

New tool to diagnose dementia by tracking person's eye movements: IIT Gandhinagar

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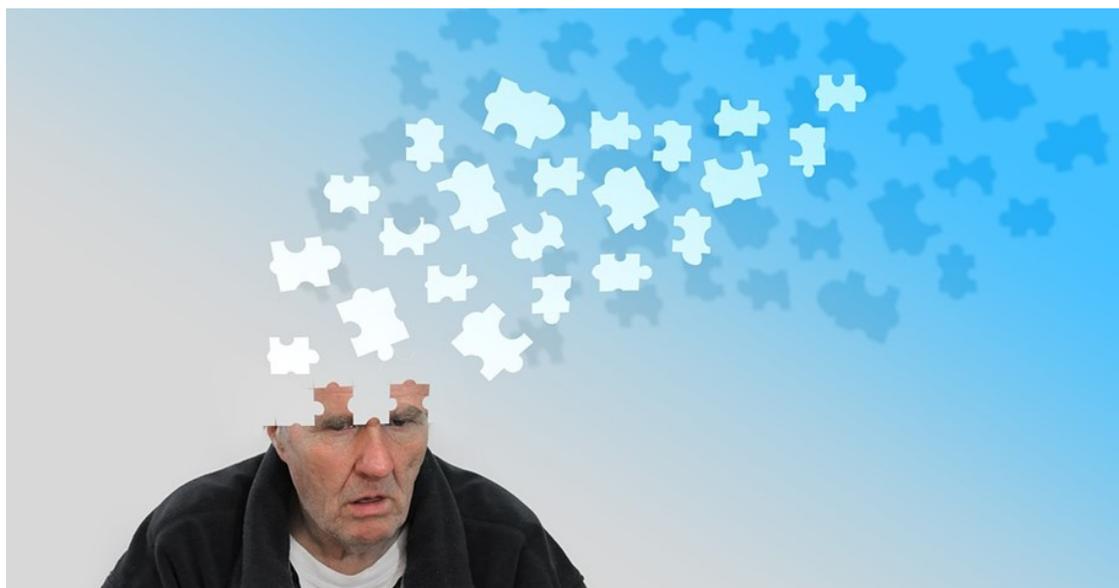
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New tool to diagnose dementia by tracking person's eye movements: IIT Gandhinagar

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Researchers can then map the eye movements in response to the stimulus. They can identify subtle patterns that predict whether a person suffers from mild cognitive impairment. Image Credit: Pixabay

Scientists at [IIT Gandhinagar](#) have developed a technology that can non-invasively diagnose dementia by tracking a person's eye movements, much before the symptoms appear. With a significant rise in ageing population, neurodegenerative disorders are becoming a serious health issue. While dementia cannot be cured, its progression can be delayed if diagnosed early.

"By the time symptoms of dementia are detected, it is too late -- Alzheimer's disease kicks in and it can not be managed. But if dementia is caught early, we

can delay the progression of Alzheimer's," said [Uttama Lahiri](#), Associate Professor of Electrical Engineering, at [Indian Institute of Technology \(IIT\) Gandhinagar](#). Her team, which included Ritika Jain and Valay Patel, developed the 'MindEye' project that can track a person's eye movement, quantifying gaze in terms of reaction time and correct fixations, in response to visual stimuli presented on a computer monitor.

"We present a stimulus -- dots appearing at certain portions of the screen at certain angles. People with dementia often have issues with following the dot or fixing their gaze," Lahiri told PTI. Researchers can then map the eye movements in response to the stimulus. They can identify subtle patterns that predict whether a person suffers from mild cognitive impairment.

The preliminary results of the experimental study with 10 healthy [participants](#) were promising, Lahiri said. "We have handed the technology over to the industry and a larger clinical trial is underway in Kolkata and Gujarat," Lahiri said.

About 1,600 people have been screened already, she added. The researchers used standard tests -- long questionnaires that a patient answers with the help of a psychiatrist -- to validate their results.

The results were presented this month at the Faculty of Old Age Psychiatry Annual Conference held in the UK. Existing tests methods to diagnose dementia in [patients](#) have several shortcomings. During their research, Lahiri found that uneducated people in old age homes have difficulty answering the questionnaires, making it harder to give a correct diagnosis. "That is where our system can take over and diagnose dementia There is no screening tool yet that can detect dementia in such objective terms," said Lahiri.

(With inputs from agencies.)

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China launches data relay satellites to control services for its manned spacecraft

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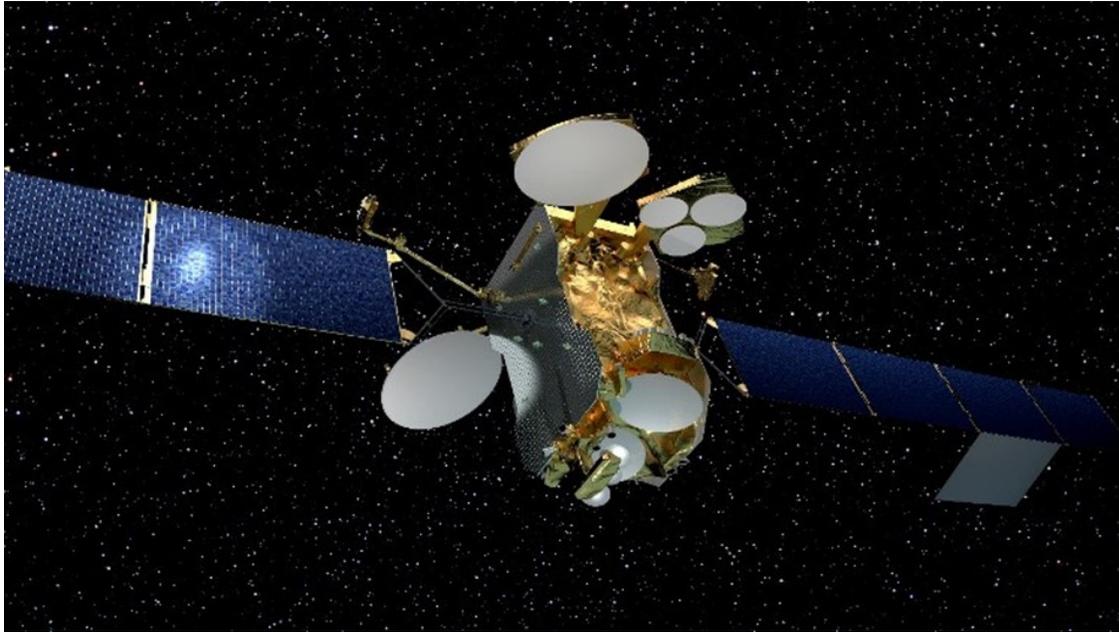


Image Credit: Wikimedia

China has successfully launched the first of its new-generation data relay satellites into orbit that will provide data relay, measurement and control services for its manned spacecraft. The Tianlian II-01 satellite was launched by a Long March-3B carrier rocket from the [Xichang Satellite Launch Centre](#) in southwest China's [Sichuan Province](#) Sunday night.

As the first satellite to constitute China's second-generation data relay satellite network, the Tianlian II-01 will provide data relay, measurement and control, transmission services for manned spacecraft, satellites, carrier rockets and other non-spacecraft users. The [Tianlian II](#) network will be markedly more advanced in mission planning, system management and operations than the first-generation network composed of [Tianlian I](#) satellites, state-run [Xinhua news agency](#) reported on Monday.

The new network, with faster data transfer and higher multi-objective service capability, will play an important role in improving the transmission promptness,

in-orbit security and mission flexibility for medium- and low-Earth orbiting satellites and manned spacecraft, it said. The satellite is developed by the [China Academy of Space Technology](#) under the [China Aerospace Science and Technology Corporation](#). The launch marks the 301st mission of the [Long March](#) carrier rocket series. [China](#) launched its first data relay satellite, the Tianlian I-01, in April 2008.

COUNTRY :China

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