Arjan de Bruijn
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SUMMARY OF QUALIFICATIONS

- More than 8 years of experience in computer simulations, programming and GIS
- Fluent in most coding languages
- Hard-working
- Experience in agile scrum methodology
- Authorized to work for any employer in the USA

PROGRAMMING LANGUAGES & SOFTWARE

- Visual Studio
- C++
- C#
- Visual Basic
- HTML5
- CSS
- JavaScript
- SQL
- MS SQL Server
- ORACLE
- ArcGIS
- ArcObjects
- Python
- Inno Setup
- R
- FireBird
- TortoiseSVN
- Matlab
- SPSS

PROFESSIONAL EXPERIENCE

NEW CENTURY SOFTWARE – Fort Collins, CO **October 2015 – present**
Software developer
- Developed GIS solutions for the oil and gas industry using C#, ArcGIS and Microsoft SQL Server.

HARVARD FOREST & USDA FOREST SERVICE – Fort Collins, CO **September 2015- March 2016**
Contractor
- Added additional features to the model "PnET-Succession" (see next entry).

PURDUE UNIVERSITY - West Lafayette, IN **2011-2015**
Post-doctoral Fellow
Posted at USDA Forest Service Northern Research Station, Rhinelander, WI and Rocky Mountain Research Station, Fort Collins, CO
- Developed a new spatially explicit simulation model, "PnET-Succession", to simulate growth and spread of tree species and associated forest carbon sequestration.

AGROSCOPE RECKENHOLZ TAENIKON – Zürich, Switzerland **2010-2011**
Post-doctoral Fellow
- Simulated biomass and carbon dynamics in lowland grasslands in Switzerland.

ALTERRA B.V. – Wageningen, Netherlands **2009-2010**
Software developer
- Developed GIS applications for spatial ecological models on dispersal patterns of plants and animal species in fragmented habitat.
- 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**
Research Assistant

• 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 modeling platform MoBiLE.

EDUCATION

ALBERT LUDWIGS UNIVERSITY OF FREIBURG– Freiburg im Breisgau, Germany **2006-2009**
PhD in Forest and Environmental Sciences, with computer simulations emphasis, *magna cum laude*.

WAGENINGEN UNIVERSITY – Wageningen, Netherlands **1998-2005**
M.S. in Forestry and Environmental Sciences.

AMSTERDAM UNIVERSITY– Amsterdam, Netherlands **2001-2005**
M.A. in Philosophy of Environmental Science.

PUBLICATIONS

- Arjan M. G. de Bruijn · Eric J. Gustafson · Daniel M. Kashian · Harmony J. Dalgleish · Brian R. Sturtevant · Douglass F. Jacobs. Decomposition rates of American chestnut (Castanea dentata) wood and implications for coarse woody debris pools (2014) Canadian Journal of Forest Research 44(12): 1575-1585
- Eric J. Gustafson · Arjan M.G. De Bruijn · Robert E. Pangle · Jean-Marc Limousin · Nate G. McDowell · William T. Pockman · Brian R. Sturtevant · Jordan D. Muss · Mark E. Kubiske (2014) Integrating ecophysiology and forest landscape models to improve projections of drought effects under climate change. Global Change Biology 287: 44-57.
- Arjan M. G. de Bruijn · Eric J. Gustafson · Brian R. Sturtevant · Jane R. Foster · Brian R. Miranda · Nathanael I. Lichti · Douglass F. Jacobs (2014). Toward more robust projections of forest landscape dynamics under novel environmental conditions: Embedding PnET within LANDIS-II. Ecological Modelling 287:44–57.
- A. M. G. De Bruijn · P. Calanca · C. Ammann · J. Fuhrer (2012) Differential long-term effects of climate change and management on stocks and distribution of soil organic carbon in productive grasslands. Biogeosciences 9(6): 1055-1096.
- Arjan M. G. de Bruijn · Rüdiger Grote · Klaus Butterbach-Bahl (2011). An alternative modelling approach to predict emissions of N2O and NO from forest soils. European Journal of Forest Reseach 130(5): 755-773.
- Arjan M. G. de Bruijn, Klaus Butterbach-Bahl (2010). Linking carbon and nitrogen mineralization with microbial responses to substrate availability — the DECONIT model. Plant and Soil 328(1): 271-290
- A.M.G. de Bruijn, K. Butterbach-Bahl, S. Blagodatsky, R. Grote (2009). Model evaluation of different mechanisms driving freeze–thaw N2O emissions. Agriculture, Ecosystems & Environment 133(3-4): 196–207
- W. G. Braakhekke · Arjan M. G. de Bruijn (2006) Modelling decomposition of standard plant material along an altitudinal gradient: A re-analysis of data of Coûteaux et al. (2002). Soil Biology and Biochemistry 39(1): 99-105