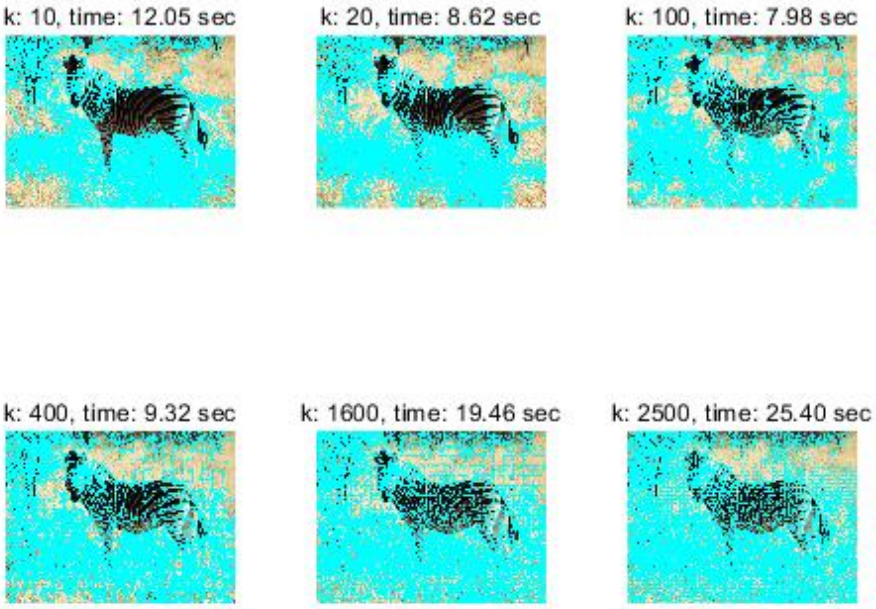
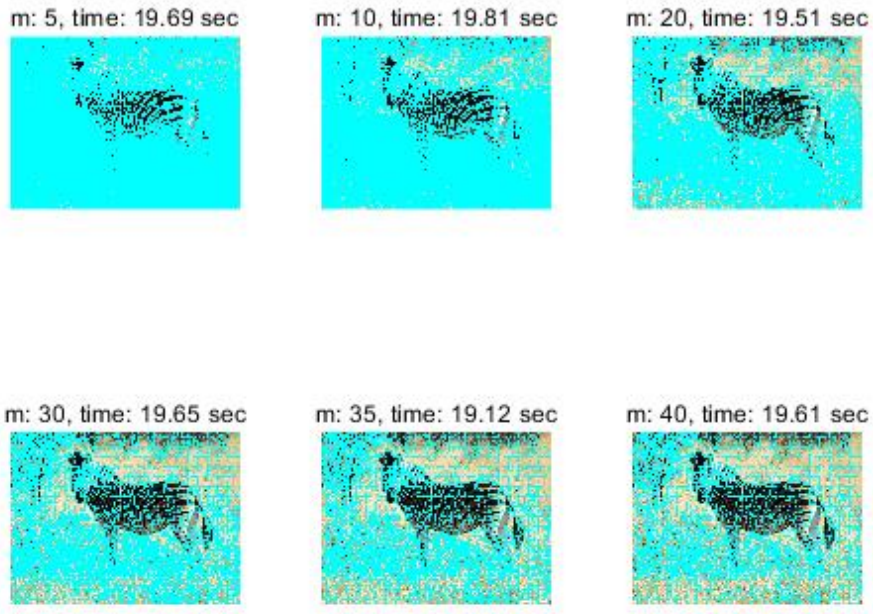
```
close all;

I = imread('./data/2.jpg');

I_gray = rgb2gray(im2double(I));

I_lab = rgb2lab(I);

I = im2double(I);

[m,n] = size(I_gray);
```

一般的 SILC 尝试不同的 K 和 M

```
ks = [10 20 100 400 1600 2500];

M = [5 10 20 30 35 40];

figure(1);

for i = 1:6

    tic;

    [L,N] = MySLIC(I_lab,I_gray,ks(i),25,0);

    t = toc;

    L_bw = boundarymask(L);

    subplot(2,3,i);

    imshow(imoverlay(I,L_bw,'cyan'),'InitialMagnification',67);

    title(sprintf('k: %d, time: %.2f sec', ks(i), t));

end

figure(2);

for i = 1:6

    tic;

    [L,N] = MySLIC(I_lab,I_gray,1600,M(i),0);

    t = toc;

    L_bw = boundarymask(L);
```

```
    subplot(2,3,i);

    imshow(imoverlay(I,L_bw,'cyan'),'InitialMagnification',67);

    title(sprintf('m: %d, time: %.2f sec', M(i), t));

end
```

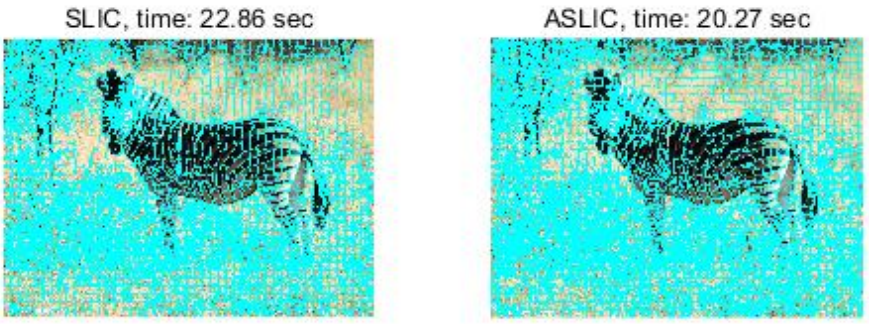




对比原始 SLIC 和 ASLIC（分割图）

```
figure(3);

tic;

[L,N] = MySLIC(I_lab,I_gray,1600,32,0);

t = toc;

L_bw = boundarymask(L);

subplot(2,2,1);

imshow(imoverlay(I,L_bw,'cyan'),'InitialMagnification',67);

title(sprintf('SLIC, time: %.2f sec', t));

tic;

[L1,N1] = MyASLIC(I_lab,I_gray,1600,32,0);

t = toc;

L1_bw = boundarymask(L1);
```

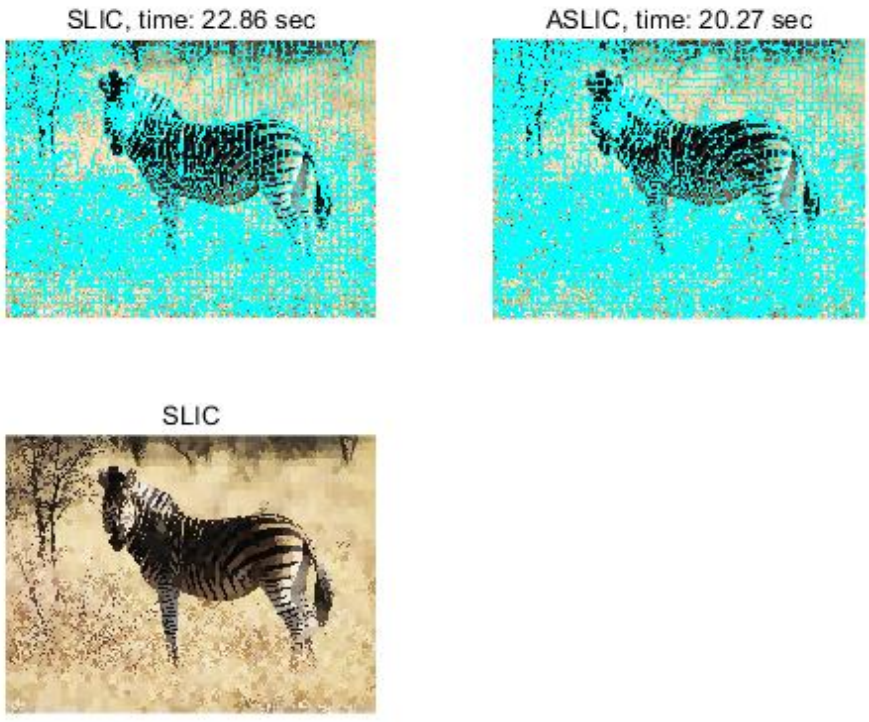
```
subplot(2,2,2);

imshow(imoverlay(I,L1_bw,'cyan'),'InitialMagnification',67);

title(sprintf('ASLIC, time: %.2f sec', t));
```



显示 SLIC 的超像素图

```
I_SLIC = I;

for i = 1:N

    index = find(L == i);

    [h,w] = ind2sub([m,n],index);

    Sizei = size(index);

    pixels = [0,0,0];

    for j = 1:Sizei(1)

        pixels = pixels + [I(h(j),w(j),1), I(h(j),w(j),2), I(h(j),w(j),3)];

    end
```

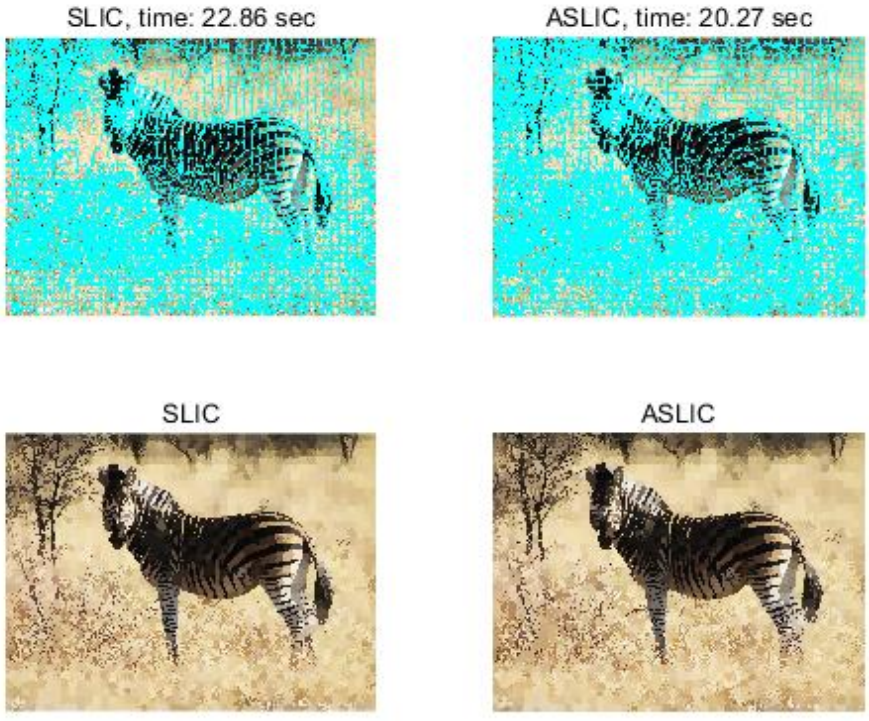
```
    pixels = pixels / Sizei(1);
    for j = 1:Sizei(1)
        I_SLIC(h(j),w(j),:) = pixels;
    end
end
subplot(2,2,3);
imshow(I_SLIC);
title('SLIC');
```



显示 ASLIC 的超像素图

```
I1_SLIC = I;
for i = 1:N1
    index = find(L1 == i);
    [h,w] = ind2sub([m,n],index);
```

```
    Sizei = size(index);

    pixels = [0,0,0];

    for j = 1:Sizei(1)

        pixels = pixels + [I(h(j),w(j),1), I(h(j),w(j),2), I(h(j),w(j),3)];

    end

    pixels = pixels / Sizei(1);

    for j = 1:Sizei(1)

        I1_SLIC(h(j),w(j),:) = pixels;

    end

end

subplot(2,2,4);

imshow(I1_SLIC);

title('ASLIC');
```



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