

# 研究合作意向书

## Letter of Intent for Research Collaboration

项目：基于脑机接口的睡眠障碍神经声学调控研究  
Project: BCI-Based Neuroacoustic Modulation for Sleep Disorders

本意向书（以下简称“本意向书”）由 AI Player in Gothenburg（Aika Lab，以下简称“甲方”）与有意参与本研究合作的大学或研究机构（以下简称“乙方”）签署，旨在就基于脑机接口（BCI）的睡眠障碍神经声学调控研究项目建立合作框架。

This Letter of Intent ("LOI") is entered into by AI Player in Gothenburg (Aika Lab, hereinafter "Party A") and the university or research institution intending to participate in this research collaboration (hereinafter "Party B"), to establish a cooperation framework for the BCI-based neuroacoustic modulation research project targeting sleep disorders.

## 第一条 项目背景与目标

### Article 1 — Project Background & Objectives

睡眠障碍已成为影响全球公共健康的重大问题。传统干预手段存在依赖性强、副作用明显等局限。Aika Lab 基于神经动力学研究积累，开发了一套基于脑机接口的神经声学调控算法体系，能够通过实时解码睡眠期脑电信号并生成自适应声学刺激，实现对睡眠结构的非侵入式精准调控。

Sleep disorders have become a major global public health concern. Traditional interventions often carry limitations such as dependency and significant side effects. Leveraging its neurodynamics research, Aika Lab has developed a neuroacoustic modulation algorithm system based on brain-computer interfaces, capable of real-time decoding of sleep-stage EEG signals and generating adaptive acoustic stimuli for non-invasive, precision modulation of sleep architecture.

本项目旨在通过甲乙双方合作，以严格的科研范式验证该算法在改善失眠、维持深度睡眠及优化睡眠周期等方面的有效性与安全性。

This project aims to validate, through rigorous scientific methodology via collaboration between both parties, the efficacy and safety of the algorithm in improving insomnia, sustaining deep sleep, and optimizing sleep cycles.

## 第二条 合作模式与各方职责

### Article 2 — Cooperation Model & Responsibilities

甲方（Aika Lab）职责：

Party A (Aika Lab) Responsibilities:

- 向乙方无偿提供加密的神经声学调控核心算法及配套技术文档，专用于本项目科研活动；

- 提供必要的技术支持与培训，确保乙方研究团队能够正确部署和使用该算法；
  - 协助制定实验方案，并就数据分析提供方法学建议；
  - 负责算法的持续迭代与版本更新。
- Provide Party B, free of charge, with the encrypted neuroacoustic modulation core algorithms and accompanying technical documentation, exclusively for research activities under this project;
  - Provide necessary technical support and training to ensure proper deployment and use of the algorithms by Party B's research team;
  - Assist in experimental design and provide methodological guidance for data analysis;
  - Maintain ongoing algorithm iteration and version updates.

## 乙方（大学/研究机构）职责：

Party B (University/Research Institution) Responsibilities:

- 提供符合伦理审查要求的实验场地、设备及受试者招募；
  - 负责申请并获取必要的伦理审查批准（IRB/EC）；
  - 按照商定的实验方案开展研究，确保数据采集的规范性和完整性；
  - 定期向甲方提交研究进展报告。
- Provide experiment venues, equipment, and participant recruitment in compliance with ethical review requirements;
  - Apply for and obtain necessary ethical review approvals (IRB/EC);
  - Conduct research per the agreed experimental protocol, ensuring standardized and complete data collection;
  - Submit periodic research progress reports to Party A.

## 第三条 知识产权与成果归属

Article 三 Intellectual Property & Ownership of Results

- 甲方提供的神经调控核心算法及其源代码、技术架构等知识产权完全归甲方所有，乙方不得逆向工程、解密、复制或转让；
  - 合作研究中产生的新数据、研究发现和学术成果由双方共同享有，具体署名顺序和贡献分配在正式协议中另行约定；
  - 基于合作研究成果产生的衍生知识产权，双方根据各自贡献比例协商确定归属；
  - 双方均有权将合作研究成果用于学术论文发表和会议报告，但须事先获得对方书面同意。
- The core neuromodulation algorithms, source code, and technical architecture provided by Party A shall remain the exclusive intellectual property of Party A. Party B shall not reverse-engineer, decrypt, copy, or transfer such materials;
  - New data, research findings, and academic outputs generated during the collaboration shall be jointly owned. Specific authorship order and contribution allocation shall be determined in the formal agreement;
  - Derivative IP arising from collaborative research outputs shall be allocated based on respective contributions as negotiated by both parties;
  - Both parties may use collaborative research outputs for academic publication and conference presentations, subject to prior written consent from the other party.

## 第四条 成果商业化

### Article 四 Commercialization of Results

合作研究成果面向商业用户的转化、有偿转让或使用授权，由甲方主导推进。商业化收益的分配方式将在正式合作协议中详细约定。乙方在同等条件下享有优先合作权。

Commercialization of collaborative research outputs — including transfer to commercial users, paid licensing, or usage authorization — shall be led by Party A. Revenue distribution from commercialization shall be detailed in the formal cooperation agreement. Party B shall have a right of first refusal under equivalent terms.

## 第五条 保密义务

### Article 五 Confidentiality

双方对合作过程中接触到的对方保密信息（包括但不限于技术资料、算法细节、实验数据、商业计划）负有严格的保密义务。保密期限自本意向书签署之日起五（5）年，即使合作终止后仍然有效。未经对方书面同意，任何一方不得向第三方披露保密信息。

Both parties shall maintain strict confidentiality regarding the other party's confidential information encountered during the collaboration, including but not limited to technical materials, algorithm details, experimental data, and business plans. The confidentiality obligation shall remain in effect for five (5) years from the date of signing this LOI, surviving any termination of the collaboration. Neither party shall disclose confidential information to any third party without the other party's prior written consent.

## 第六条 合作期限与终止

### Article 六 Term & Termination

本意向书有效期为自签署之日起两（2）年。双方应在签署本意向书后九十（90）日内完成正式合作协议的磋商与签署。任何一方均可提前三十（30）日书面通知对方终止本意向书，但已开展的研究活动及保密义务不受影响。

This LOI shall be valid for two (2) years from the date of signing. Both parties shall complete negotiation and execution of the formal cooperation agreement within ninety (90) days of signing this LOI. Either party may terminate this LOI by providing thirty (30) days' prior written notice, provided that ongoing research activities and confidentiality obligations shall remain unaffected.

## 第七条 法律性质与适用法律

### Article 七 Legal Nature & Governing Law

本意向书仅表达双方的合作意愿和初步共识，除保密条款外不构成具有法律约束力的合同。双方的权利义务以后续签署的正式合作协议为准。本意向书适用瑞典王国法律。因本意向书产生的争议，双方应首先通过友好协商解决；协商不成的，提交哥德堡有管辖权的法院裁决。

This LOI expresses the parties' intent to cooperate and preliminary consensus only, and does not constitute a legally binding contract except for the confidentiality provisions. The rights and obligations of both parties shall be governed by the formal cooperation agreement to be executed subsequently. This LOI shall be governed by the laws of the Kingdom of Sweden. Any disputes arising from this LOI shall first be resolved through amicable negotiation; failing which, they shall be submitted to the competent court in

Gothenburg.

## 第八条 其他条款

### Article 八 Miscellaneous

- 本意向书以中英文书就，两种语言版本具有同等效力。如有歧义，以中文版本为准。
- 本意向书一式四份，双方各执两份，自双方授权代表签字盖章之日起生效。
- 本意向书的任何修改或补充均须经双方书面同意。
- This LOI is executed in both Chinese and English, with both versions having equal validity. In case of discrepancy, the Chinese version shall prevail.
- This LOI is executed in four (4) counterparts, with each party retaining two (2) copies. It shall become effective upon signature and seal by both parties' authorized representatives.
- Any amendment or supplement to this LOI shall require the written consent of both parties.

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甲方 / Party A ( Aika Lab )

乙方 / Party B

机构名称 / Institution:

AI Player in Gothenburg (Aika Lab)

机构名称 / Institution:

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授权代表 / Authorized Rep.:

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授权代表 / Authorized Rep.:

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签字 / Signature:

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签字 / Signature:

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