This is a sample script written by Dr. Ioannis Sechopoulos to submit a batch job to SGE with various different values for a set of input parameters. This script is intended to be used when the values to be set for each parameter are somewhat regular. With this script, all possible combinations of parameter values will run.

```
#!/bin/bash
#$ -cwd
#$ -S /bin/bash

# if a certain amount of memory is needed then use this flag
# e.g. only submit to nodes that have at least 1024 MB of memory free
#$ -l mem_free=1024M

# include here any environment variables needed during run
export VARIABLE=value

numTimesEachParameterSet=100

#for first parameter:
#number of values of this parameter to simulate
numVar1=5
#first value for first parameter
firstVar1=7
#change in value for first parameter
deltaVar1=3

#for second parameter, as above:
numVar2=5
firstVar2=2
deltaVar2=1

numVar3=5
firstVar3=0
deltaVar3=25

numVar4=11
firstVar4=0
deltaVar4=5

numVar5=45
firstVar5=5
deltaVar5=0.5

let a="( ($SGE_TASK_ID-1) / ($numVar2 * $numVar3 * $numVar4 * $numVar5 * $numTimesEachParameterSet) ) % $numVar1"
let b="( ($SGE_TASK_ID-1) / ($numVar3 * $numVar4 * $numVar5 * $numTimesEachParameterSet) ) % $numVar2"
let c="( ($SGE_TASK_ID-1) / ($numVar4 * $numVar5 * $numTimesEachParameterSet) ) % $numVar3"
let d="( ($SGE_TASK_ID-1) / ($numVar5 * $numTimesEachParameterSet) ) % $numVar4"
let e="( ($SGE_TASK_ID-1) / $numTimesEachParameterSet ) % $numVar5"

export param1=$(echo "$firstVar1 + ($a * $deltaVar1)" | bc -l)
export param2=$(echo "$firstVar2 + ($b * $deltaVar2)" | bc -l)
export param3=$(echo "$firstVar3 + ($c * $deltaVar3)" | bc -l)
export param4=$(echo "$firstVar4 + ($d * $deltaVar4)" | bc -l)
export param5=$(echo "$firstVar5 + ($e * $deltaVar5)" | bc -l)

# if some special case value is needed to override the otherwise regular distribution of parameter values
if [ $param3 -eq 0 ]
then
        export param3=1
fi

#$ -v param1,param2,param3,param4,param5

program_to_run input_file
```