

HOME QATAR INDIA WORLD BUSINESS SCIENCE LIFESTYLE WOMEN ENTERTAINMENT CHILDREN CONTACT

Home > Science > Sci & Tech News > Cooling breakthrough for computers...

Cooling breakthrough for computers...

THURSDAY, 24 SEPTEMBER 2009 08:04 SCI & TECH NEWS

Technology Services

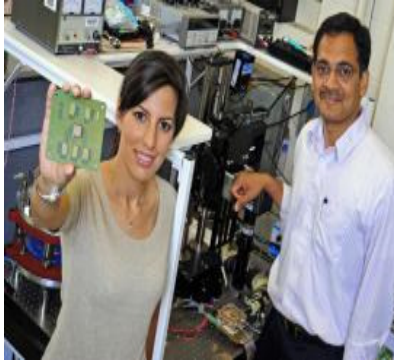
World-Class Managed IT Services Reduce Cost and Eliminate Downtime

www.mindSHIFT.com

User Rating: ○○○○○○ / 0

Poor ○ ○ ○ ○ ● Best **Rate**

Ads by Google



Researchers at Purdue University have had a breakthrough that may completely change how engineers design cooling systems in everything from computers to electric and hybrid cars.

Using special computer chips from Delphi Electronics, Suresh Garimella, the R. Eugene and Susie E. Goodson Professor of Mechanical Engineering at Purdue University, and doctoral student Tannaz Harirchia, have developed and tested new mathematical formulas concerning the

properties of boiling liquids in "microchannels."

Purdue University doctoral student Tannaz Harirchia holding up the computer chip she and professor Suresh Garimella (right) used to develop new formulas concerning 'microchannels.'

(Credit: Purdue University)

It's no secret that engineers, particularly chipmakers and computer manufacturers, have been striving for years to design cooling systems with highly efficient heat-transfer rates.

Microchannels are tiny channels through which fluid is directed in some types of high-power electronic cooling systems. Purdue University researchers have been working on the idea of microchannel heat sinks, as well as liquid-filled chips, for some time. IBM has also been developing a liquid-based chip-cooling concept.

Garimella and Harirchia have now determined that "allowing a liquid to boil in cooling systems dramatically increases how much heat can be removed, compared to simply heating a liquid to below its boiling point," according to their report.

"Boiling occurs differently in tiny channels than it does in ordinary size tubing used in conventional cooling systems," Garimella said in a statement.

Details of the breakthrough will be presented on October 8 in Belgium at Therminic 2009, an annual conference on thermal research and technology for microelectronics.

Having come up with a new way to assess fluid boiling in microchannels, Garimella and Harirchia now plan to concentrate on developing heat-transfer models engineers can use when designing cooling systems for high-power electronics.

Conducted in conjunction with Delphi Electronics, the research was funded by Indiana's 21st Century Research and Technology Fund, and Purdue-based National Science Foundation Cooling Technologies Research Center, a consortium of corporate, academic, and government laboratories.

Cnet

[Recommend this article...](#)

Over 4 Million Businesses places.google.com/business

Already Verified on Google Places What About You? Its Free and Easy

Compare Top 10 Help Desk Business-Software.com/He

2011 Top 10 Help Desk Software Ranking. Get Your Free Report.

Ambir Official Website www.ambir.com/

Scanners for Documents/ID/Passports Save Time & Reduce Business Costs!

University of Phoenix Phoenix.edu

Information Technology Degrees Request More Information Here!



Ads by Google

Shares:

[Back to Top](#)

Comments

[Add New](#) | [Search](#)

Write comment

Name:

Email: do not notify

Title:



Please input the anti-spam code that you can read in the image.

Powered by [!JoomlaComment 3.26](#)

Search

Other Headlines

Latest Articles: Sci & Tech News

[BlackBerry Messenger Services to Continue in India](#)

[Scientists create miniature liver in a laboratory](#)

[RIM Unveils BlackBerry Bold 9780](#)

[High speed Internet at Mt Everest now2010](#)

[Exclusive: Maxi size Mini agenda](#)

['Marrying 3G with Wi-Fi may make sense'](#)

[First tablet device from Samsung](#)

[84 percent of Nokia Ovi store app developers say Apple's store is better](#)

[iPod Touch 4th Generation - Little Better Than The Last](#)

[Motorola's Rs 12K Android tablet in India](#)

[Microsoft Targeting Middle Aged Moms for Kinect Promotion](#)

[Lemon Mobile's Launching A Low-Cost 3G Handset ..](#)

[With a flick of the magic wand, interactive lessons](#)

[\\$50 million to Harvard, what about India?](#)

[Intel opens biggest chip plant](#)

[MOST COMMENTED](#)

[MOST EMAILED](#)

[Jet Airways, to launch daily, direct flight from Kuwait to Mumbai \(37\)](#)

[IEI: AMIE Summer 2009 Examination \(34\)](#)

[Air India Express: Press Note \(30\)](#)

[Shri Ajai Malhotra appointed as next Ambassador to Kuwait \(29\)](#)

[KIRAN BEDI IPS to Visit Kuwait \(21\)](#)

Archive

- [May, 2009](#)
- [April, 2009](#)
- [March, 2009](#)
- [February, 2009](#)
- [January, 2009](#)
- [December, 2008](#)
- [November, 2008](#)
- [October, 2008](#)
- [April, 2008](#)

Currency Converter

Amount:

From:

To:

