

$$p_1 = \frac{1}{2a_2}$$

$$q_{11} = \frac{1}{2a_2}$$

5.4. Eliminación Gaussiana

Programa de eliminación Gaussiana (*egaussiana.for*).

c Eliminacion de Gauss

dimension a(5,6), b(5,6), y(5), x(5)

$$y(1) = 0.468$$

$$y(2) = 0.695$$

$$y(3) = 0.398$$

$$y(4) = 0.913$$

$$y(5) = 0.483$$

$$a(1,1) = 0.546$$

$$a(1,2) = 0.447$$

$$a(1,3) = 0.242$$

$$a(1,4) = 0.194$$

$$a(1,5) = 0.795$$

$$a(2,1) = 0.380$$

$$a(2,2) = 0.276$$

$$a(2,3) = 0.581$$

$$a(2,4) = 0.108$$

$$a(2,5) = 0.416$$

$$a(3,1) = 0.721$$

$$a(3,2) = 0.022$$

$$a(3,3) = 0.853$$

$$a(3,4) = 0.068$$

$$a(3,5) = 0.312$$

$$a(4,1) = 0.151$$

$$a(4,2) = 0.759$$

$$a(4,3) = 0.186$$

$$a(4,4) = 0.597$$

$$a(4,5) = 0.757$$

$$a(5,1) = 0.192$$

$$a(5,2) = 0.509$$

$$a(5,3) = 0.041$$

$$a(5,4) = 0.411$$

$$a(5,5) = 0.632$$

$$a(1,6) = y(1)$$

$$a(2,6) = y(2)$$

$$a(3,6) = y(3)$$

$$a(4,6) = y(4)$$

$$a(5,6) = y(5)$$

```
open(55,file='egauss.out',status='unknown')
```

```
call gauss(a, 5, 6, 5)
```

```
call mdisplay(a, 5, 6)
```

```
stop
```

```
end
```

```

subroutine gauss(a,n,m,ldim)
dimension t(1000),a(ldim,1)
do 10 i=1,n-1
con=1./a(i,i)
do 5 k=1,m+1-i
5 t(k)=-con*a(i,k+i-1)
call elim (a(i,i),t,n-i,m+1-i,ldim,con)
10 continue
return
end

```

```

subroutine elim(a,t,nn,m,ldim,con1)
dimension a(ldim,1),t(1)
do 4 i=2,nn+1
con=a(i,1)
do 3 j=1,m
3 a(i,j)=a(i,j)+con*t(j)
!a(i,1)=con1*con
4 continue
return
end

```

```

subroutine mdisplay(a,lrow,lcol)

```

```

dimension a(lrow,lcol)

```

```

doi = 1,lrow

```

```

print10,(a(i,j),j = 1,lcol)

```

```

write(55,10)(a(i,j),j = 1,lcol)

```

```
10  format(6F10.3)
```

```
    enddo
```

```
    print *,
```

```
    return
```

```
end
```