

Chromatic characteristics are primary features of smoke which can be directly applied for detection in the visible spectra. There are several approaches which utilize these characteristics, exploring which color models are most suitable for smoke detection, as well as ranges of smoke region values regarding each channel.

Some of the articles which contain analysis based on smoke chromatic characteristics are listed here:

T. H. Chen, Y. H. Yin, S. F. Huang, Y. T. Ye,

"The Smoke Detection for Early Fire-Alarming System Base on Video Processing"

Intelligent Information Hiding and Multimedia Signal Processing, IIH-MSP, 2006.

<http://portal.acm.org/citation.cfm?id=1193962#abstract>

P. Piccinini, S. Calderara, R. Cucchiara,

"Reliable smoke detection system in the domains of image energy and color",

International Conference on Image Processing, 2008.

<http://www-video.eecs.berkeley.edu/Proceedings/ICIP2008/pdfs/0001376.pdf>

J. Fernández-Berni, R. Carmona-Galán, L. Carranza-González,

"A vision-based monitoring system for very early automatic detection of forest fires",

Modelling, Monitoring and Management of Forest Fires, WIT Press, 2008.

<http://library.witpress.com/pages/PaperInfo.asp?PaperID=19605>

D. Krstinic, D. Stipaničev, T. Jakovčević,

"Histogram-based smoke segmentation in forest fire detection system",

Information Technology and Control, Information Technology And Control, Kaunas,
Technologija, Vol. 38, No. 3, 237 - 244, 2009.

<http://itc.ktu.lt/itc383/Krstinic383.pdf>

