

**Arjan de Bruijn**  
309 E Myrtle St,  
Ft. Collins, CO 80524  
715-401-0799  
amgdebruijn@gmail.com

## **SUMMARY OF QUALIFICATIONS**

- Fluent in most coding languages
- More than 8 years of experience in software development and GIS
- Developer of efficient code
- Hard-working
- Authorized to work in the USA
- Background in Bayesian and probabilistic statistics
- Spatial stochastic and deterministic biogeochemical simulation models
- Experienced in public speaking at international conferences and workshops
- Excellent communication, teamwork and problem solving skills
- Proven initiative in new approaches to forest demographic models
- Proficient in written and spoken English, German and Dutch

## **SOFTWARE EXPERTISE**

- |                 |               |                           |
|-----------------|---------------|---------------------------|
| • C#            | • Python      | • GIMP                    |
| • C++           | • R           | • FireBird                |
| • Visual Basic  | • Matlab      | • SQL                     |
| • HTML5         | • TortoiseSVN | • Microsoft Office family |
| • CSS           | • SPSS        |                           |
| • JavaScript    | • Inno Setup  |                           |
| • Visual Studio | • ArcGIS      |                           |

## **SOFTWARE TECHNIQUES**

- Data manipulation and performance bottlenecks
- Multi-threading/Background worker in Visual Studio 2010
- Developer of efficient code
- Embedding COM components in Visual Studio 2010 (i.e. MapWinGis ActiveX API)
- Application Extension (i.e. ARCGIS plugin)

## **PROFESSIONAL EXPERIENCE**

### **PURDUE UNIVERSITY - West Lafayette, IN**

**2011- present**

#### **Post-doctoral Fellow**

*Purdue University, posted at USDA Forest Service Northern Research Station, Rhinelander, WI*

- Developed a new spatially explicit simulation model, "PnET-Succession", with user interface to simulate growth and spread of tree species and associated forest carbon sequestration.

### **AGROSCOPE RECKENHOLZ TAENIKON – Zürich, Switzerland**

**2010-2011**

#### **Post-doctoral Fellow**

*Agroscope Reckenholz-Tänikon Research Station, Zürich, Switzerland*

- Simulated biomass and carbon dynamics in lowland grasslands in Switzerland.

### **ALTERRA B.V. – Wageningen, Netherlands**

**2009-2010**

Alterra B.V. is a research station specializing in animal population dynamics, agriculture, and sustainability with close ties to my alma mater, Wageningen University.

#### **Software developer**

*Alterra B.V. Research Institute, Wageningen, Netherlands*

Developed GIS applications for spatial ecological models on dispersal patterns of plants and animal species in fragmented habitat according to metapopulation theory.

- Improved the Landscape ecological Analysis and Rules for the Configuration of Habitat (LARCH) model user interface which is a plug-in for ArcMap to analyse population viability given fragmented habitat.
- Expanded functionality of the metapopulation simulation model (METAPHOR) interface which operates as a standalone Windows program that uses GIS freeware to embed GIS capabilities into the program interface.

**IMK-IFU - Garmisch-Partenkirchen, Germany**

**2006-2009**

IMK-IFU is an internationally reclaimed research institute, with ties to several universities in Germany, amongst which the Albert-Ludwigs University in Freiburg im Breisgau, Germany where I obtained my PhD.

**Research Assistant**

**2006-2009**

- As part of EU's NitroEurope research project on nitrogen cycling, developed a model subroutine *DECONIT* that was published as an isolated program and later embedded in a larger modelling platform MoBiLE.

**EDUCATION**

**ALBERT LUDWIGS UNIVERSITY** – Freiburg im Breisgau, Germany

**2006-2009**

**PhD in Forest and Environmental Sciences**, *magna cum laude*.

**WAGENINGEN UNIVERSITY** – Wageningen, Netherlands

**1998-2005**

**M.S. in Forestry and Environmental Sciences.**

- Master's thesis on modelling decomposition kinetics published in Soil Biology and Biochemistry.

**AMSTERDAM UNIVERSITY** – Amsterdam, Netherlands

**2001-2005**

**M.A. in Philosophy of Environmental Science.**

- Master's thesis on the relationship between environmental science and public perception of environmental issues.