

#BEYOND THE PRINTS

Could Wrinkled Fingers Be the Next Biometric Breakthrough?

Emerging research suggests that the way our fingers wrinkle in water may be just as unique as our fingerprints, opening up new possibilities in identity, forensics, and healthcare.



When we think of fingerprints, we picture the ridges and whorls that uniquely identify each individual, a natural ID card etched onto our fingertips. But what if there's more to them than just dry, patterned skin? Recent research has begun to suggest that the way our fingers wrinkle, particularly when soaked in water, may also be unique to each person. This intriguing possibil-

The Science of Wrinkling

For decades, scientists believed that water wrinkles were caused purely by the skin absorbing moisture and swelling. However, in 2011, researchers discovered that wrinkling is actually a nervous system response. The body narrows blood vessels under the skin to create a wrinkled surface, potentially to improve grip on wet

objects, an evolutionary adaptation. This process is controlled by the autonomic nervous system, meaning the reaction is not superficial but neurologically regulated. Because our nervous systems are as individual as our fingerprints, the patterns and timing of how our fingers wrinkle might also be unique to each person.

New Frontiers in Biometrics

Researchers from institutions in the UK, Japan, and the United States are now studying high-resolution images of wrinkled fingertips to determine whether these patterns can serve as biometric identifiers. Using computer vision and AI, scientists are analyzing wrinkle depth, formation timing, and pattern deviations across individuals.

Early findings indicate promising uniqueness, no two wrinkling patterns have matched exactly across test subjects. Additionally, the dynamic aspect of wrinkle formation (how quickly and in what order wrinkles appear) could provide a 'live' biometric indicator, adding a layer of anti-spoofing protection that static fingerprint patterns lack.

Implications Beyond Security

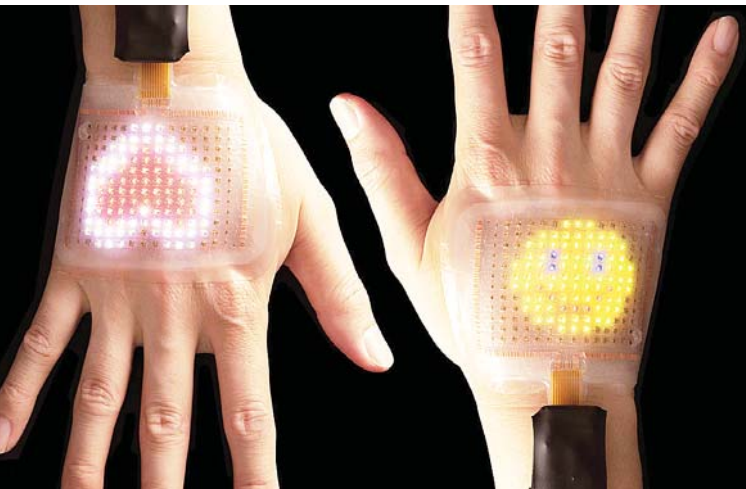
If further validated, unique wrinkle patterns could influence various fields beyond personal security and law enforcement. Forensics may benefit from this discovery by identifying individuals based on wet prints left behind at crime scenes. In healthcare, the speed and pattern of skin wrinkling could

be a diagnostic tool, potentially indicating nerve or circulatory issues. Moreover, this research invites philosophical questions about identity and individuality. It reminds us that human uniqueness runs deeper than we often assume, right down to the momentary folds in our skin after a swim.

A Wrinkled Revolution?

While fingerprint biometrics are already deeply integrated into security systems, from smartphones to border control, wrinkle-based identification is still in its infancy. More studies and larger data sets are needed to confirm reliability. But if proven accurate, this new biometric

frontier could change the way we think about the human body's storytelling capacity. In a world where data privacy and security are more important than ever, perhaps, the answers lie not only in what's etched into us permanently, but also in what forms fleetingly, after a dip in the water.



Monika Choudhary

On 23 May 1999, in a meeting between Chief of the Army Staff, General Ved Malik, PVSM, AVSM (Retd) and Chief of the Naval Staff, Admiral Sushil Kumar, PVSM, UYSM, AVSM, NM

(Retd), the two Chiefs agreed to take a Joint Services planning approach to the Operations in Kargil for the larger benefit of optimal utilisation of all assets. The war accordingly was to be fought in an integrated manner with detailed coordination between the three arms of the forces. It had a force multiplying effect. General Ved Malik, PVSM, AVSM (Retd) writes in his book *Kargil: From Surprise to Victory*, "The Indian Navy had issued instructions for an alert before the CCS meeting and had deployed INS Taragiri on a barrier patrol off the coast of Dwarka (in Gujarat). Immediately after the meeting, the Navy added two information warfare Dornier aircraft and also deployed INS Veer and INS Nirghat near Okha (also in Gujarat). CCS meeting in the Operations Room took place on 25 May, 2023. On 26 May 1999, the Indian air strikes began in Kargil. Once the Air Force and the Navy entered the fray, Indian Army's firm resolve to evict the intruders became very clear to Pakistan."

Operation Talwar, launched by Indian Navy, by deploying ships on barrier patrols off the coast of Dwarka to bottle-up Karachi harbour, while elements of the Eastern Fleet were moved to supplement the resources of the Western Fleet. In a crucial move aimed at ensuring offshore security from clandestine underwater attacks and integrate efforts of all maritime stakeholders, Western Naval Command sailed ships from

Mumbai on 22 May 1999. By 25 May, the entire Western Fleet had sailed from Mumbai to the North Arabian Sea as a precautionary deployment to increase surveillance and adopt a deterrent posture. By 27 May, the Navy had deployed a guided missile destroyer off Saurashtra and positioned additional Dornier aircraft at Daman to augment surveillance. Praveer Purohit, in his article 'Kargil Vijay Diwas: How Indian Navy's Operation Talwar squeezed Pakistan out of the Arabian Sea' in the Indian Express writes, Operation Talwar involved protective activities such as bolstering our coastal defences and jointly conducting maritime patrols along with agencies such as the Coast Guard, Customs and police. Warfighting assets such as ships, submarines and aircraft fully armed were deployed. It wasn't that the Naval operations and activities were limited to maritime domain. According to Admiral Sushil Kumar, PVSM, UYSM, AVSM, NM (Retd), the Navy's squadron of specially equipped electronic warfare aircraft operated extensively along the Line of Control in support of

land operations. Specialist hydrographic survey teams of the Indian Navy were conjoined with the army's artillery batteries to pin-point gun locations. INS Hansa was actively involved with its Naval air elements during the Kargil war.

By early June, combat ready ships of units of the Eastern Fleet joined the Western Fleet. Although the Western Naval Fleet

were adequate to deal with the Pakistan Navy and the force ratio was seven-to-one in India's favour, the Eastern Naval Fleet was diverted to the West and placed under overall command of the Commander-in-Chief Western Command, to deal with any maritime threat by Pakistan to India's strategic offshore assets.

By sending ships of the Eastern Naval Command to join the fleet of the Western Naval Command in the Northern Arabian Sea, the Indian Navy blockaded Pakistani ports, primarily Karachi, cutting off supply routes and began aggressive patrols and threatened to cut Pakistan's sea trade. This exploited Pakistan's dependence on sea-based oil and trade flows. Maj Gen Ashok Mehta (Retd) writes, in operational terms, the Eastern Naval Fleet was deployed to cover Pakistani shipping lanes from the Gulf to its ports. Pakistan Navy flew its maritime aircraft and once the scale and span of deployment sank in, it went into a defensive mode, warning its vessels to steer clear of the Indian Navy.

The sending of ships of the Eastern Naval Command to join the fleet of the Western Naval Command also enabled it to



Vivid Sydney 2025 lights up the harbour

Vivid Sydney 2025, running from May 23 to June 14, celebrates its 15th year with the theme 'Dream,' transforming the city into a vibrant canvas of light, music, ideas, and food. The festival features over 75% free programming, including the expansive Vivid Light Walk, which showcases cutting-edge projections across iconic landmarks like the Sydney Opera House and the Museum of Contemporary Art. Highlights include installations such as 'Kiss of Light' by David McDiarmid and 'King Dingo' by Vincent Namatjira. Vivid Sydney continues to offer immersive experiences, live performances, and culinary events, drawing millions to its five major zones across the city.

Indian Navy experience during Operation Vijay (Kargil Operations) bears testimony to the utility of strong maritime forces in dissuasion and control of escalation. Indian Navy's posture in the North Arabian Sea contributed significantly to the early achievement of India's operational goals and, more importantly, in limiting the scope of the conflict. As Admiral Sushil Kumar stated, "The overwhelming superiority of our Navy had a sobering effect on Pakistan." Indian Navy had played a crucial role in limiting the conflict to the mountainous region of Kargil and its posture in the North Arabian Sea contributed significantly to the early achievement of India's operational goals.

A Sufficient Stare...

#OPERATION TALWAR



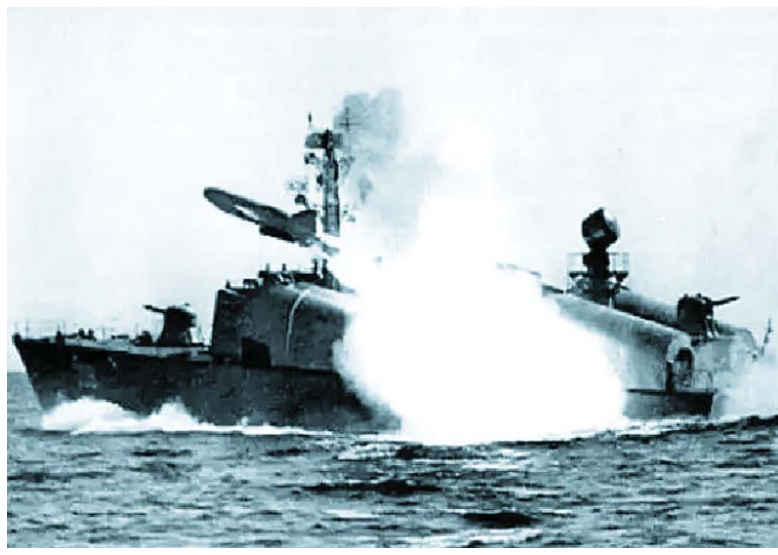
The Pakistan Navy reacted by cautioning its units to keep well clear of Indian Naval ships. The Indian Navy thereafter remained fully alert, oscillating from an 'offensive' to an 'offensive defence' posture. Kargil Committee Report mentions that the Indian Navy also resorted to psychological operations by deploying units along the Makran Coast.

The message to be conveyed to Pakistan was not to escalate in Kargil or extend it to the sea. The Pakistan Navy, however, went to full alert, launched additional surveillance sorties along its coast, all the while remaining clear of Indian naval ships and aircraft. Karachi Port was placed on full alert. On 30 June, India's Amphibious Brigade started moving westwards from Port Blair to Goa. The presence of Indian Naval ships played on the Pakistan Navy's apprehension of oil supplies from the Gulf being disrupted. Sensitive about the vulnerability of these oil supplies and aware that a naval engagement might expose its fuel storages in Karachi harbour and also its sea lanes to naval attack, the Pakistan Navy prudently escorted its oil tankers along the Makran Coast. The Indian Naval ships, however, did nothing to escalate tensions. In the ensuing operations, Indian Naval ships arrested a North Korean ship that was carrying missile components to Pakistan.

Soon, the Pakistani intruders were evicting their bunkers, and by 04 July, 1999, the Pakistan authority declared unconditional withdrawal. On 14 July, 1999, the Prime Minister, Shri Atal

Bihari Vajpayee declared Op TALWAR a success. In a skillful display of its prowess, the Navy played a vital role in giving India the strategic upper hand in the conflict. The Pakistan Navy reacted by cautioning its units to keep well clear of Indian Naval ships. The Indian Navy thereafter remained fully alert, oscillating from an 'offensive' to an 'offensive defence' posture. Kargil Committee Report mentions that the Indian Navy also resorted to psychological operations by deploying units along the Makran Coast.

the naval force were pressed into action to, first, ascertain the positions of the Pakistan Navy assets and, second, to ensure that India's high value assets in the sea, Bombay High, as well as in the coastal areas, especially in Gujarat, were well protected. The idea was to provide no opportunity to Pakistan to claim success and to ensure that if Pakistan dared to think of expanding the battle from



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#J'ADORE

Kidzz Fashion Trends and Colours

What will be the trend colours in 2025 summer kids' fashion clothes?

Summer is here and so is the fashion game for the tiny ones! Summer calls for the sweet smell of ice cream, the touch of the warm breeze brushing against the skin, and the trendiest fashion for all.

With all the sunshine, warmth, and playfulness around, kids want to enjoy every moment of the summer; your responsibility is to keep them comfortable and protected, with the right kind of kids' wear for summer. We have listed below some of the children's summer fashion trends for 2025.



Bright colours

The summer days are always sunny with a crisp breeze, so light and bright colours are a summer fashion hit! These bright and light colours come with the added advantage that they do not absorb heat and help in keeping the body cool. Clothes for kids during summers mean floral prints and plain pastels that are always a good combination with colours like bright yellow. Polka dots also are other summer prints that look great in kids' summer dresses.



Fun Prints!

Summer clothes for kids with beautiful prints are always a yes! They look attractive and also blend perfectly with the summer theme. Find t-shirts, shorts, and dresses with the cutest prints that even your kid will love. Floral prints are hugely popular and look colourful and 'summery.' Find plenty of patterned summer outfits to choose.



Mix And Match!

New fashion dress? Mix and match them! Summers are all about going all-in when it comes to fashion. It is about experimenting and seeing what your little one likes and dislikes. Mix and match the colours, and the style of the patterns, and we guarantee your bundle of joy will look like THE summer icon.



Cute Dresses

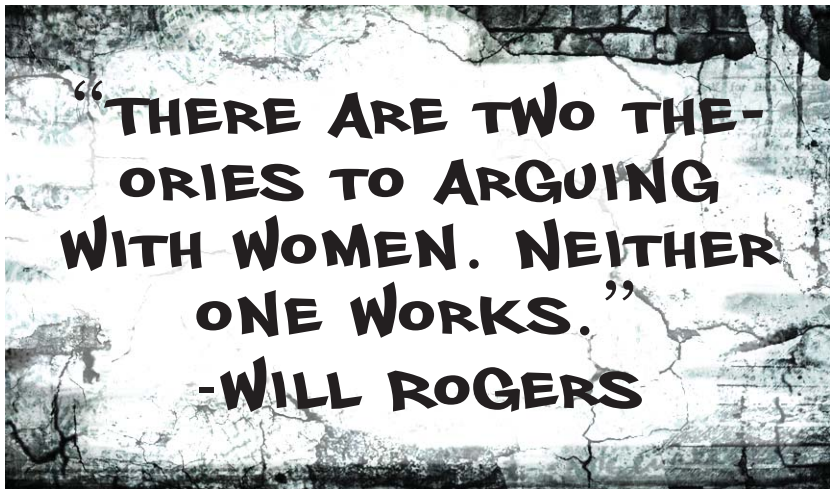
Cute summer dresses are a win-win! When picking the summer dresses, you should choose something that isn't figure-hugging and skin-tight types. Loose-fitting clothes during the summers ensure that your baby girl stays comfortable as she is allowed easy movements. Dress your kids in graceful, loose clothes.



Graphics

Brand logos, slogans, unique words, phrases are still prevalent in children's fashion for 2025. Some of the popular graphics for children's are geometric shapes, amusement park themes, etc.

THE WALL



BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman