common functions

abs(x)	Absolute value of x
sqrt(x)	Square root of x
sign(x)	Signum function, returns the sign of x (returns 1 or -1)
rem(x,y)	Remainder when x is divided by y
exp(x)	Exponential of x
log(x)	Natural logarithm of x
log2(x)	Base 2 logarithm of x
log10(x)	Base ten logarithm of x
round(x)	Rounds x to nearest integer
fix(x)	Takes the integer part of a number (e.g, fix(-4.6) = -4)
floor(x)	Rounds down to nearest integer (e.g., floor(-4.6) = -5)
ceil(x)	Rounds up to nearest integer
factorial(x)	Factorial of x
nchoosek(n,k)	Combinatorial function of n and k

trigonometric functions

sin(x)	Sine of x
cos(x)	Cosine of x
tan(x)	Tangent of x
asin(x)	Arc sine of x
sinh(x)	Hyperbolic sine of x
asinh(x)	Arc hyperbolic sine of x
sind(x)	Sine of x, input in degrees
asind(x)	Arc sine of x, input in degrees
(others)	(similar trig functions using "d" for degrees)

array functions

size(x)	Returns size of x
[a,b] = size	Assigns size of x to a new vector
length(x)	Length of largest dimension of an array
numel(x)	Total number of elements in array x
rand(n)	n x n array of random numbers between 0 and 1
rand(m,n)	m x n array of random numbers between 0 and 1
randn(n)	n x n array of random numbers described by normal distribution
randn(m,n)	m x n array of random numbers described by normal distribution

min(x)	Minimum value in array x
[a,b] = min(x)	Returns location of minimum in array x
max(x)	Maximum value in array x
[a,b] = max(x)	Returns location of maximum in array x
mean(x)	Mean of array x
median(x)	Median of array x
mode(x)	Mode of array x
std(x)	Standard deviation of array x
var(x)	Variance of array x
hist(x,n)	Histogram of array values in x, n is number of bins
sum(x)	Sum of array x
prod(x)	Product of each column of array x (e.g., prod[2 4 6; 1 2 3] is [2 8 18])
cumsum(x)	Cumulative sum of each column of array
cumprod(x)	Cumulative product of each column of an array
sort(x)	Sorts each column in an array in ascending order
sort(x,'descend')	Sorts each column in an array in descending order
sortrows(x)	Sorts rows in an array in ascending order according to first column; items in a row are kept together
sortrows(x,n)	Sorts rows in an array in ascending order according to the n^{th} column; items in a row are kept together

image functions

- Lectura i conversió d'imatges: imread, rgb2gray, imshow, imfinfo
- Retall i re-escalat d'imatges: imresize
- Funcions auxiliars: insertMarker, insertShap
- Histogrames d'una imatge: imhist
- Afegir soroll a una imatge: imnoise
- Conversió de color: rgb2hsv

insertMarker

insertShap