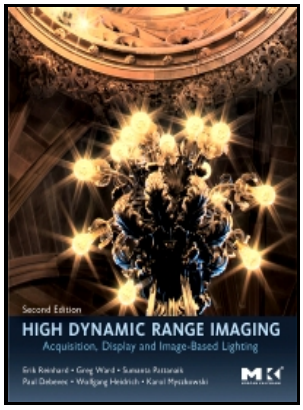
High-dynamic-range (HDR) vision - microelectronics, image processing, computer graphics

Springer - 9783540444329



Description: -
-
Andersen, H. C. -- 1805-1875
Video
Computergraphics
Beeldverwerking
Pattern Recognition, Automated
Image Processing, Computer-Assisted
Artificial Intelligence
Imaging systems
Optical pattern recognition
Image processing
Computer visionHigh-dynamic-range (HDR) vision - microelectronics, image processing, computer graphics
-
Springer series in advanced microelectronics -- 26High-dynamic-range (HDR) vision - microelectronics, image processing, computer graphics
Notes: Includes bibliographical references and index.
This edition was published in 2007

Filesize: 66.11 MB

Tags: #A #novel #high #dynamic #range #image #enhancement #algorithm #based #on #guided #image #filter

A novel high dynamic range image enhancement algorithm based on guided image filter

Neuware - Creating high-fidelity images of our world has been a continuous challenge, even as our understanding and skills have evolved. The power of the eye-like, logarithmic optoelectronic conversion concept is demonstrated in machine-vision, medical, automotive, surveillance and cinematic applications, and it is extended to HDR sub-retinal implants for the vision impaired. Meanwhile, the base layer controls the gray scale contrast which also needs to be processed with certain strategy.

9783540444329

A serious problem of dealing with such kind of image is that, although the image has high dynamic range, people cannot display all the information of it.

High

Now electronic image sensors can record a dynamic range from bright to dark of more than seven orders of magnitude, thus exceeding the ability of a human eye by more than a hundred times and displaying five orders of magnitude in brightness, resulting in CRT and LCD displays with more than 100-fold improvement.

OSA

.

9783540444329

The raw high dynamic range image can be enhanced both through the detail layer and the base layer to improve its digital detail, gray scale rearranging and the color contrast. Under this advance in technology, people can take a picture with higher resolution and higher dynamic range.

9783540444329

The efficiency of the algorithm is confirmed by examples and a comparison with known methods.

High

The color saturation can be controlled by both two layers. While the book conveys the overall picture of HDR vision, specific knowledge of microelectronics and image processing is not required. A rapid and stable algorithm is proposed that is based on combined multiscale analysis of the images and histogram processing of the images at each level of a pyramidal representation.

A novel high dynamic range image enhancement algorithm based on guided image filter

Now electronic image sensors can record a dynamic range from bright to dark of more than seven orders of magnitude, thus exceeding the ability of a human eye by more than a hundred times and displaying five orders of magnitude in brightness, resulting in CRT and LCD displays with more than 100-fold improvement. The Topic facet will reveal the high-level topics associated with the articles returned in the search results.

Related Books

- Iconography of Hell
- Giving presentations - expert solutions to everyday challenges.
- Saturn
- Tabulae ossium humanorum
- Business opportunities and financial reporting in Germany