# Article information:

Panoramic imaging—a review - ScienceDirect
[https://www.sciencedirect.com/science/article/pii/S0097849303000384?ref=pdf\_download=RR-9=79d5fd80cc00079b](https://www.sciencedirect.com/science/article/pii/S0097849303000384?ref=pdf_download&fr=RR-9&rr=79d5fd80cc00079b)

# Article summary:

1. This paper reviews the design and development of 2D/3D panoramic image capturing systems, auto-calibration, registration and corresponding techniques, stereo vision, 3D reconstruction and image-based rendering.

2. Different types of panoramic imaging systems are discussed, including single camera on a tripod, multiple cameras facing in different directions, and omni-directional cameras.

3. Image processing techniques such as noise reduction, radial lens distortion correction, camera calibration and feature detection and matching are also discussed.

# 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:

This article provides an overview of the design and development of panoramic imaging systems for robotics, computer vision and virtual reality applications. The article is well written and provides a comprehensive review of the various types of panoramic imaging systems available as well as the image processing techniques used to create high quality images from these systems.

The article is generally reliable in its coverage of the topic; however there are some areas where it could be improved upon. For example, while the article does discuss some potential applications for panoramic imaging systems (e.g., robot navigation), it does not provide any examples or case studies to illustrate how these applications can be used in practice. Additionally, while the article does mention some potential risks associated with using these systems (e.g., dynamic range issues), it does not provide any detailed information on how to mitigate these risks or what steps should be taken to ensure that they do not become an issue when using these systems in real world scenarios.

In terms of bias or partiality, the article appears to be fairly balanced in its coverage of both single camera on a tripod and multi-camera/omni-directional imaging systems; however it does appear to favour one type over another at times (e.g., when discussing resolution). Additionally, while the article does mention some potential risks associated with using these systems (e.g., dynamic range issues), it does not provide any detailed information on how to mitigate these risks or what steps should be taken to ensure that they do not become an issue when using these systems in real world scenarios.

In conclusion, this article provides a comprehensive overview of panoramic imaging systems for robotics, computer vision and virtual reality applications; however there are some areas where it could be improved upon (e.g., providing more detailed information on potential risks associated with using these systems).

# Topics for further research:

* Panoramic Imaging System Applications
* Panoramic Imaging System Risks
* Mitigating Panoramic Imaging System Risks
* Single Camera Panoramic Imaging Systems
* Multi-Camera Panoramic Imaging Systems
* Image Processing Techniques for Panoramic Imaging Systems

# Report location:

<https://www.fullpicture.app/item/8bd51793543705c425fa05ede47f1045>