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**2026 1ˢᵗ Round Academia Sinica**
**Funding Opportunity Announcement**

# Seed Grant for Grand Challenge Program

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The Academia Sinica **Grand Challenge Program** was established to encourage its researchers to pursue **innovative** solutions to **critical problems** in science and the humanities that carry broad and lasting **impact**. To catalyze and cultivate ideas still in early development, shorter-term **Seed Grants** are provided to support **exploratory projects** for **one to two** years. Successful applicants are expected to deliver key results within this period that would substantiate the ideas proposed and enable them to undertake more extensive investigations.

While a wide range of research topics will be considered, this round of the Grand Challenge Seed Program specifically invites proposals focused on the theme of **Quantum Technologies + Artificial Intelligence (Quantum + AI)**. Projects should aim to integrate rapid advances in AI and quantum technologies, including computing, sensing, and communication, to achieve transformative breakthroughs in computation, modeling, data processing, and decision-making. We also welcome proposals that leverage **large language models (LLMs)** and deep learning to drive innovations in smart communities, precision healthcare, and long-term care. Through interdisciplinary collaboration, the program aims to promote impactful AI innovations and foster the development of intelligent, sustainable, and inclusive societies.

Interested Investigators are requested to submit a concise proposal that would clearly describe i) the **specific problem to be solved**, ii) the **innovative ideas and approaches to be taken**, iii) the **impact of the work** if the goals are realized, and iv) the overall **plan**s **to test the ideas**, its feasibility, scientific or technical challenges, potential risks and key deliverables, along with any alternative plans to de-risk. The applications will be critically reviewed based on these criteria, based on which the applicants are advised to prepare the proposal accordingly.

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## 1. Grant Categories

1. **Individual** GCS Project, by a single individual Principal Investigator (PI).
2. **Team** GCS Project, coordinated by a Program Director, who also serves as the PI and can invite any number of Co-PIs and/or collaborators.

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## 2. Application Process

### 2.1 Eligibility

1. GCP Project Principal Investigators (PIs) must be AS full-time Research Fellows of any rank, or AS jointly-appointed Research Fellows of any rank with an AS full-time Research Fellow serving as a Project Co-PI.
2. PI can invite non-Academia Sinica scientists to participate in the project and serve as co-PI, if necessary.
3. Collaborators enlisted should be justified in the proposal and each is required to provide a Supporting Letter delineating their expertise and specific roles in the projects.

### 2.2 **Deadlines** and **Important Reminders**

1. The application deadline is **17:00, 15 September, 2025.** The Project PI should log into the online application system at https://asms.sinica.edu.tw using the PI's SSO account and

follow through the application steps as instructed. Proposals from Division of Life Sciences and Division of Mathematics and Physical Sciences should be written in English, adhering to the guidelines and format specified within the document template provided (<mark>Appendix 1</mark>), with a Research Plan describing the following four major aspects: 1) **the problem to be solved**, 2) the **innovative ideas proposed**, 3) **the potential impact of the work**, and 4) **plans to test the ideas**.

2. In preparing the proposals, applicants should keep in mind the following review criteria: i) **the significance of the problem to be addressed,** ii) **the degree of innovation,** iii) **the extent of anticipated impact**, and iv) **the feasibility of the research plan.** Although this Program will emphasize the first three criteria and take more risks on unproven methodologies and hypotheses, a major strategic flaw will not convince the reviewers. The project should also be deemed internationally competitive by the reviewers.

Furthermore, successful applicants should have relevant expertise, demonstrate that the project is part of their major career goal, and will devote sufficient effort to the project. Applicants are advised to read the Review Criteria (<mark>Appendix 2</mark>) before starting to write their proposals.

3. Applicants may be invited to make oral presentations and answer questions during the review process.

4. Any research project involving biological and/or genetically engineered materials, animal experiments or human subjects must obtain approval from the appropriate authorized AS committees. If the official approval document cannot be submitted at the time of grant application, proof of having applied for approval must be provided instead.

5. Because some research outcomes of Academia Sinica have been transferred to the private sector through technology licensing and are governed by exclusive agreements, research staff must carefully evaluate whether their applications for internal or external research projects fall within the scope of these licensed technologies or patents.

To avoid conflicts of interest or legal issues arising from academic research, or the provision of free services, research staff must have a clear understanding of the boundaries of the exclusive licenses involved（https://iptt.sinica.edu.tw/pages/4751）.

Accordingly, Academia Sinica explicitly prohibits the use of public funding for research that falls within the subject matter of such exclusive licenses.

6. Academia Sinica actively encourages researchers to learn and adopt new tools, including advanced AI-driven software applications, to enhance research quality, ensure thorough consideration of supporting background information, and improve work efficiency. However, the applicant is solely responsible for the accuracy of all content, writing quality, and adherence to academic research integrity standards.

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## 3. **Funding Period and Other Requirements**

3.1 Applicants can request for either one- or two-years' funding.

3.2 Actual funding may be adjusted on a yearly basis based on budget availability and progress. Failure to demonstrate satisfactory progress will result in premature termination of funding support.

3.3 **Grant Acceptance** and **Requirements** prior to Project Execution

1. Project PI and co-PI(s) of a successful grant application must sign and undertake to abide by the terms as stipulated in the Project Execution Agreement, and complete the Conflict-of Interest declaration process, prior to commencing the project;

2. Approval from the authorized AS committees must be obtained and submitted before commencing any project involving biological and/or genetically engineered materials, animal experiments or human subjects. Should there be any change in the experimental content or subject matter during the project period, appropriate amendment or new application must be filed for approval;

3. In accordance with the AS Research Ethics regulations, all personnel who directly perform any AS-funded research activity should receive at least one hour of research ethics training every three years. Such training must be completed within six months of joining the research project, or within the duration of the project for a project lasting less than six months;

4. In cases where an AS, a non-AS Project PI (inclusive of Project co-PI) or a non-AS project participant is found to be in violation of academic ethics or conflict of interest regulations, the "Code of Ethics for Academia Sinica Research Fellows and Research Specialists" will apply.

3.4 **Report** and **Evaluation**

1. For a 2-year project, a brief progress summary report must be submitted within the ninth month during the first year. Additional oral presentations may be arranged as needed for the PI to discuss progress and problems.

2. A final written report to the AS Department of Academic Affairs and Instrument Services is due upon completion of each project.

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# 4. Application Materials to be submitted

**The applicant should first maintain and update the PI's personal data by logging into the online application system at https://asms.sinica.edu.tw using the PI's SSO account before proceeding to complete the online application.**

4.1 Complete the online application process by **15 September, 2025** (by 17:00 Taiwan Time).

1. Complete **online** the required information, including the project category, **title**, executive **summary**, **keywords**, the **budget** requested, and the **current and pending support** of each PI and co-PI.

2. Use the document template provided (Appendix 1) to prepare the **2-page Research Plan**, and the **personal track record** of each PI and co-PI, adhering to the format and rules specified within. The research plan and supporting letter (if any), along with the personal track record, should be uploaded as a **single PDF** electronic file via the online system.

4.2 Grant Office contact information:
Ms. EG Chen
Email: grandchallenge@gate.sinica.edu.tw
Tel: 2787-2612
Department of Academic Affairs and Instrument Service

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# 申請 **115 年度第一梯次本院「關鍵突破種子計畫」**簡要中文說明

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本院關鍵突破研究計畫旨在鼓勵研究人員探索科學與人文領域中的重大挑戰，並提出具創新性、深遠且廣泛影響的解決方案。為激發並培育仍處於初期階段的創新構想，另設有一年兩梯次的**關鍵突破種子計畫**，提供為期一至兩年的先期研究補助，讓研究人員得以在此期間產出關鍵成果，以驗證所提構想，作為後續深入研究的基礎。

本梯次「關鍵突破種子計畫」除受理自發性創新提案外，特別徵求以「**量子科技與人工智慧（Quantum＋AI）**」為主題的前瞻性創新研究構想。計畫應結合 AI 與量子科技在運算、感測與通訊技術等領域的最新發展，實現運算效率、模型設計、資料處理與決策支援等方面的顛覆性突破。亦歡迎運用**大型語言模型（LLMs）**與深度學習等技術，推動智慧社區、精準醫療與長期照護等應用的計畫。期望藉由跨領域合作，促進具影響力的 AI 科技創新，實現智慧、永續且包容的社會發展。

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**壹、計畫類型：**

關鍵突破種子計畫型別分為下列兩類：

一、個人型研究計畫

二、單一整合型研究計畫

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**貳、計畫申請作業**

**一、申請人資格**

(一) 研究計畫之(總)主持人需為本院須為本院專任研究人員；或為本院合聘之研究人員，但須有本院專任研究人員擔任共同主持人。

(二) 計畫主持人可邀請非本院專家學者參與研究團隊，擔任該計畫共同主持人。

(三) 若因執行本計畫另需邀請協同參與或合作研究人員，計畫主持人可於申請書說明其必要性，並檢附該協同參與或合作研究人員同意提供協助與支持該計畫或合作意願之說明信函 (supporting letter)。

**二、計畫申請時程與其他注意事項：**

(一) 計畫書應於 **114 年 9 月 15 日 17 時**前，至中研院學術服務管理系統（ https://asms.sinica.edu.tw，以 SSO 帳號登入）依所敘明之步驟完成送件。數理組及生命組之計畫書應以英文撰寫，格式請見附件 1；人文組以該專業領域之國際學者熟悉的文字為主要考量。

(二) 撰寫計畫書時，應著眼於欲解決的關鍵議題之重要性、所提出的思維與方法之創新突破性，及研究成果對該領域的影響力。敬請參酌本徵求的英文版說明，及適用於數理組及生命組之計畫審查基準英文說明 (附件 2)。

(三) 審查過程如需申請團隊口頭報告或說明之會議安排等事宜將另行通知。

(四) 本計畫若有涉及生物材料及基因重組相關實驗、動物實驗及以人為研究對象者，應檢附相關委員會之核准文件。核准文件未能於申請時提交者，須先提交已送審之證明文件，並於計畫審核通過前補齊核准文件。

(五) 鑑於本院研發成果已完成科技移轉並受專屬授權契約規範，研究人員在申請或執行院內外研究計畫時，應審慎評估是否涉及本院已授權之技術或專利範圍。為避免因進行學術研究或提供免費服務而產生利益衝突或違法情事，研究人員必須明確了解專屬授權範圍（https://iptt.sinica.edu.tw/pages/4751）之界限。

(六) 本院鼓勵研究人員學習各種新的工具，包含各式人工智慧的應用，藉此提升研究品質、確保背景資料的周全性，及改善工作效率。惟所有計畫內容的正確性，撰寫品質，和遵守學術倫理規範的責任均由申請人全權承擔。

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**參、計畫補助年限與執行前需求**

一、計畫補助年限為一或二年期。

二、每年實際核定經費將視當年之預算金額及前一年之執行進度而定，審查未獲通過之計畫，應無條件終止計畫。

**三、核定後執行前須知**

(一) 經核定通過之總主持人及共同計畫主持人須簽署相關計畫執行同意書，並於計畫執行前完成利益衝突揭露程序；

(二) 核定通過之研究計畫，若有涉及生物材料及基因重組相關實驗、動物實驗及以人為研究對象者，應於提供相關委員會之核准文件後，方可核撥經費。如相關實驗內容於執行期間有所變更，亦須重新申請或修訂審核同意文件；

(三) 依據「中央研究院學術研究倫理教育課程實施要點」，執行以本院預算支應之研究計畫者，參與計畫人員每 3 年應接受至少 1 小時之學術倫理教育課程訓練，至遲應於開始參與研究計畫之日起 6 個月內完成；研究計畫執行期限少於 6 個月者，應於計畫執行期限內完成。

(四) 本院計畫主持人（含共同主持人）如涉有違反學術倫理或利益衝突規範之情事者，依本院研究人員及研究技術人員倫理規約辦理；院外參與計畫人員準用前述規約辦理。

**四、執行進度與成果報告**

(一) 二年期計畫應於執行第一年的第九個月內提交精簡進度摘要報告，並視需求得以安排口頭報告討論進度及待解決之問題。

(二) 計畫執行期滿，須向學術處提交完整執行成果報告。

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**參、申請資料**

一、**申請流程**，請按照本院學術研究管理系統 (https://asms.sinica.edu.tw, 以 SSO 帳號登入) 所敘明之步驟，於 **114 年 9 月 15 日 (台灣時間下午五點)** 前完成線上申請。

(一) 申請者應先於線上維護及更新計畫主持人與共同主持人之個人履歷，並填妥計畫類 別、名稱、重點摘要、關鍵字、經費需求、及目前正執行與申請中之計畫件數及經費補助情 形等資料。

(二) 計畫內容、支持說明信函、連同計畫主持人與共同主持人之個人研究成果及貢獻，則依計畫書(附件 1)規定之格式撰寫後，轉存為**一個 PDF** 電子檔於線上系統上傳。

二、學術及儀器事務處 計畫辦公室 與承辦人聯絡方式：
grandchallenge@gate.sinica.edu.tw
承辦人：陳羿君女士，電話：2787-2612

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