(3)

## BA - 2

Properties of C

C has 2×3 submatrices $C_{ij}^T$

Properties of B — it has 2×6 matrices $B_{ij}^T$

Submatrix connect image point $x_{ij}'$ and $j$th camera orientation.

From.

3-point Algorithm

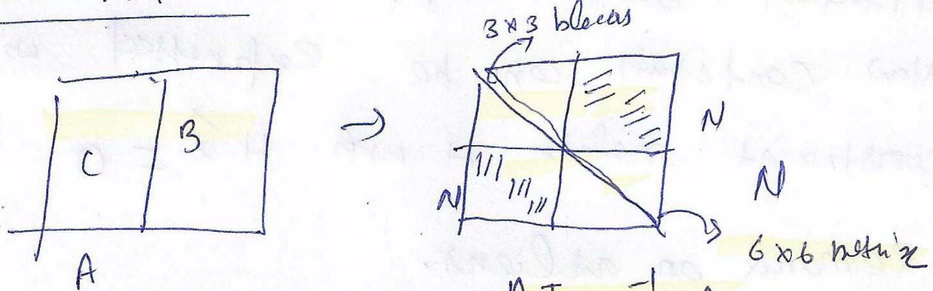
B, C are the result of the linearization (Jacobian)

$B_{ij}^T = [\quad]$, for $C_{ij}$, $B_{ij}$ Compute

$C_{ij}^T = [\quad]$. Jacobian analytically.

Normal matrix.

Sparse normal matrix




$A^T \Sigma_{ll}^{-1} A$

7 - stripes with 15 - images per stripe

$\Sigma_{ll} = \mathrm{Dia}\,(\Sigma_{ij})_{2\times 2}$

$$N = A^T \Sigma_{ll}^{-1} A = \begin{bmatrix} C^T \\ B^T \end{bmatrix} \Sigma_{ll}^{-1} \begin{bmatrix} C & B \end{bmatrix}$$

$$= \begin{bmatrix} C^T \Sigma_{ll}^{-1} C & C^T \Sigma_{ll}^{-1} B \\ B^T \Sigma_{ll}^{-1} C & B^T \Sigma_{ll}^{-1} B \end{bmatrix} = \begin{bmatrix} N_{kk} & N_{kt} \\ N_{tk} & N_{tt} \end{bmatrix}$$

3×6 blocs

6×6 blocs

$N_{kt} = C_{ij} \Sigma_{ij}^{-1} B_{ij}^T$

$N_{kk} = \mathrm{Dig}\,(N_{k,i}, k_i) \sum_{j \in R} C_{ij} \Sigma_{ij}^{-1} C_{ij}^T$

$N_{tt} = \sum B_{ij} \Sigma_{ij}^{-1} B_{ij}^T$

Orientation parameters only.

$N \Delta x = h$

$$\begin{bmatrix} N_{kk} & N_{kt} \end{bmatrix} \begin{bmatrix} \Delta k \\ \Delta t \end{bmatrix} = \begin{bmatrix} h_k \\ h_t \end{bmatrix}$$