





GGC5039 / ESS419

Academic Communication

Section 5-3: Writing proposals and applications (Grant Proposal)

Instructor: Dikun Yang

Term: Fall 2020-2021



Outline

- Section 1: Introduction (2 hr)
- Section 2: International communications (2 hr)
- Section 3: Writing and publishing (8 hr)
- Section 4: Presentations at conferences (6 hr)
- Section 5: Writing proposals and applications (6 hr)
- Section 6: Interviews (4 hr)
- Section 7: New media (2 hr)
- Section 8: Integrated practice (2 hr)

Research Grant vs. Scholarship



- Money
- Students
- Investment in persons
- Important for promotion



- Money
- Independent researchers
- Investment in ideas
- Important for promotion/survival

Persuasive Writing

- Scholarship/fellowship applications (past or future)
 - I have done or will do amazing things that you care
 - I am the person you want to reward or invest in
- Job or graduate school applications (past < future)
 - I qualify
 - I can and will do the work well
- Grant proposals (past < future)
 - I have an idea worth investigating
 - I have good track record
 - You should invest

Where to Find Grant Opportunities

- Government agencies
 - Natural Science Foundation (national, provincial, municipal)
 - Ministry of Science and Technology, Education, etc.
- Universities, institutions, laboratories
 - 重点实验室开放基金、本科生/研究生学术探索基金
- Professional societies/associations
- Non-profit and non-government organizations
- Industry and private sectors

Information in a Grant Proposal

- Research contents
 - What, why, who, how (much)
- You and your team
 - Education and work experience
 - Previous publications
- Preliminary and feasibility studies
 - Project not purely imaginary
- Expected results and impacts
 - Capture the reviewer's imagination



Preparation Before Writing Proposals

- Make smart decisions
 - A suitable grant: stage of career development
 - A good topic: continuity of your research area; explore in new areas
 - A good timing: how old are you?
- Think about research ideas year-round
- Literature review: know the state-of-art
- Set a time frame: time goes fast!
- Preliminary experiments/results
- Consult with senior researchers

NSFC基于四类科学问题属性的分类申请

- A 鼓励探索,突出原创:是指科学问题源于科研人员的灵感和新思想,且具有鲜明的首创性特征,旨在通过自由探索产出从无到有的原创性成果。
- B 聚焦前沿,独辟蹊径:是指科学问题源于世界科技前沿的热点、难点和新兴领域,且具有鲜明的引领性或开创性特征,旨在通过独辟蹊径取得开拓性成果,引领或拓展科学前沿。
- C 需求牵引,突破瓶颈: 是指科学问题源于国家重大需求和经济主战场, 且 具有鲜明的需求导向、问题导向和目标导向特征, 旨在通过解决技术瓶颈背 后的核心科学问题, 促使基础研究成果走向应用。
- D 共性导向,交叉融通:是指科学问题源于多学科领域交叉的共性难题,具有鲜明的学科交叉特征,旨在通过交叉研究产出重大科学突破,促进分科知识融通发展为知识体系。

Anatomy of Grant Applications (NSFC)

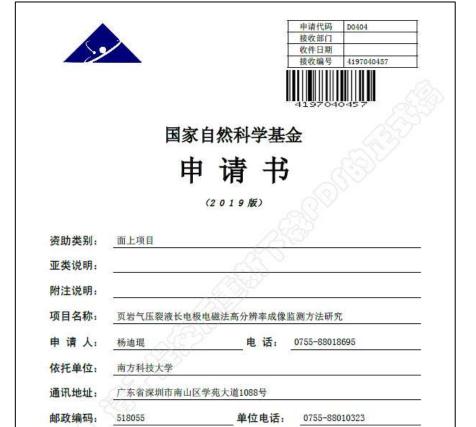
- Fact sheets (forms)
- Budget
- Main body
- Resumes
- Signatures

报告正文

- (一) 立项依据与研究内容:
 - 1. 项目的立项依据(包括参考文献)
 - 2. 项目的研究内容、研究目标, 以及拟解决的关键科学问题
 - 3. 拟采取的研究方案及可行性分析
 - 4. 本项目的特色与创新之处
 - 5. 年度研究计划及预期研究结果
- (二) 研究基础与工作条件
 - 1. 研究基础
 - 2. 工作条件
 - 3.正在承担的与本项目相关的科研项目情况
 - 4.完成国家自然科学基金项目情况
- (三) 其他需要说明的问题

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国家自然科学基金委员会

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NFSC申请书样例

Tips

- Visually pleasing: use the template, consistent spacings, figures/tables properly resized, cautious about colorful fonts
- Language: formal writing, no grammatical errors and misspelling, clear and understandable
- Structure: be logical, be concise, keep the readers on track
- **Presentation style**: proper use of bullet points and boldface, convey complex concepts/workflows in figures
- References: a potential "battle ground"
- Iterative writing: Get a draft then revise and polish

Evaluation of Proposals

- Submit in print (with signatures and stamps) or online
- Pre-screening for incorrect format and "fatal" errors
- Selection of reviewers: category code and keywords
- Peer review (usually single blind): email or online forms
- Second round of review: defense or committee meeting
- Notification and confirmation

