

Amir Dezfouli

CONTACT INFORMATION

Behavioural Neuroscience Laboratory,
Brain and Mind Research Institute,
Level 6, Building F, 94 Mallet Street,
Camperdown, NSW 2050

Voice: (+61) 426 580 699
e-mail:
adez5182@uni.sydney.edu.au,
akdezfuli@gmail.com

Born on June 9, 1984

AFFILIATION

Behavioural Neuroscience Laboratory
Brain and Mind Research Institute

EDUCATION

University of Sydney

Sydney, Australia

Ph.D, Behavioral Neuroscience

Aug 2011 – Present

- Advisor: Professor Bernard W. Balleine

University of Tehran

Tehran, Iran

M.S., Artificial Intelligence

Sept 2006 – May 2009

- Thesis Topic: Computational Modeling of Addiction
- Advisor: Professor Caro Lucas
- Area of Study: Reinforcement Learning
- GPA: 17.64/20

B.S., Software Engineering

Sept 2002 – July 2006

- Thesis Topic: Using analogy for morphology of Persian language
- Advisors: Dr. Ahmad Khonsari, Dr. Laleh Ghadakpour
- GPA: 15.93/20

Isfahan University of Technology High School

Isfahan, Iran

Diploma, Mathematics and Physics,

Sept 1998 – May 2002

- GPA: 19.7/20

JOURNAL

PUBLICATIONS

Amir Dezfouli, Bernard W. Balleine. Habits, Action Sequences, and Reinforcement Learning. *European Journal of Neuroscience*, in press.

Mohammad Mahdi Keramati¹, **Amir Dezfouli**¹, Payam Piray. Speed/Accuracy Trade-off between the Habitual and the Goal-directed Processes. *PLoS Computational Biology*, Vol. 7, No. 5. (May 2011).

Payam Piray, Mohammad Mahdi Keramati¹, **Amir Dezfouli**¹, Caro Lucas and Azarakhsh Mokri. Individual Differences in Nucleus Accumbens Dopamine Receptors Predict Development of Addiction-like Behavior: A Computational Approach. *Neural Computation*, Vol. 22, No. 9. (September 2010), pp. 2334-2368.

¹These authors contributed equally to this work.

Amir Dezfouli, Payam Piray, Mohammad Mahdi Keramati, Hamed Ekhtiari, Caro Lucas and Azarakhsh Mokri. A Neurocomputational model for Cocaine Addiction. *Neural Computation*, Vol. 21, No. 10. (October 2009), pp. 2869-2893.

CONFERENCE
PUBLICATIONS

Amir Dezfouli, Mohammad Mahdi Keramati, Hamed Ekhtiari, Hooman Safaei and Caro Lucas. (2008, poster). Understanding Addictive Behavior on the Iowa Gambling Task Using Reinforcement Learning Framework. *Proceedings of the 30th Annual Conference of the Cognitive Science Society* (pp. 1094-1099). Austin, TX: Cognitive Science Society.

Arash Khodadadi, **Amir Dezfouli**, Pegah Fakhari and Hamed Ekhtiari. (2010). Effects of Methadone Maintenance Treatment on Decision-Making Processes in Heroin-Abusers: A Cognitive Modeling Analysis. *2010 International Conference on Behavioral, Cognitive and Psychological Sciences (BCPS 2010)*.

ABSTRACTS

Amir Dezfouli, Payam Piray, Mohammad Mahdi Keramati, Hamed Ekhtiari, Caro Lucas and Azarakhsh Mokri (2008, poster). A neurocomputational model for decreased harm avoidance in addicts. *SfN: Neuroscience 2008. Washington DC November, 2008*.

Hamed Ekhtiari, Habib Ganjgahi, Arian Behzadi, **Amir Dezfouli**, Mohammad Ali Oghabian, Masumeh Amini Khoo, Hooman Safaei and Azarakhsh Mokri (2008, poster). Effects of short term methadone maintenance treatment on brain activation due to heroin cue induced craving. *SfN: Neuroscience 2008. Washington DC November, 2008*.

Amir Dezfouli, Payam Piray, Mohammad Mahdi Keramati, Hamed Ekhtiari, Caro Lucas and Azarakhsh Mokri (2009, talk). Computational modeling of cocaine addiction using reinforcement learning framework. *The Third International Conference of Cognitive Science. Tehran, Iran*.

REVIEWS,
MISCELLANY AND
BOOK CHAPTERS

Mohammad Mahdi Keramati, **Amir Dezfouli**, Payam Piray. Understanding Addiction as a Pathological State of Multiple Decision Making Processes: A Neurocomputational Perspective. In *Computational Models of Drug Addiction*. Boris Gutkin and Serge H. Ahmed (eds).

Amir Dezfouli, Mohammad Mahdi Keramati and Hamed Ekhtiari (Autumn 2007). Computational Modeling: An Effective Approach to Behavioral Analysis of Addiction. *Quarterly Journal of Addiction* (p. 85).

TEACHING
ASSISTANT

University of Tehran

Advanced Programming

January 2003

- Instructor: Mr. Abedinezhad

Design and Implementation of Compiler

September 2004

- Instructor: Dr. Jaberipur

HONORS	<p>Entered University of Tehran, Sept. 2006 (Ranked 13 in National Universities Entrance Exam)</p> <p>Entered University of Tehran, Sept. 2002 (Ranked 221 among more than 400,000 applicants in National Universities Entrance Exam)</p>
MEMBERSHIPS	<p>Member, Society for Neuroscience (SfN)</p>
TALKS AND SEMINARS	<p><i>Multiple decision-making systems in the brain: computational approaches</i> December, 2010</p> <ul style="list-style-type: none"> • Amirkabir University of Technology (Tehran Polytechnic) <p><i>A review of macro and micro methods in computational modeling approaches to addiction</i> May 19, 2008</p> <ul style="list-style-type: none"> • Drug Control Headquarters • Addiction Seminar Series <p><i>Modeling addictive behavior on the Iowa Gambling Task using reinforcement learning framework</i> Nov 20, 2008</p> <ul style="list-style-type: none"> • 8th annual meeting of Iranian psychiatric association
PROFESSIONAL EXPERIENCE	<p><i>Demographic, personality and cognitive predictors of treatment outcome in Methadone detoxification, Methadone maintenance therapy, and Buprenorphine detoxification programs</i> Sep 2009-June 2011</p> <ul style="list-style-type: none"> • Iranian National Center for Addiction Studies <p><i>Effect of methadone maintenance treatment on reinforcing efficacy of methamphetamine in human subjects</i> Sep 2009-June 2011</p> <ul style="list-style-type: none"> • Drug Control Headquarters <p><i>Computational modeling of addictive behavior on Iowa Gambling Task</i> June 2007</p> <ul style="list-style-type: none"> • Tehran University of Medical Sciences <p><i>Short term load forecasting for Mazandaran area</i> June 2006</p> <ul style="list-style-type: none"> • Tose'e Niro Kosar Co. Ltd • Designer and J2EE developer • 8 months of work experience <p><i>Nahad Portal</i> June 2004</p> <ul style="list-style-type: none"> • Paniz Co. Ltd • Designer and J2EE developer • 9 months of work experience
LANGUAGE SKILL	<p>Internet Based TOEFL: 99/120; Reading, Listening, Writing, Speaking: 29, 25, 25, 20</p>