

VU Research Portal

Exploring Computational Models for Intelligent Support of Persons with Depression

Bin Ab Aziz, A.

2011

document version

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

citation for published version (APA)

Bin Ab Aziz, A. (2011). *Exploring Computational Models for Intelligent Support of Persons with Depression*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

Take down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

E-mail address:

vuresearchportal.ub@vu.nl

Table of Contents

I: Introduction	
1. Introduction	10
II: Computational Models for Individuals with a Risk of Unipolar Depression	
2. An Agent Model for Temporal Dynamics in Relapse and Recurrence in Depression	36
3. An Agent Based Simulation of the Dynamics in Cognitive Depressogenic Thought	52
4. Simulating Cognitive Coping Strategies for Intelligent Support Agents	70
III: Ambient Agent Models to Support an Individual with a Risk of Unipolar Depression	
5. Modelling an Ambient Agent to Support Unipolar Depression Relapse Prevention	87
6. Design of an Intelligent Support Agent Model for People with a Cognitive Vulnerability	104
7. Computational Modelling of Therapies Related to Cognitive Vulnerability and Coping	120
IV: Computational Models for Depressed Individuals and their Social Support Networks	
8. An Agent Model for a Human's Social Support Network Tie Preference during Unipolar Depression	137
9. Dynamics of Social Support Networks for Mutual Support in Coping with Stress	156
10. Modelling Caregiving Interactions during Stress	174
11. An Agent-Based Model for Integrated Contagion and Regulation of Negative Mood	193
V: Ambient Agent Models to Support Depressed Individuals and their Social Support Networks	
12. Intelligent Configuration of Support Networks around Depressed Persons	214
13. An Ambient Agent Model for Support of Informal Caregivers during Stress	232
VI: Discussion	
14. Discussion and Future Work	257
SIKS Dissertation Series	276