**中央研究院110年度「關鍵突破研究計畫」計畫書**

**2021 Academia Sinica Grand Challenge Program (GCP) Proposal**

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| 申請組別Division | 🞎 數理組Mathematics and Physical Sciences🞏 生命組Life Sciences🞏 人文社會組Humanities and Social Sciences |
| 計畫類別GCP Category | 🞏 1.個人型 Individual 🞏 2.單一整合型 Integrated Team🞏 3.所、中心問題導向團隊型 Institutional Problem-Solving |
| 計畫名稱ProjectTitle | 中文： |
| English: |
| 計畫(總)主持人Project PI orProgram Director | 中文： | 職稱Position |  |
| English: | 申請單位Affiliation |  |
| 共同(分支)計畫主持人Project Co-PISub-Project PI | 中文 / English:1. | 職稱/單位Position/Affiliation |
| 2. |  |
| 3. |  |
| 計畫經費含自提額度與來源單位：新臺幣千元Total Budget incl. Matching Amount & SourceUnit: thousand NTD | 第一年 Year 1: *e.g.* 25,000 千元 | 第二年 Year 2: |
| 自提Matching:  *e.g.* 5,000千元來源 Source: *e.g.* 所內業務費 | 自提Matching: 來源 Source: |
| 第三年 Year 3: | 第四年 Year 4: |
| 自提Matching: 來源 Source:  | 自提Matching: 來源 Source: |
| 計畫聯絡人ProjectContact Person |  | Email:  |
| Tel:  |
| 計畫關鍵詞Keywords | 中文：English: |

**中央研究院110年度「關鍵突破研究計畫」計畫書**

**2021 Academia Sinica Grand Challenge Program (GCP) Proposal**

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計畫名稱（中文）：

Project Title (English):

計畫（總）主持人Project PI or Program Director:

申請單位Affiliation:

計畫類別 GCP Category:

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**1. Statement of Purpose and Abstract** (as specified)

For the grand challenge problem proposed, answer each of the following questions in short statement(s) of less than 100 words:

**1.1** What is the grand challenge problem?

**1.2** What is new in your approach?

**1.3** Does the idea transform the area if it works?

**1.4** How does the PI test whether the idea works or not during the project period?

In addition, please provide a **Chinese Abstract** based on the above statements in less than 500 words.

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**2. Research Plan** (limited to 10 pages, irrespective of how many sub-projects or co-PIs)

**2.1** Elaborate on the identified grand challenge problem, focusing on its importance, describe the state-of-the-art and identify the bottleneck. Then describe the specific aims of current proposal and the innovative approach you are considering, its rationale and feasibility, how it may lead to a breakthrough and transform the field, its scientific and/or societal impact.

**2.2** Describe your international competitive edge and that of the team you assembled including any Co-PI and collaborator enlisted.

**2.3** State your anticipated deliverables, timeline, and milestones.

*You can flexibly organize your GCP project descriptions, taking into considerations the above points. The total page limit for this section including references is* ***ten*** *pages, A4 size, 1 inch or 2.54 cm margins for all sides, single spaced, font: Times New Roman, 11 or 12 point. Smaller font size 9 or 10 is allowed only for Figure legend and Bibliography.*

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**3. Organization and Budget Justification** (limited to One page)

**3.1** Provide a succinct description of how your research team is organized and how different aspects of the projects are coordinated; how the expertise of your co-PIs and collaborators is essential to this GCP project and complements one another. This section may not be needed if you are applying for Individual GCP project. For Institutional GCP projects only, justify the logistics of setting up Sub-Projects and joint applications with other Institutes/Research Centers, if applicable.

**3.2** Justify the budget requested and how it will be distributed for team and institutional based GCP projects. Describe the amount and source of matching support, why it is deemed appropriate, and any anticipated administrative problem.

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**4. Budget Plan** (use the Table provided)

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| --- | --- | --- | --- | --- |
| 年度Year | 1 | 2 | 3 | 4 |
| 業務費Operating Expenses(A) | 教育訓練費Training | International |  |  |  |  |
| Domestic |  |  |  |  |
| Mainland China |  |  |  |  |
| 旅費Travel | International |  |  |  |  |
| Domestic |  |  |  |  |
| Mainland China |  |  |  |  |
| 臨時人員酬金Personnel & Salary |  |  |  |  |
| 研究相關耗材費用Consumables |  |  |  |  |
| 業務費總額Total (A) |  |  |  |  |
| 自提配合款 Matching (a) |  |  |  |  |
| 機械(儀器)設備費Equipment(B) | 非資訊相關Non-Computer Item  |  |  |  |  |
| 資訊相關Computer-related Item |  |  |  |  |
| 設備費總額 Total (B)  |  |  |  |  |
| 自提配合款 Matching (b) |  |  |  |  |
| 獎補助費Graduate Student Stipend (C) |  |  |  |  |
| 總金額Total (T) = (A)+(B)+(C) |  |  |  |  |
| 自提配合款 Matching (M) = (a)+(b) |  |  |  |  |
| 向院方申請總額 Total Requested (T-M) |  |  |  |  |

**5. Summary of Previous Research Accomplishments** (limited to Two pages).

Summarize and highlight your previous research accomplishments in the last five years, paying particular attention to describing the respective outcome from each of the grant supports. Include the funding sources and grant number as listed in the publications for all accomplishments described here. Do not include manuscripts in preparation or submitted. Limited to two pages for each PI and Co-PI, if any.

簡述個人過去5年的具體學術表現與研究成果，請註明各項成果由哪些計畫(含院內外)的經費補助產出，並列出其計畫編號。

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**6. Curriculum Vitae**(CV, for Division of Mathematics and Physical Sciences & Division of Humanities and Social Sciences) or **Biographical Sketch** (for Division of Life Sciences).

**CV** should include **Contact Information, Current Affiliation and Title, Education and Professional Experiences, Research Interests, Awards and Honors, Selected Publication List.**

**個人簡歷** 應含**聯絡資訊、所屬單位與職稱、學經歷、研究領域、獎項及榮譽、代表性著作目錄**

**Biographical sketch** should additionally contain i) a **Personal Statement** (brief self-introduction of research path/career in 200-300 words); and ii) **Contributions to Science** (a summary of major research achievements, their significance and impact, along with a list of key publications). Total should not exceed four pages. You can use the template provided in the next page.

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**BIOGRAPHICAL SKETCH**

**NAME:** 中文姓名**：**

**INSTITUTE/RESEARCH CENTER:**

**Current POSITION:**

**EDUCATION** (Begin with baccalaureate or other initial professional education)

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| **INSTITUTION AND LOCATION** | **DEGREE** | **DURATION**MM/YY-MM/YY | **FIELD OF STUDY** |
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**EMPLOYMENT** (Include postdoctoral training)

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| --- | --- | --- | --- |
| **INSTITUTION AND LOCATION** | **POSITION TITLE** | **DURATION**MM/YY-MM/YY | **FIELD OF STUDY** |
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1. **PERSONAL STATEMENT**

A brief self-introduction of research path/career, 200-300 words

1. **HONORS**

Include Professional distinctions and service, honors and selected speaking invitations

1. **CONTRIBUTIONS TO SCIENCE**

Summarize major research achievements and describe their significance and impact along with a list of key publications

1. **COMPLETE LIST OF PUBLISHED WORK**

You can also provide a selected list from more recent (last 5 years) publications to keep within the total 4-pages limit.

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Total should not exceed 4 pages

**7.** **List of Current and Pending Grant Support**

Please list any current and pending projects/proposals funded by Academia Sinica and external agencies in the last three years (from 2018-2020). Any incomplete information may adversely affect the consideration of this proposal. Please be reminded that applicants should not submit the same proposal to multiple funding sources at Academia Sinica and/or to external funding agencies at the same time.

請列舉近3年所執行或申請中之院內、外研究計畫及其相關資料，資訊不足者將影響審查。請勿以同一計畫書同時向本院不同計畫及院外補助機關提出申請補助。

主持人Principal Investigator:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | (1) Funding Agency and Project Type補助單位及計畫類型:(2) Grant Title and number計畫名稱與編號 : ● Status計畫狀態: □ A. Current執行中 □ B. Pending申請中 ● Research Role計畫擔任角色: □ A. Project PI 計畫主持人  □ B. Program Director 總計畫主持人 □ C. Subproject PI分支計畫主持人(3) Project Period執行期間: \_\_\_\_\_\_(YYYY/MM) to \_\_\_\_\_\_(YYYY/MM)

|  |  |  |
| --- | --- | --- |
| Year 年度 | Total Project Amount 總研究經費 |  Individual Project Amount個人研究經費 |
|  |  |  |
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(4) Funding Amount in thousands of NTD補助總額 (仟元) (5) Is there any relationship between this project/proposal and the Grand Challenge Program for which you are applying? 此計畫是否與本次申請計畫有相關？□ No □ Yes. (Please specify details請敘明其關聯性) |
| 2 | (1) Funding Agency and Project Type補助單位及計畫類型:(2) Grant Title and number計畫名稱與編號 : ● Status計畫狀態: □ A. Current執行中 □ B. Pending申請中 ● Research Role計畫擔任角色: □ A. Project PI 計畫主持人  □ B. Program Director 總計畫主持人 □ C. Subproject PI分支計畫主持人(3) Project Period執行期間: \_\_\_\_\_\_(YYYY/MM) to \_\_\_\_\_\_(YYYY/MM)

|  |  |  |
| --- | --- | --- |
| Year 年度 | Total Project Amount 總研究經費 |  Individual Project Amount個人研究經費 |
|  |  |  |
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(4) Funding Amount in thousands of NTD補助總額 (仟元) (5) Is there any relationship between this project/proposal and the Grand Challenge Program for which you are applying? 此計畫是否與本次申請計畫有相關？□ No □ Yes. (Please specify details請敘明其關聯性) |

**List of** **Recommended Reviewers**

Please read the Conflict of Interest Guidelines and provide a list of 8–10 reviewers with the expertise to review your application and submit this list as a separate file to the Grant Office. If necessary, provide also the names of individuals who should be excluded as reviewers due to Conflict of Interest.

|  |
| --- |
| **Conflict of Interest Guidelines**1. A committee member or reviewer must decline to review the relevant application if they1.1 Have, or have had, a personal relationship with the applicant.1.2 Were a doctoral thesis supervisor of the applicant, or have supervised the applicant as a postdoctoral fellow.1.3 Have published work in collaboration with the applicant within the last five years, especially as a primary co-author.1.4 Have been involved in any situation considered as a Conflict of Interest with the applicant.2. Committee members and reviewers should disclose to the Committee Chair, in advance, any of the following Conflicts of Interest. In addition, they must avoid giving scores or votes, and should withdraw from the meeting for as long as the application is being discussed.2.1 A committee member or reviewer is working in the same Institute or Department as the applicant.2.2 A committee member or reviewer was a Bachelor’s or Master’s thesis supervisor of the applicant.2.3 A committee member or reviewer implements projects in collaboration with the applicant during the period of review.2.4 A committee member or reviewer is involved in any situation considered as Conflict of Interest with the applicant. |

**1. Recommended Reviewers** (Please provide 8–10 reviewers)

|  |  |  |
| --- | --- | --- |
| 1 | Name | ○○○ |
| Organization / Department | ○○○ |
| Area(s) of Expertise | ○○○ |
| Telephone No. | ○○○ |
| E-mail Address | ○○○ |
| Note | ○○○ |

**2. Please state, if necessary, the names who should be excluded as reviewers due to Conflict of Interest with the applicant.**

|  |  |  |
| --- | --- | --- |
| 1 | Name | ○○○ |
| Organization / Department | ○○○ |
| Area(s) of Expertise | ○○○ |
| E-mail Address | ○○○ |
| Note | ○○○ |

I acknowledge that I have read the Conflict of Interest Guidelines and I declare that none of the recommended reviewers are in conflict with the application or the applicant.

Signature: Date: