

a)

MPI_Main

Master:

```

:
:
Subroutine Master_Job_fwdPred (m0,d,e0)
  1- Task = 'Distribute Model Parameters'
    - Send a copy of model parameters to all workers.
  2- Task = 'Solve Forward Problem '
    - Send the index of one transmitter to each worker
    - Receive the predicted data
End subroutine
:
```

Worker:

Do

Receive **task** from Master

```

if task = 'Distribute Model Parameters' then
  Receive a copy of model parameters from Master

if task = 'Solve Forward Problem ' then
  Receive the index of one transmitter from Master
  Call fwdPred_TX (m0,d,e0)
  Send the predicted data for one transmitter to Master

if task = 'Stop' then
  EXIT loop
```

Loop

b)

Serial version: i.e. inside NLCG

```

:
:
:
:
:
Call fwdPred (m0,d,eAll)
:
:
:
```

c)

Serial/Parallel version: i.e. inside NLCG

```

:
:
:
#if def=MPI then
  Call Master_Job_fwdPred (m0,d,eAll)
#else
  Call fwdPred (m0,d,eAll)
#end if
:
:
:
```