

## **2nd Call for Research Proposals in the Cluster of Excellence SE<sup>2</sup>A (2163/1)**

### **Important information for applicants**

#### **1. Formalities**

##### **1.1 Eligibility of applicants**

Applicants must be members of either TU Braunschweig, DLR (sites Braunschweig or Göttingen), PTB, LU Hannover, or HBK Braunschweig. Applicants must hold a doctoral degree and must be renowned in their field of application. Joint proposals by two or more applicants are highly welcome. In this case, every applicant must be associated with a clearly marked portion of the proposed budget. Applications including Co-PIs from other organizations are welcome.

##### **1.2 Cost categories and cost estimates**

EXC SE<sup>2</sup>A funds project cost for personnel, consumables, and research equipment. The proposal shall include justification of cost items. Eligibility of cost items shall follow practices of the DFG. That is, the research institute or research institution of the applicant bears the general infrastructure such as cost of overheads, cost of operating facilities, cost of desktop computers and workstations, cost of software licenses, etc. Planned usage of unique infrastructure (labs, test rigs, etc.) has to be confirmed by the head of the institute in the form of co-signing the proposal. Funding of costs of non-member institutes or research institutions is not possible.

It is expected that applicants typically apply for 1 doctoral researcher in full-time employment (FTE). Applicants can act as principal investigators in more than one project. However, the maximum funding request by a single applicant in all projects is 2 FTE. Financial funding for staff is limited by the DFG staff rates (see [www.dfg.de/formulare/60\\_12/v/60\\_12\\_-2022- de.pdf](http://www.dfg.de/formulare/60_12/v/60_12_-2022- de.pdf)). For PhD researchers funded by SE<sup>2</sup>A, a participation in the SE<sup>2</sup>A Doctoral Researchers Programme is mandatory.

Applicants can increase the value of the research work offered by their proposals by acquiring additional funding from other sources. Such externally funded portions of the proposed research must be clearly marked in the proposal. However, partial employment of doctoral researchers is not desired.

##### **1.3 Project Period**

The proposal shall cover research work and related project cost within the years 2023-2025. Delayed hiring of personnel will not extend the funding period.

##### **1.4 Format of application**

The proposal must use the common application form as provided by EXC SE<sup>2</sup>A. No modifications of fonts, spacing, page layout, etc. are allowed. The proposal shall respond to all chapters given by the application form. The lists of the applicants own publications must distinguish between publications with a peer-review process and other publications, following DFG practices. Maximum number of pages is 8 for proposals by a single applicant, while joint proposals by two or more applicants may use up to 11 pages. The proposal must be written in English.

The proposal must include an endorsement of the intended use of facilities, office space, computer etc., signed by the responsible Director of the Institute. This endorsement shall also assign full responsibility and accountability of the project budget to the applicant.

The proposal must be accompanied by a 2-page CV for each of the applicants and a one-page list of his or her 10 most important publications. Applicants who have received funding during the first half of the Cluster must provide pdf-copies of minimum 2 publications on their previous, relevant research

project in the Cluster<sup>1</sup>. New applicants can provide up to 3 pdf-copies of relevant preliminary work as well. No further appendices are allowed.

Failing to comply with these rules will result in rejection of the proposal.

### **1.5 Letter of intent and Application deadline**

Letter of Intent: Prior to submission of the proposal, an informal letter of intent including i) the proposed project title, ii) name of the planned lead applicant (lead PI) plus planned co-PIs, and iii) proposed assignment to ICAs is mandatory. Letter of intents should be sent by Email latest by 7 June 2022 to [se2a@tu-braunschweig.de](mailto:se2a@tu-braunschweig.de).

Proposals shall be sent to [se2a@tu-braunschweig.de](mailto:se2a@tu-braunschweig.de). Application deadline is **29 August 2022 at 24.00 CET**. Later applications will not be considered for evaluation.

## **2. Evaluation Criteria**

The proposals will be evaluated based on DFG quality criteria and the expected contribution to the SE<sup>2</sup>A cluster. Criteria for the review process are:

1. Fit of the proposal and contribution to the SE<sup>2</sup>A overall objectives (as outlined in App. 1 of the SE<sup>2</sup>A-Proposal to the DFG and also accessible on [www.tu-braunschweig.de/en/se2a/about-us](http://www.tu-braunschweig.de/en/se2a/about-us)) and the specific objectives of the respective Research Units (as outlined in the Call for Proposal),
2. Originality and novelty of the idea (new scientific methods/knowledge, unique features of the proposal going beyond the existing projects in the SE<sup>2</sup>A cluster),
3. Integration and cooperation with other projects,
4. Quality and credibility of the work program, research environment, and cost,
5. Quality of preliminary work and the applicant's relevant qualifications including publication record.

For the underlying research hypothesis of the proposal, the applicant must show at the system level that the intended contribution is either ...

- (a) a necessary pre-requisite for aviation applications or
- (b) has the potential of improving essential performance parameters (to be defined by the applicant e.g. durability, fuel consumption, efficiency, power density, or energy density) to the level at which they are required for aviation applications.

Proposals which contribute approaches beyond the hypotheses stated in the Call for Proposals (CfP) or work content not specified in the CfP will be considered if they provide sufficient evidence that their merit, as defined by a and b above, may exceed that of the hypotheses and work contents in the CfP.

The achievement of performance parameters by the proposed research may be shown by analysis, validated simulation and/or experiments. The expected results must be evaluated according to engineering standard procedures or suitable, newly developed procedures including quantified uncertainties through, e.g., confidence intervals for suitably chosen levels of probability. Results from past or current projects providing needed knowledge can be mentioned and incorporated into the proposal. Synergies with other proposals in preparation can be mentioned and will be considered as supporting contributions.

Information about SE<sup>2</sup>A global objectives and the current cluster projects is available on the SE<sup>2</sup>A website: [www.tu-braunschweig.de/en/se2a/research](http://www.tu-braunschweig.de/en/se2a/research).

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<sup>1</sup> Copies of SE<sup>2</sup>A publications can also comprise manuscripts currently under peer review by scientific journals.

### **3. Review process and decision making**

Proposals will be evaluated for completeness, originality, scientific content, and feasibility by a team of senior experts by the end of September 2022. These scientific reviewers are nominated by the SE<sup>2</sup>A Board. Based on these evaluations, the Board will select proposals to be funded, subject to endorsement by the SE<sup>2</sup>A Member Assembly. Funding decisions may include budget adjustments, to meet the constraints of the overall SE<sup>2</sup>A budget. Following these initial budget decisions, the Call Coordination Team and the applicant(s) will negotiate further harmonization of project plans, including suitable milestones and deliverables, resulting in a comprehensive planning of the Research Units to be endorsed by the SE<sup>2</sup>A Board. Further, the applicant(s) will lay out harmonized project plans in the SE<sup>2</sup>A Intranet. Failing to complete these project negotiations in due time will result in rejection of the proposal. Funding decisions will be communicated to the applicants at the latest by the end of October 2022.

The EXC SE<sup>2</sup>A aims at funding research work by the applicants starting in January 2023.

Neither project applicants nor members of EXC SE<sup>2</sup>A can assert a claim for obtaining funding by SE<sup>2</sup>A.