# Article information:

Investigation on the influence of edge effect on flow and temperature uniformities in cylindrical oblique-finned minichannel array - ScienceDirect  
<https://www.sciencedirect.com/science/article/pii/S0017931013010363>

# Article summary:

1. This article investigates the influence of edge effect on flow and temperature uniformities in cylindrical oblique-finned minichannel array.

2. It proposes a cylindrical oblique fin minichannel structure to provide better temperature control, eliminate edge effects, increase fluid-solid contact surface area, generate uniform secondary flow, disrupt thermal boundary layer development and improve flow mixing.

3. Experimental and numerical investigations were performed on both blockaded and un-blockaded cylindrical minichannel heat sinks with oblique fins to quantify the temperature uniformity characteristic and local temperature distribution.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy as it provides detailed information about the research conducted by the author on the influence of edge effect on flow and temperature uniformities in cylindrical oblique-finned minichannel array. The author has provided a comprehensive overview of the proposed design, experimental setup and procedures, theoretical approach, numerical studies, results and discussion. The article also includes references to relevant literature which adds credibility to the claims made by the author.

However, there are some potential biases that should be noted in this article. Firstly, there is a lack of exploration into counterarguments or alternative solutions for achieving similar results as those presented in this article. Secondly, there is no mention of possible risks associated with using this design such as safety concerns or environmental impacts which could be important considerations for designers interested in using this design for their applications. Finally, while the author has provided detailed information about their research methodology and results, they have not included any evidence to support their claims which could make it difficult for readers to verify these claims independently.

In conclusion, while this article is generally reliable and trustworthy due to its comprehensive overview of the research conducted by the author on edge effect on flow and temperature uniformities in cylindrical oblique-finned minichannel array, there are some potential biases that should be noted such as lack of exploration into counterarguments or alternative solutions for achieving similar results as those presented in this article; lack of mention of possible risks associated with using this design; and lack of evidence to support claims made by the author which could make it difficult for readers to verify these claims independently.

# Topics for further research:

* Alternative solutions for flow and temperature uniformities
* Safety considerations for cylindrical oblique-finned minichannel array
* Environmental impacts of edge effect
* Verifying claims made in research articles
* Counterarguments to edge effect on flow and temperature uniformities
* Numerical studies of cylindrical oblique-finned minichannel array

# Report location:

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