PRESS RELEASE

Training Mental Resilience
Research Team Presents New Web Platform »resiLIR«

Incisive events and challenging life circumstances place an enormous burden on mental health. People with a high level of resilience are better prepared for stress and strokes of fate. But can this mental resilience be learned? Researchers from the Fraunhofer Institute for Industrial Mathematics ITWM and the Leibniz Institute for Resilience Research LIR have developed the freely accessible web application »resiLIR« as part of the »APPWAG« project, which allows users to assess and train their personal resilience online.

The abbreviation »APPWAG« stands for »Expansion of resilience promotion programs into a platform with target-group-specific health promotion offerings«. In collaboration with trained psychology experts from the LIR, the researchers at Fraunhofer ITWM developed a psychoeducational online service that allows people to assess and train their individual resilience in order to better prepare themselves for future challenges. The project was funded by the Ministry of Science and Health of the State of Rhineland-Palatinate with funding from the European Regional Development Fund (ERDF).

Go-Live: Artificial Intelligence for Individual Resilience Training

The web application »resiLIR« is now freely accessible to the public at the web address www.resilir.eu. At Fraunhofer ITWM, the project was carried out by research assistants Michael Moos and Tobias Zimmermann and student assistant Lars Gottfriedsen under the supervision of Dr. Alexander Scherrer.

»Our AI methods ensure that the resilience data and previous training progress of a user are analyzed, and the web application then compiles individually tailored training content for this person«, says Scherrer, deputy head of the »Optimization in the Life Sciences« department. The basis for this is the specialist input from psychological experts and the current state of resilience research in digitally processed form. A special feature of »resiLIR« is its design as an educational game, which also provides complex methodological solutions and sophisticated psychoeducational content in a low-threshold way.

Accessible to All Free of Charge – www.resilir.eu

»The new application is the first web platform developed by Fraunhofer ITWM that is available to such a broad public – a small milestone for our institute«, emphasizes Scherrer. »The importance of mental health has been demonstrated not least during

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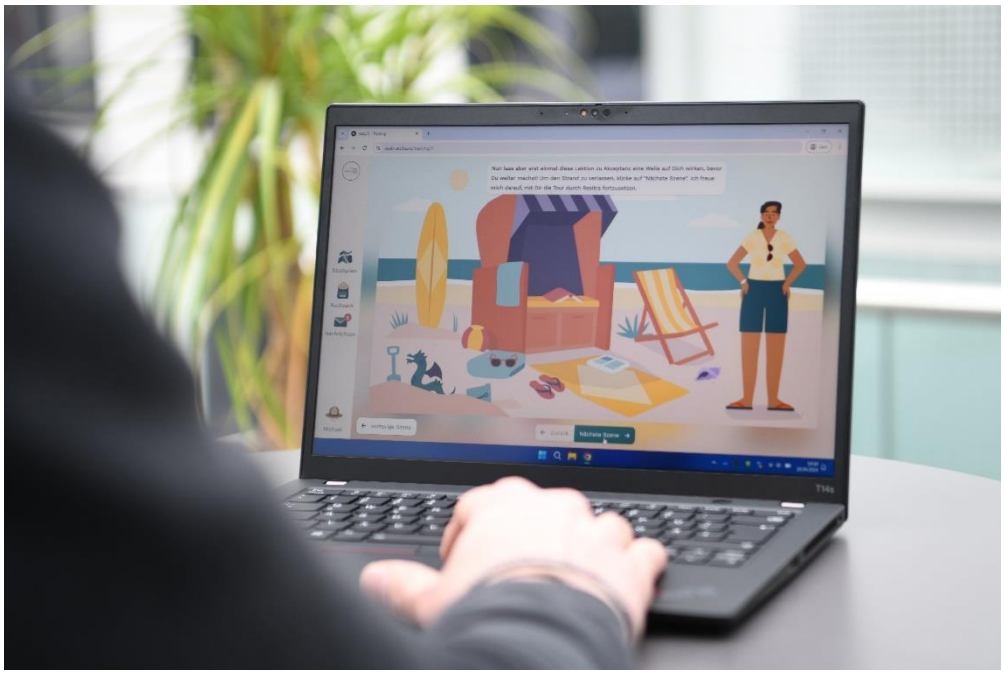
the COVID-19 pandemic. We are currently living in a world with multiple crises in which every individual has to deal not only with subliminal fears of climate change, wars or globalization, but also with private strokes of fate, stressful situations at work or tensions in their social environment. With this project, we are providing people with preventative support for the challenges they can expect in the future.«

The »resiLIR« web application currently includes a general training program for the general population as well as additional content for healthcare professionals. However, the Fraunhofer ITWM's method and software solution goes much further, which is why LIR and the mathematical institute want to work together on expanding the training content for specific target groups. The Fraunhofer ITWM is also planning to further develop the AI methods for analyzing documented training progress, the results of which will then automatically adapt the training.



Researchers from the Fraunhofer ITWM and the Leibniz Institute for Resilience Research LIR have developed the freely accessible web application »resiLIR« in the project »APPWAG«, with which users can have their personal resilience assessed and trained online. © Fraunhofer ITWM

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About the Fraunhofer Institute for Industrial Mathematics ITWM

The Fraunhofer Institute for Industrial Mathematics ITWM in Kaiserslautern is one of the largest research institutes for applied mathematics in the world. We see it as our task to further develop mathematics as a key technology and to provide innovative impulses. Our focus is on the implementation of mathematical methods and technology in application projects and their further development in research projects. The close cooperation with partners from industry guarantees the high practical relevance of our work.

Their integral building blocks are consulting, implementation and support in the application of high-performance computing technology and the provision of customized software solutions. Our various areas of expertise address a wide range of customers: the automotive industry, mechanical engineering, the chemical industry, energy and the financial sector. This also benefits from our excellent networking, for example in the Simulation and Software-based Innovation Center.

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