

# CALL FOR PAPERS

## *IEEE Transactions on Affective Computing*

### Special Issue on “Extremely Low-Resource Autonomous Affective Learning”

#### **Deadlines:**

Open for submissions: January 1, 2024

Submissions due: May 1, 2024

Preliminary notification: July 1, 2024

Revisions due: August 1, 2024

Final notification: October 1, 2024

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#### **TOPIC SUMMARY:**

Autonomous artificial intelligence indicates the ability of machines to learn with little help from real-world data and human beings, which typically refers to extremely low data resource cases with insufficient real-world data. This is also practical in affective computing if we aim to design strongly intelligent social robots for human-machine interaction or even machine-machine collaboration, through attempting to teach machines to achieve sustainable learning by themselves. Hence, we hereby propose the topic of extremely low-resource learning for affective computing, as the very first step to autonomous artificial intelligence in affective computing. Fortunately, the rapid emergence of foundation models and learning approaches towards low-resource cases brings the dawn to extremely low-resource learning in affective computing, by means of considering external information sourcing from public models, experience, or commonly acquired data.

Within the scope of the proposed topic, we expect to explore feasible and effective solutions for extremely low-resource learning in affective computing, on the aspects of algorithms, models, data, applicable knowledge, applications, or other highly related topics. In detail, we list setting-related topics of extremely low-resource learning in multimodal affective computing, mental health, and affective human-machine interaction. It is also encouraged to investigate conventional learning paradigms in low data resource cases possibly suitable for affective computing. In addition, we include the topics of foundation model assisted approaches for extremely low-resource learning, in view of the various public foundation models (e.g., large language models) for applications in different modalities. Note that applicable topics are not limited to the listed ones, which means it is encouraged to explore other feasible novel thoughts or approaches for extremely low-resource affective learning.

Topics of interest include:

- Extremely low-resource learning in multimodal affective computing and mental health (e.g., by zero-, few-shot, reinforced or massive transfer learning)
- Emergent affective intelligence in large and foundation models
- Meta learning in affective computing
- Emergent affective intelligence in foundation models
- Synergistic learning with foundation models and traditional approaches to affective computing

- Prompt learning and efficient fine-tuning in affective computing
- Foundation model assisted data augmentation in affective computing
- Generated databases in affective computing
- Other affective computing topics using extremely low-resource learning

### **SUBMISSION GUIDELINES**

For author information and guidelines on submission criteria, visit *[URL to be added by staff]*. Please submit papers through the ScholarOne system (<https://mc.manuscriptcentral.com/cs-ieee>) and be sure to select the special issue or special section name. Manuscripts should not be published or currently submitted for publication elsewhere. Please submit only full papers intended for review, not abstracts, to the ScholarOne portal. If requested, abstracts should be sent by email to the guest editors directly.

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