# 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 38th)

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出生地: 山东, 中国

出生日期: 1991年10月15日



**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

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

教育背景

博士课题

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

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-*

Ce Zheng, Malcolm Egan, Laurent Clavier, Troels Pedersen and Jean-Marie Gorce. "Linear Combining in Dependent  $\alpha$ -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  $\alpha$ -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

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*  $\alpha$ -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, 素尼 AI 大会, 素尼

**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,  $\alpha$ -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)