## Running R jobs

**Slurm at Prince cluster**

**Submitting array jobs**

**Running MPI jobs**

**Running Matlab jobs**

**Running Gaussian jobs**

**Running GPU jobs**

**Running interactive jobs**

**Running R jobs**

**Running Amber jobs**

R is installed on Prince. It is compiled with intel compiler. R can be run in interactive session or the batch mode. To check what versions are available:

```
$ module avail r/intel
```

```
------------------------------------------ /share/apps/modulefiles
-------------------------------------------------
gstreamer/intel/1.10.2    mothur/intel/1.35.1    r/intel/3.3.2
```

It is shown that R 3.3.2 exists presently as of Jan 12, 2017. You can check what packages are installed with this R installation. **If a package you need does not show up** in a check as below (please do run it as installation updating is a constantly ongoing process), please contact HPC support.
Long running and big data crunching jobs ought to be submitted as batch, so that they will run in the background and Slurm will drive their executions. Below are a R script "example.R", and a job script which can be used with sbatch command to send a job to Slurm:

```
$ cat example.R
df <- data.frame(x=c(1,2,3,1), y=c(7,19,2,2))
df
indices <- order(df$x)
order(df$x)
df[indices,]
df[rev(order(df$y)),]
```

```
$ cat run-R.sbatch
#!/bin/bash
#
#SBATCH --job-name=RTest
#SBATCH --nodes=1
#SBATCH --tasks-per-node=1
#SBATCH --mem=2GB
#SBATCH --time=01:00:00
module purge
module load r/intel/3.3.2
cd /scratch/$USER/examples
## srun R CMD BATCH example.R example.out
R --no-save -q -f example.R > example.out 2>&1
exit
```

```