Dependence of Interference in Wireless Communication Network*, invited talk and hosted by Professor Troels PEDERSEN and Professor Petar POPOVSKI, Department of Electronics, 奥尔堡大学, 奥尔堡, 丹麦

2019.05.30, *Interference Modeling for Wireless IoT Networks*, 特邀报告（陈立教授和 Dr. Ting-yi Wu）, 电子与通信工程学院, 中山大学, 广州, 中国

2019.03.06, *Modeling Interference with α-stable and Copulas*, ARBurst Project meeting, ITER Lab, 雷恩, 法国

2018.10.11, *Modeling of Dependence in Impulsive Interference and Copula Theory*, ARBurst Project meeting, CITI-lab, 里昂, 法国

2018.06.12, *Dependent Impulsive Interference modeling*, IRCICA Lab, 里尔, 法国

2018.02.14, *Copula Theory and Dependence in Interference*, ARBurst Project meeting, ITER Lab, 雷恩, 法国

研究技能

Matlab, Python, Latex, Stochastic Geometry, Copula Theory, α-stable, Markov Chain, Federated Learning, NOMA, SCMA, NB-IoT, LPWAN, XR, AI, VMR, 3GPP SA1 & SA2

面向每个人的生成式 AI （Generative AI for Everyone） on Coursera 01/2024

语言技能

普通话（母语）;
英语（精通）: TOEFL 96;
法语（初级）: A1;
日语（初级）