Thank you for using the FLAME model provided by the Max Planck Institute for Intelligent Systems. For details, please see the publication

> T. Li, T. Bolkart, M. J. Black, H. Li and J. Romero
> Learning a model of facial shape and expression from 4D scans
> ACM Transactions on Graphics (Proc. SIGGRAPH Asia), 2017.

For questions, please contact flame@tuebingen.mpg.de.

FLAME is available under a Creative Commons Attribution license. For details on the license, please visit https://flame.is.tue.mpg.de/modellicense.html. By using the model, you acknowledge that you have read the license terms, understand them, and agree to be bound by them. If you do not agree with these terms and conditions, you must not use the model. You further agree to cite the FLAME paper when reporting results with this model in a scientific publication. The project page (http://flame.is.tue.mpg.de) lists the most up to date bibliographic information.

For **FLAME2023**, we provide two different versions, flame2023 and flame2023_no_jaw. Both models are trained from thousands of registered meshes, including the training and testing data described in the paper.

Different from flame2023 (and from previous FLAME versions), the expression space of flame2023_no_jaw does not factor out jaw rotation. While other FLAME models factor facial expression into expression parameters and jaw pose, flame2023_no_jaw models all expression variation with the expression space. Therefore, while the jaw pose parameters are still provided for compatibility reasons (i.e., all FLAME models use the same kinematic tree), when optimizing the expression of flame2023_no_jaw, optimizing the jaw pose parameters is not necessary.

Please visit the FLAME-Universe (https://github.com/TimoBolkart/FLAME-Universe) for more public FLAME resources (papers, code, data).