

# 1 GPArotation Functions

In R, the functions in this package are made available with

```
> library("GPArotation")
```

Also, it should be possible to view the pdf version of the guide for this package with `print(vignette("GPArotation"))`.

The most complete reference for the software is: Bernaards, C.A. and Jennrich, R.I. (in press) Gradient Projection Algorithms and Software for Arbitrary Rotation Criteria in Factor Analysis. Educational and Psychological Measurement. Addition material is also available at <http://www.stat.ucla.edu/research/gpa>.

Rotations are computed using the Gradient Projection Algorithm code, which can be called directly. Examples of this are available in the help pages for *GP-Forth* and *GP-Foblq*. In R it may be most convenient to pass the rotation name to the *factanal* program. An example of this is

```
> data(ability.cov)
> z <- factanal(factors = 2, covmat = ability.cov, rotation = "oblimin")
> loadings(z)
```

Other examples are available in the help page for *rotations*.