

# Writing functions & programming in R

Introduction to R & FLR for Fisheries Science

JAN 2013

# R as a language

R is ...

- an implementation of the S programming language
- written primarily in C, Fortran, and R
- an interpreted language

Created by Ross Ihaka and Robert Gentleman (U. Auckland)

Supports procedural programming with functions and OOP

# An R function

3 main components

1. `body()`
2. `formals()`
3. `environment()`

```
foo <- function(arg) {  
  res <- arg + 1  
  return(res)  
}
```

# Scoping

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# Function arguments

# Return values

# Programming constructs

# Debugging

Things can (and will) go wrong

`debug()`

`browser()`



# Tips and tricks

## Extra references

`http:  
//www.johndcook.com/R_language_for_programmers.html`