
monoid:
$M_3 = \begin{bmatrix} -1 & -1 \\ 1 & 0 \end{bmatrix}$, $M_4 = \begin{bmatrix} -1 & -1 \\ 1 & 1 \end{bmatrix}$, $M_5 = \begin{bmatrix} -1 & 0 \\ 0 & 0 \end{bmatrix}$,
$M_8 = \begin{bmatrix} 0 & -1 \\ 0 & 1 \end{bmatrix}$, $M_9 = \begin{bmatrix} 0 & 0 \\ -1 & -1 \end{bmatrix}$, $M_{10} = \begin{bmatrix} 0 & 0 \\ -1 & 0 \end{bmatrix}$,
$M_{13} = \begin{bmatrix} 0 & 0 \\ 0 & 1 \end{bmatrix}$, $M_{14} = \begin{bmatrix} 0 & 0 \\ 1 & 0 \end{bmatrix}$, $M_{15} = \begin{bmatrix} 0 & 0 \\ 1 & 1 \end{bmatrix}$,
$M_{18} = \begin{bmatrix} 0 & 1 \\ 0 & 0 \end{bmatrix}$, $M_{19} = \begin{bmatrix} 0 & 1 \\ 1 & 0 \end{bmatrix}$, $M_{20} = \begin{bmatrix} 1 & 0 \\ -1 & -1 \end{bmatrix}$,
$M_{23} = \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$, $M_{24} = \begin{bmatrix} 1 & 1 \\ -1 & -1 \end{bmatrix}$, $M_{25} = \begin{bmatrix} 1 & 1 \\ 0 & 0 \end{bmatrix}$.
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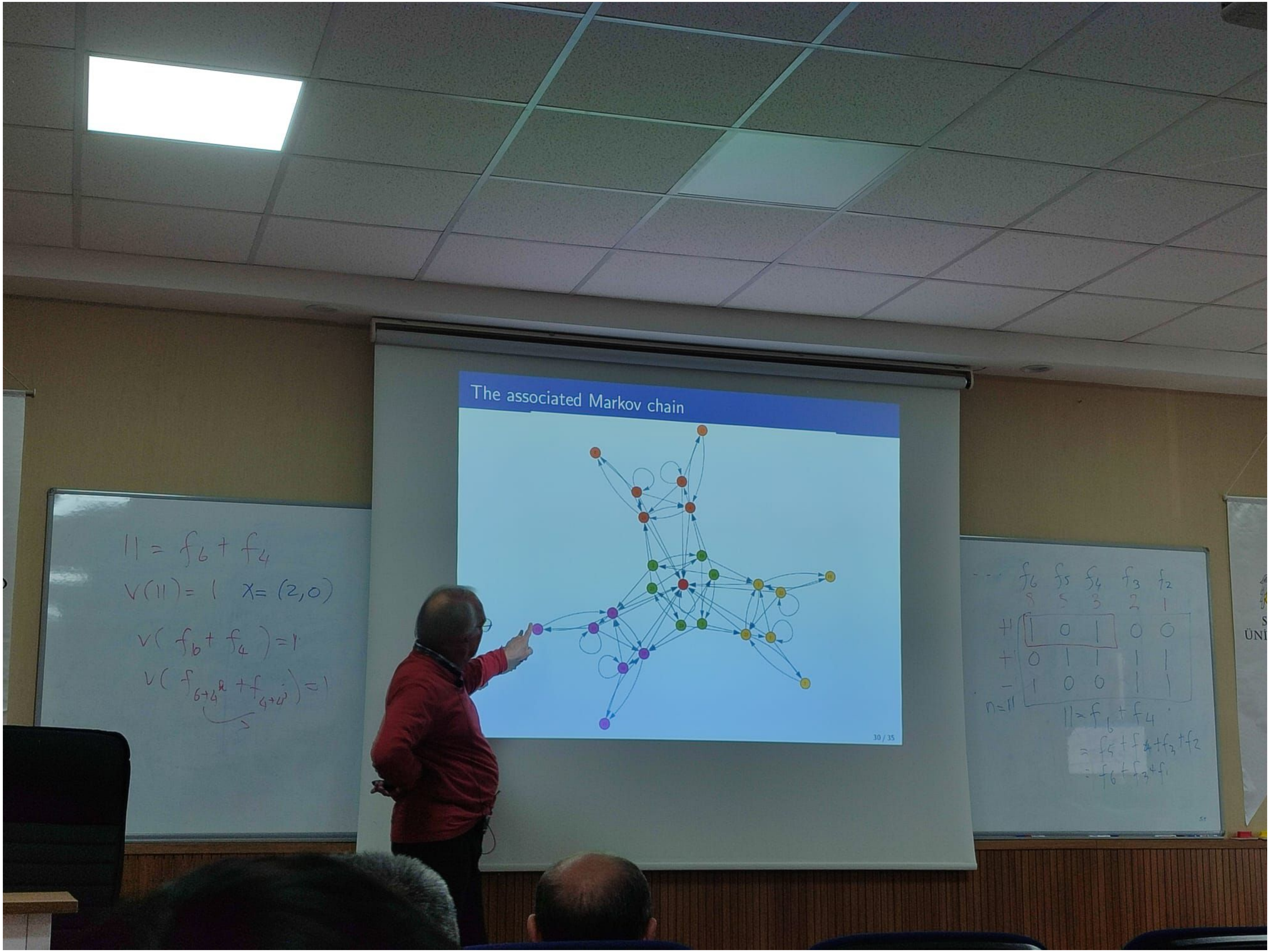
The associated Markov chain
30 / 35
11 = f6 + f4
V(11) = 1   X = (2,0)
v(f6 + f4) = 1
11 = f6 + f4
= f5 + f4 + f3 + f2
= f6 + f3 + f1


Canonical/Zeckendorf representation
Set
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on
, x2, . . . , xr) with r ≥ 2 and xi ∈ {0, 1, 2, 3}, set
M(x, xr) = B2B3 · · · Br−1 .
x, xr) is given by the vector-matrix-vector
representation n = fk1 + fk2 + · · · + fkr with
≡ 3 mod 4, then v(n) = 0.
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