非规则时间序列基础模型博士研究生招聘（与德国慕尼黑工业大学联合培养）

海南比勒费尔德应用技术大学（BIUH）

关于 BIUH

海南比勒费尔德应用技术大学（BIUH）是中国境内第一家由境外高校在海南自贸港设立的理工类高等教育机构，也是德国公立高校首次在中国设立的大学。学校秉持“应用创新”理念，致力于培养具有坚实科学理论基础和系统专业知识，同时具备国际视野、跨文化沟通能力与创新精神的高层次、复合型应用型人才。BIUH 的人才培养模式紧密结合大学生就业需求，服务地方经济、文化和社会发展。本博士项目为 BIUH 与德国慕尼黑工业大学（TUM）联合培养计划的一部分，依托双方优势科研资源，聚焦**非规则时间序列基础模型（Irregularly Sampled Time Series Foundation Model）的前沿研究**，与产业深度融合，推动技术落地与应用。

岗位概况

本岗位为全额奖学金支持的博士研究项目（TUM 博士学位），主要在海南 BIUH 校区开展研究工作，并将定期赴德国 TUM 参与联合科研。博士生将与 TUM、BIUH、和中国科学院香港创新研究院（HKISI-CAS）导师共同开展科研任务，博士生将与 TUM、BIUH 和 HKISI-CAS 导师共同开展课题研究，重点围绕非规则时间序列建模技术。项目强调算法与系统工程结合，鼓励博士生参与本科教学（英文授课），授课部分将另行支付补贴。

研究方向与职责

面向非规则时间序列数据中普遍存在的异步采样、缺失和不齐步等挑战，特别是在多领域场景下数据模态、时间粒度与分布规律高度异构的复杂背景下，围绕以下一个或多个方向开展系统性研究与基础模型构建：

- **非规则时序一致性建模**：设计具备时间间隔感知的预训练范式，按时间难度递进地学习“下一时刻分布”，结合多尺度间隔建模，统一点预测与概率预测评估（如分位数/区间校准），从而提升在非等间隔输入下的全局建模与泛化能。
- **跨领域基础模型预训练**：基于 Transformer 或扩散式架构，利用医疗、金融、交通等多个领域的大规模非规则时序数据，构建通用的基础模型（Foundation Model），以捕捉跨任务、跨场景的深层时序结构与复杂分布特征。
- **基础模型微调与应用：**在预训练模型的统一时序表示基础上，结合任务指令、适配器（Adapter）或参数高效微调机制（如 LoRA），实现对预测、分类、插值与异常检测等下游任务的泛化迁移，支持跨领域与低资源条件下的快速部署。
- **评测基准、综述和指南**：构建覆盖医疗、金融、交通与电力等典型场景的非规则时序评测基准（Benchmark），配套训练脚本与复现实验流程，并撰写系统性的研究综述与专题教程，推动在计算机顶级会议上的学术传播与社区共识建设。

申请条件

- 获得计算机科学、自动化、电子工程、机器人、人工智能或相关专业的硕士。
- 精通 Python，熟练掌握 PyTorch 或 TensorFlow 等深度学习框架。
- 扎实的理论基础：深入理解自然语言处理、计算机视觉、深度学习、状态估计、概率论等基础知识。
- 拥有扎实的大语言模型、时间序列分析或人工智能相关项目经验，并取得过优秀成果者优先。
- 算法与系统能力：熟悉经典的自然语言处理和计算机视觉模型，具备将算法部署到实际系统中的能力者优先
- 团队协作与沟通：出色的解决问题能力、主动性和团队合作精神，具备良好的中英文技术沟通能力。
- 具备良好的英语听说读写能力，能够胜任英文授课者优先。
- 有教学经验或教学兴趣者优先考虑。

我们提供

- **具有竞争力的薪资待遇**:
- -薪资：每月 5000 元人民币基本工资，授课部分另按每学时（45 min）不少于 200 元人民币发放课时补贴，至少 13 薪(均为税前）
  - 全面保险保障：包括六险一金，另为员工提供补充福利保险及意外伤害保险;
  - 交通补贴：每年人民币 8,000 元;
  - 高温补贴：每年 4 月至 10 月，每月 300 元;
  - 通讯补贴：每月 200 元。
- **节假日福利：**根据国家法定节假日及学校规定发放节日福利。
  - 节假日及带薪休假:
  - 享受国家法定节假日;
  - 每年 25 天带薪年假
  - 圣诞节享有 2 天假期。
- **绩效激励机制完善**：在国内外高水平期刊发表论文、主持纵向/横向科研项目均可获得额外奖励
- **人才发展支持**：全力支持申报国家自然科学基金青年项目、省级引才计划及海南人才评定体系
- **教师住宿安排：**1）学校提供教师公寓（房源有限，先到先得），入住者需自理房租及水电费用（收费标准按照学校规定执行）2）鼓励自行租房，可协助申请儋州市政府租房补贴（最终以政府审核为准）
- **优越的工作与生活环境**：工作地点位于国家战略重点区域——海南自由贸易港儋州市洋浦经济开发区，环境宜人、政策扶持力度大
- **职业成长路径清晰**：提供一对一教学与科研指导，支持多元发展路线，提供充足科研经费和平台，提供与自动驾驶行业领先企业的项目深度合作机会；依据博士期间业绩情况，满足要求的优秀者可以在博士期间就签订毕业后正式教师

岗位

- **国际化科研与教学氛围**：与全球高水平教师团队共事，国际化行政团队保障支持，深度融入国际教育与科研体系

应聘材料

请提交以下材料：

- 个人简历（CV）
- 简短的研究陈述或动机信
- 支持材料（如项目作品集、发表论文等）

联系方式

曾卓琦 教授
邮箱：**zhuoqi.zeng@hainan-biuh.edu.cn**

黎子玥 教授

邮箱：ziyue.li@tum.de

刘晨曦 助理教授

邮箱：chenxi.liu@cair-cas.org.hk

PhD Position in Irregularly Sampled Time Series Foundation Models (Joint PhD Program with Technical University of Munich — TUM)

Hainan Bielefeld University of Applied Sciences (BIUH)

About BIUH

Hainan Bielefeld University of Applied Sciences (BIUH) is the first engineering-focused higher education institution established in China by an overseas public university in the Hainan Free Trade Port. It represents the first time a German public university has established a campus in China. BIUH follows the philosophy of "Applied Innovation," dedicated to cultivating top-tier, application-oriented talent with solid scientific foundations, strong professional knowledge, international vision, cross-cultural communication skills, and an innovative mindset. The university closely integrates talent cultivation with industry needs to support local economic, cultural, and social development.

This PhD program is part of the Joint Doctoral Training Program between BIUH and the Technical University of Munich (TUM), leveraging world-class research resources from both sides. It focuses on cutting-edge research in Irregularly Sampled Time Series Foundation Models, deeply integrated with industrial applications to drive real-world impact.

Position Overview

This is a fully funded PhD program (TUM PhD degree). The PhD student will primarily conduct research at BIUH in Hainan and participate in collaborative research visits at TUM. The student will work jointly with advisors from BIUH, TUM, and the Chinese Academy of Sciences Hong Kong Institute of Science & Innovation (HKISI-CAS), focusing on advanced methodologies for irregular time series modeling. The program emphasizes both algorithmic research and system engineering, and PhD students are encouraged to participate in undergraduate teaching (with additional compensation for teaching hours).

Research Areas & Responsibilities

Motivated by the challenges of asynchronous sampling, missing values, and heterogeneous time granularity widely occurring in irregular time series across multi-domain settings, the PhD student will conduct systematic study and model development in one or more of the following areas:

• Consistent modeling of irregular time series:

Develop time-interval-aware pre-training paradigms that progressively learn next-timestamp distributions, incorporate multi-scale interval representation, unify point and probabilistic forecasting (e.g., quantile/interval calibration), and enhance global modeling and generalization.

• Cross-domain foundation model pre-training:

Build general-purpose time series foundation models using large-scale irregular time series data across healthcare, finance, transportation, etc., based on Transformer or diffusion architectures, capturing cross-task and cross-scenario temporal structures.

• Efficient fine-tuning and applications:

Based on unified temporal representations, apply instruction-tuning, adapters (e.g., LoRA), or parameter-efficient tuning to enable generalization to downstream tasks such as forecasting, classification, interpolation, and anomaly detection across domains.

• Benchmarking, survey, and tutorials:

Construct evaluation benchmarks for irregular time series in multiple domains (healthcare, finance, transportation, energy), release training scripts and reproducible pipelines, and prepare survey papers and tutorials for top-tier research venues.

Applicant Requirements

• Master's degree in Computer Science, Automation, Electrical Engineering, Robotics, AI, or related field.

• Strong programming skills in Python; proficient in PyTorch or TensorFlow.

• Solid theoretical foundation in NLP, CV, deep learning, state estimation, probability, etc.

• Experience in LLMs, time series modeling, or relevant AI projects; strong research record preferred.

• Strong system implementation skills; experience deploying machine learning models in real systems preferred.

• Excellent problem-solving skills, teamwork capability, initiative, and technical communication skills in English and Chinese.

• Strong English communication and teaching ability preferred.

• Teaching experience or interest is a plus.

We Offer

• Competitive funding package:

- Monthly stipend: RMB 5,000 (pre-tax)
- Additional teaching compensation: ≥ RMB 200 per teaching hour (45 minutes)
- Minimum 13-month annual salary
- Full social insurance coverage and supplemental insurance
- Annual transportation subsidy: RMB 8,000
- High-temperature allowance: RMB 300/month (April–October)
- Communication subsidy: RMB 200/month

• Holidays & Leave:

- National public holidays
- 25 days paid annual leave
- 2-day Christmas holiday

• Performance-based rewards for high-quality publications, and research project achievements

• Strong talent-support program: support applying for national youth grants and Hainan talent programs

• Housing:

- On-campus faculty apartment available (priority by order of request; tenant pays utilities)
- Assistance available to apply for local government housing subsidy

• Excellent research and living environment located in Yangpu Economic Development Zone, Hainan Free Trade Port

• Clear academic career development and possible fast-track faculty appointment for outstanding candidates before PhD completion

• International research and teaching environment with global faculty collaboration and institutional support

Application Materials

• Curriculum Vitae

• Research statement or motivation letter

• Supporting materials (e.g., publications, project portfolio)

Contact

Prof. Zhuoqi Zeng — zhuoqi.zeng@hainan-biuh.edu.cn

Prof. Ziyue Li — ziyue.li@tum.de

Dr. Chenxi Liu — chenxi.liu@cair-cas.org.hk