NAME

      saturate − saturate, standardize and stretch linearly

SYNOPSIS

      saturate [[−**z**] | [−**M** *mask_file* [*mask_value* [−**o** *maskoutval*]]]] [−**s** [*mean stddev*]] [−**a** | −**p**] [−**l** *min max*] [−**b**]

DESCRIPTION

      saturate with −**s** standardizes an image sequence to a desired mean (default 0) and standard deviation (default 1; if negative input sequence is negated; if 0 only mean is changed). With −**l** it saturates an image sequence by setting all values below *min* to *min* and all values above *max* to *max*. With −**p** (and −**l**) it saturates an image sequence by setting all values below −*(max−min)* to −*(max−min)* and all values above *max−min* to *max−min* and all values between −*min* and *min* to zero. If −**s** and −**l** or −**p** are specified simultaneously each frame is standardized to the desired mean and standard deviation before saturation. If −**a** is specified absolute values are taken (after standardization, before saturation). Default output format is float. If −**b** is specified a byte sequence stretched linearly from minimum to maximum for each frame is output. Input sequence must be byte, short, int or float.

OPTIONS

      −**z**   do not include zeros in statistics calculations

      −**M** *mask_file* [*mask_value*]

            include only pixels where byte image *mask_file* has value *mask_value* in statistics calculations; default: all values > 0

      −**o** [*maskoutval*]

            set value of unmasked pixels to *maskoutval* in outseq, defaults to 0 (in this case and if −**b** is specified inseq is stretched linearly to interval [1,255], else inseq is stretched linearly to interval [0,254])

      −**s** [*mean stddev*]

            standardize input sequence to desired mean (defaults to 0) and standard deviation (defaults to 1)

      −**a**   take absolute values of input sequence before saturating

      −**l** *min max*

            set all values below *min* to *min* and all values above *max* to *max*

      −**p**   (with −**l**) set all values below −*(max−min)* to −*(max−min)* and all values above *max−min* to *max−min* and all values between −*min* and *min* to zero

      −**b**   output byte sequence stretched linearly from minimum to maximum

SEE ALSO

      scale, scale0, histoeq, histobe, fhist

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