

# Simulation

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## Normal DPM in LMM

### Dimension setting

```
set.seed(10)
N = 50; T = 4; D = 7
Z = make_Z(rep(T, N))
```

### Data generation

```
beta = rnorm(D+1)
w = matrix(rnorm(N*T*D), N*T, D)
# Represent random intercept as mixture of 3 normal distributions
assigner = runif(N)
mu1 = 3; mu2 = 0; mu3 = -3
u = rnorm(N, mu1, 0.49)
u[assigner > 0.33] = rnorm(sum(assigner > 0.33), mu2, 0.49)
u[assigner > 0.66] = rnorm(sum(assigner > 0.66), mu3, 0.49)
y = cbind(1, w) %*% beta + Z %*% u + rnorm(nrow(Z))
```

### Result presentation

```
## [1] "0.1356 seconds elapsed."
## [1] "Truncated at R=10"
```

