

Curriculum vitae

Ibrahim E. El-Semman

Mathematics Department, Faculty of science, Assiut University, Egypt

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Personal information

Birth Date: February 15th, 1977

Social Status: Married

Nationality: Egyptian

Education and Degrees

Ph.D. in computer science	Assiut University, Egypt	2015
M.Sc. in computer science	Assiut University, Egypt	2006
B.Sc. in computer science	Assiut University, Egypt	1999

Employments

Assistant Professor	Faculty of Science, Assiut University, Egypt	Mar 2015 – until now
Assistant Lecturer	Faculty of Science, Assiut University, Egypt	Feb 2014 – Feb 2015
PhD Visiting Student	Systems and Synthetic Biology Group, Chalmers University of Technology, Sweden	May 2012 – Jan 2014
Assistant Lecturer	Faculty of Science, Assiut University, Egypt	May 2006 – May 2012
Demonstrator	Faculty of Science, Assiut University, Egypt	Dec 2000 – Apr 2006

Areas of expertise

- Reconstruction of Genome-Scale Metabolic Models (GEMs), their integration with transcriptomics and community modeling of them.
- Integration hepatitis C Virus with *iHepatocytes2322*.
- Analyzing microarray data and next generation sequencing.
- Data mining: extracting logic and fuzzy classification rules using genetics algorithms, and association rules.
- Computational Intelligence: genetic algorithms, fuzzy logic.

List of Publications

1. [El-Semman I](#), Karlsson F, Shoaie S, Nookaew I, Soliman T, Nielsen J: **Genome-scale metabolic reconstructions of *Bifidobacterium adolescentis* L2-32 and *Faecalibacterium prausnitzii* A2-165 and their interaction**. *BMC Systems Biology* 2014, **8**(1):41.

2. Marghny M, El-Semman I: **Extracting logical classification rules with gene expression programming: microarray case study**. In: *CGST International Conference on Artificial Intelligence and Machine Learning (AIML-05): 2005; Cairo, Egypt*: Edited by Elmahdy H. 2005: PID: P1120535113.
3. Marghny M, El-Semman I: **Exact Fuzzy Classification Rules with Gene Expression Programming**. In: *CGST International Conference on Artificial Intelligence and Machine Learning (AIML-05): 2005; Cairo, Egypt*: Edited by Elmahdy H. 2005: PID: P1120535114.

Programming Skills

- MATLAB
 - Working with RAVEN and COBRA toolboxes, writing code to generate bacterial draft bacterial GEMs using RAVEN toolbox.
 - Designing a MATLAB graphic user interface to run Reporter Metabolites and Reporter Subnetworks from GEM and transcriptomics.
- R
 - Piano package, writing code for analyzing TCGA level 3 of copy number variation and DNA methylation, and familiar with Bioconductor packages.
- C++
 - Writing two packages convert protein sequence to fixed-length vector by pseudo amino acid composition and amino acid momentum composition principles. They are useful in protein sub-cellular localization predication.
 - C++ program solves 8-puzzle problem using reinforcement learning.
 - I have a background in OpenGL.
- Database applications
 - I have cooperated with Prof. Hassan El-Hawary in building software for Credit Hours System and Student Results program which are used in many faculties in our university.
- Web Programming Web 2.0 techniques: HTML 5.0, PHP, XML, and WebGL, Angular, IBM WorkLight 6.2

Activities

1. Member of Quality Assurance and Accreditation Unit, Faculty of Science, Assiut University, From 1/5/2007 to 2012.
2. Member of Origination Committee in Young Youth Researchers Conference, Faculty of Science, Assiut University (2007, 2009).