

# Görüntü İşleme

## Uygulamalarının Tanıtımı

# Görüntü işleme uygulamalarına örnekler

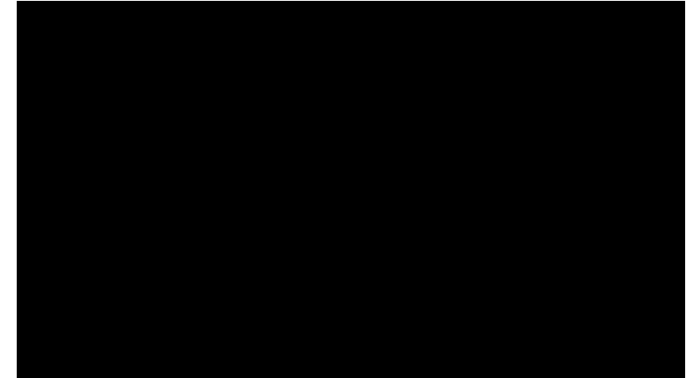
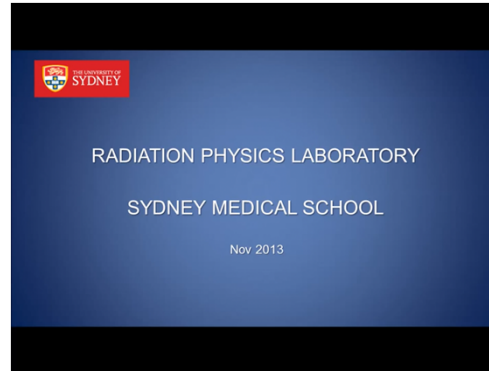
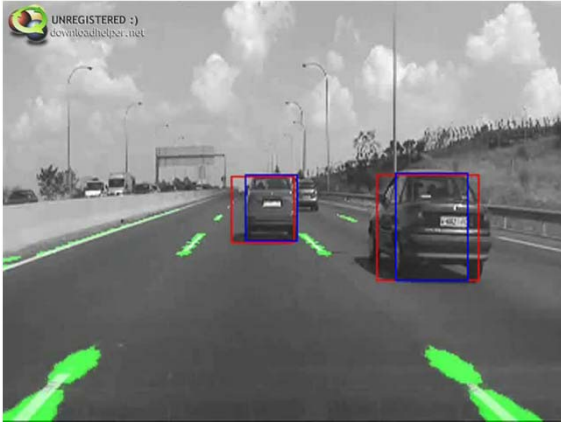
## Predator: Camera That Learns

Zdenek Kalal, Jiri Matas, Krystian Mikolajczyk  
University of Surrey, UK  
Czech Technical University, Czech Republic

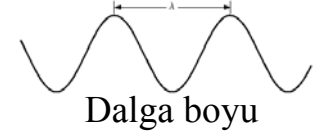


Image processing  
(skin detection)

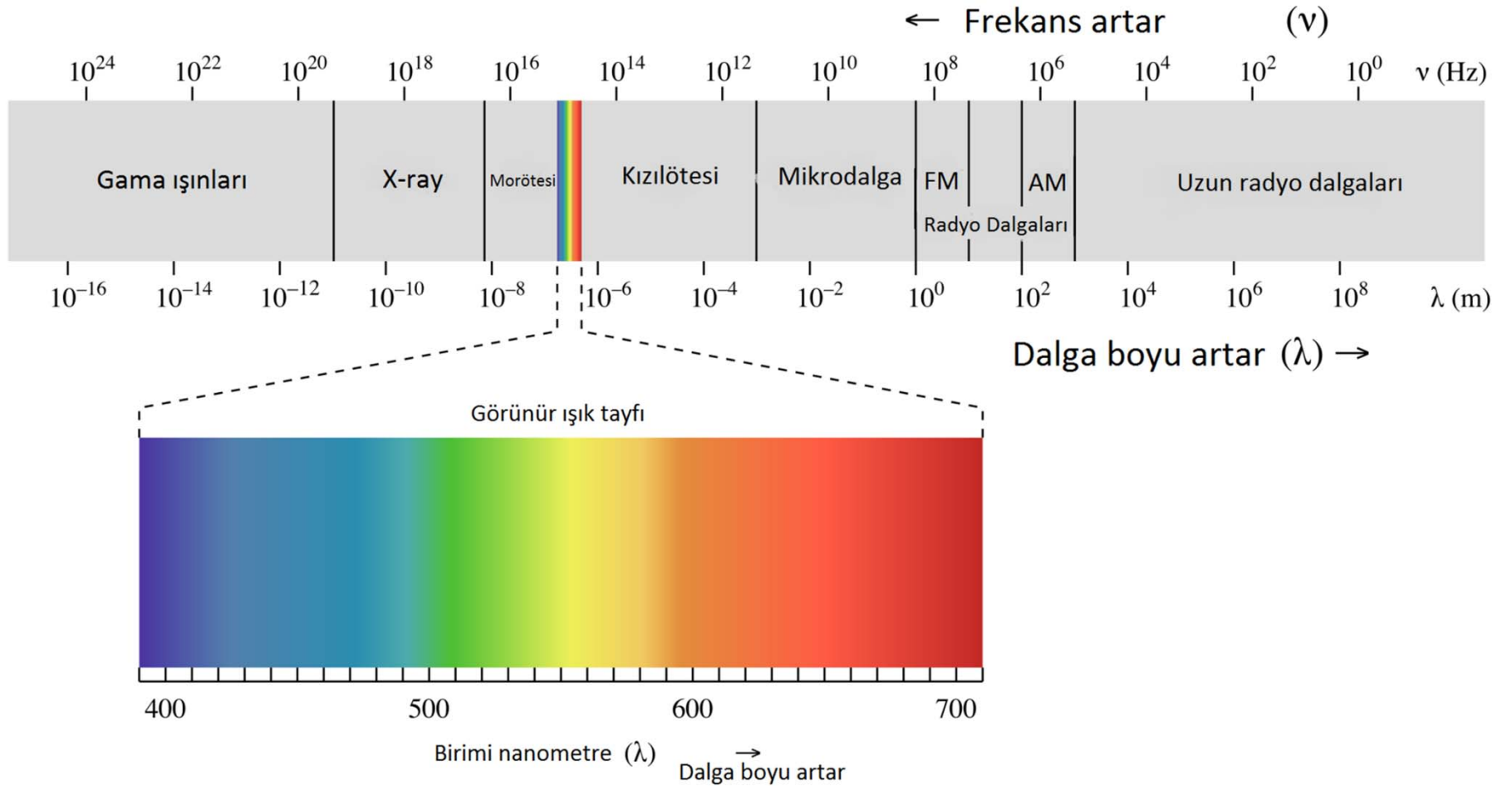
# Görüntü işleme uygulamalarına örnekler



# Işık



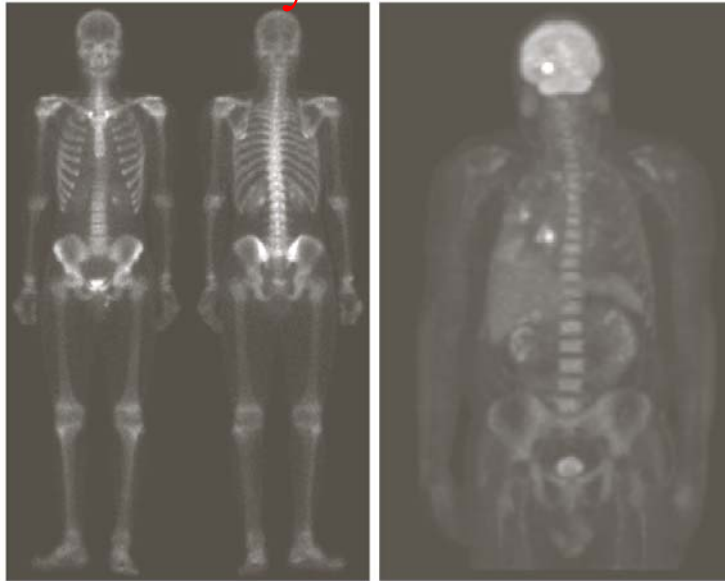
Işık, sinüs dalgası ve parçacık şeklinde hareket eden elektromanyetik dalgadır. Hızı (vakumda) yaklaşık 300 milyon m/s'dir.



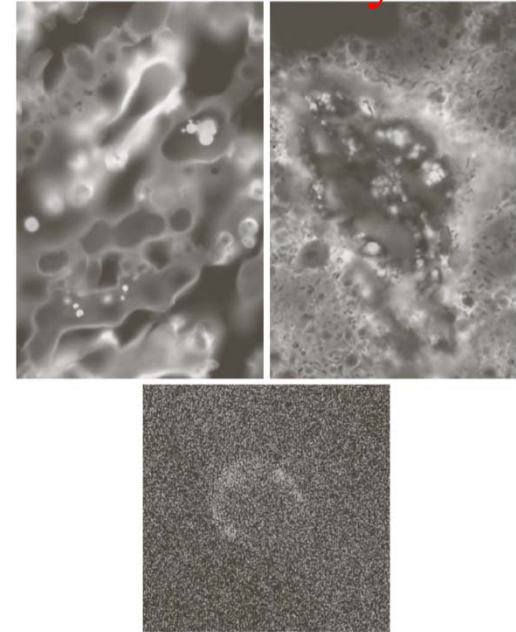
## Ay'ın ilk görüntüsü



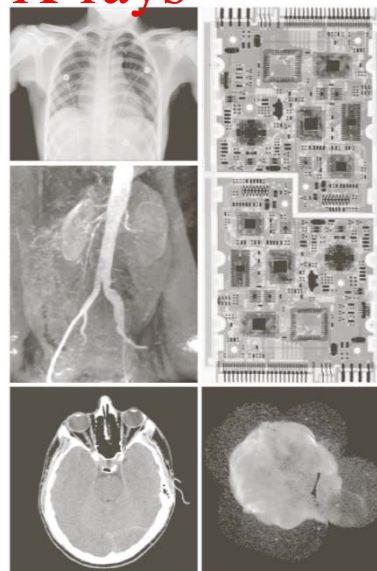
## Gamma-rays



## Ultraviolet-rays



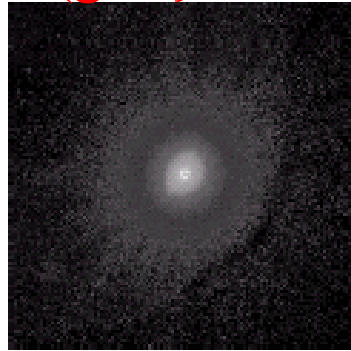
## X-rays



Aynı yıldızın (genç nötron) farklı enerji seviyelerindeki görüntüleri



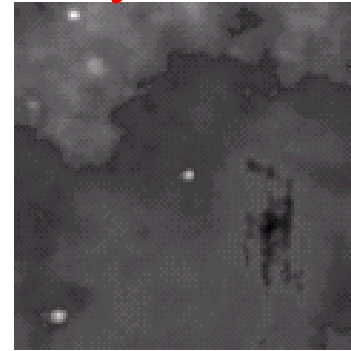
Gamma



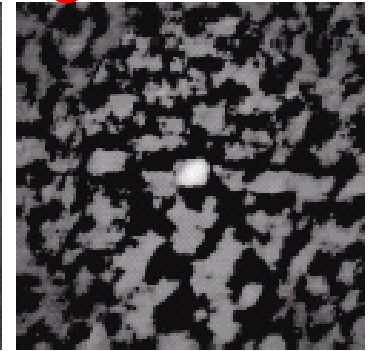
X-ray



Optical



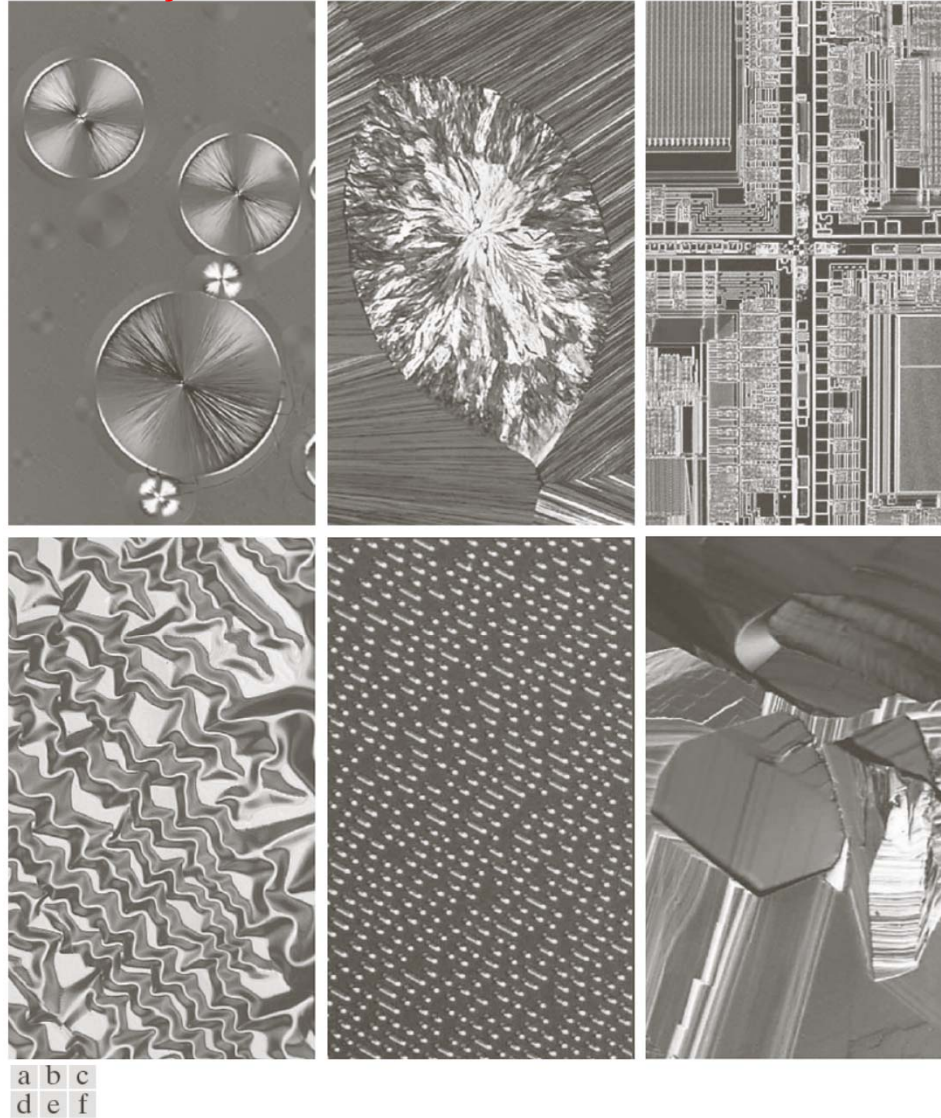
Infrared



Radio



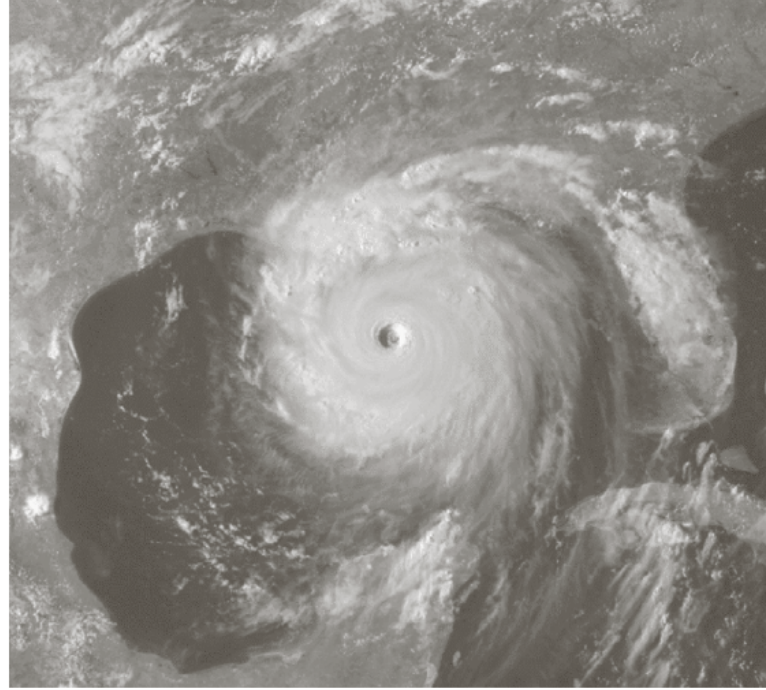
## Işık Mikroskobu Görüntüleri



**FIGURE 1.9** Examples of light microscopy images. (a) Taxol (anticancer agent), magnified 250 $\times$ . (b) Cholesterol—40 $\times$ . (c) Microprocessor—60 $\times$ . (d) Nickel oxide thin film—600 $\times$ . (e) Surface of audio CD—1750 $\times$ . (f) Organic superconductor—450 $\times$ . (Images courtesy of Dr. Michael W. Davidson, Florida State University.)



## Katrina Kasırgası Uydu Görüntüleri

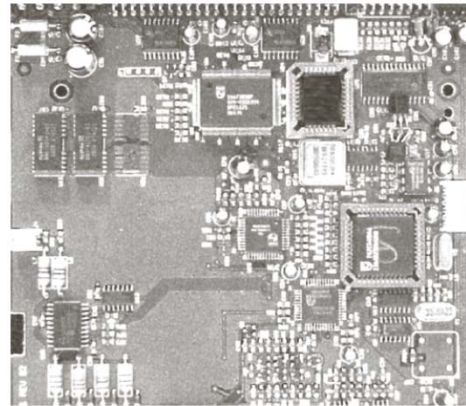


## Kızılötesi ABD Uydu Görüntüleri



**FIGURE 1.12**  
Infrared satellite  
images of the  
Americas. The  
small gray map is  
provided for  
reference.  
(Courtesy of  
NOAA.)

## Bazı DIP (Digital Image Processing) Uygulama Örnekleri



a	b
c	d
e	f

**FIGURE 1.14**

Some examples of manufactured goods often checked using digital image processing.

(a) A circuit board controller.

(b) Packaged pills.

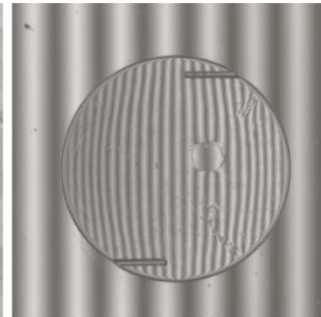
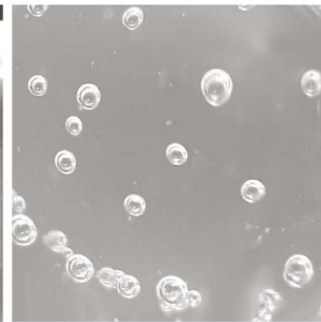
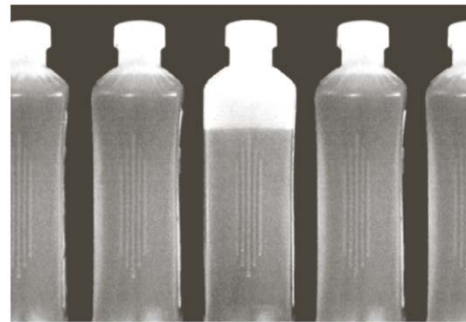
(c) Bottles.

(d) Air bubbles in a clear-plastic product.

(e) Cereal.

(f) Image of intraocular implant.

(Fig. (f) courtesy of Mr. Pete Sites, Perceptics Corporation.)



## DIP Uygulama Örnekleri



a b  
c  
d

**FIGURE 1.15**  
Some additional examples of imaging in the visual spectrum. (a) Thumb print. (b) Paper currency. (c) and (d) Automated license plate reading. (Figure (a) courtesy of the National Institute of Standards and Technology. Figures (c) and (d) courtesy of Dr. Juan Herrera, Perceptics Corporation.)



Prof. Peters in his home office. Needs a better shirt.





This shirt demands a monogram.





He needs some more color.



Nice. Now for the way he'd wear his hair if he had any.



He can't stay in the office like this.



Where's a hepcat Daddy-O like this belong?



In the studio!