

## Sahan T. M. Dissanayake

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### EDUCATION

- **Ohio Wesleyan University** Bachelor of Arts expected May, 2004 Delaware, OH  
**Major:** Computer Science / Economics, **Cumulative GPA:** 3.65/4.00  
**Relevant upper level course work:**  
Computer Science: Theory of Computation, Artificial Intelligence, Computer Organization, Paradigms of Computation, Databases, Algorithms, Neural Networks.  
Economics: Internet and Business Choices (Honors), International Economics, Economic Development, Intermediate Microeconomics (Honors), Monetary and Fiscal Economics  
Math: Discrete Mathematics, Graph Theory, Applied Statistics, Math Logic, Combinatorics.  
**Outstanding** Dean's List (Spring 2001 - Present)  
**Achievements:** Trustee Scholarship for outstanding academics and extracurricular activities  
David H Staley, Outstanding Junior Prize, Second Place
- **One Year Professional Diploma in Network Centered Computing** Kandy, Sri Lanka 2000  
NIIT (National Institute of Information Technology) India.
- **Diploma in Computer Hardware Informatics** Computer Training Center Kandy, Sri Lanka 1999

### RESEARCH EXPERIENCE

#### **Research Assistant**

Delaware, OH  
Summer 2001

Physics Department, Ohio Wesleyan University

- Simulated the physical interactions among Josephson Junctions
  - Created a graphical simulation in Fortran 90
- Publication:** Daniels, B. C.; **Dissanayake, S. T. M.**; Trees, B. R. "Synchronization of coupled rotators: Josephson junction ladders and the locally coupled Kuramoto model". *Physical Review E* Volume: 67, Issue: 2, February 01, 2003. pp. 026216-026216-14.

### ACADEMIC PROGRAMMING PROJECTS \*(For details refer to annexure 3 or view online resume)

- Created an Artificial Intelligence Program to play Othello versus a human player in C++.
- Created a Prolog Program to calculate Erdős numbers.

### PERSONAL PROGRAMMING PROJECTS \*(For details refer to annexure 3)

- Constructed and programmed a Lego Mindstorm Robot Walker and a Robot Stepper.
- Created a web based, database driven library search program using PHP, HTML, and MySQL.
- Created a database driven program to record hours of the Lab Assistants for Ohio Wesleyan Info Sys.

### WORK EXPERIENCE \*(For details refer to annexure 2 or view online resume)

- |  |              |  |       |
|--|--------------|--|-------|
| • <b>Web Design StAP position</b>      | Present      | • <b>Library Reference Desk Assistant, OWU</b>     | 02/03 |
| • <b>Camp Counselor, OWJL</b>          | Summer 02/03 | • <b>Web Designer/Tutor – UPWARD BOUND</b>         | 02/03 |
| • <b>Microlab Assistant, OWU</b>       | Fall 01/03   | • <b>Supervisor, OWU Student Calling Committee</b> | 2001  |
| • <b>On-Campus Internship : Online</b> | Fall 2001    | • <b>Web Designer – Woltemede Center</b>           | 2003  |
| Editor, The Transcript                 |              | • <b>Web Designer – Chaplains Office</b>           | 2003  |

### LEADERSHIP AND ACTIVITIES

#### **Programming/Math Contests**

- Regional Contest :** 4<sup>th</sup> in Denison University, 4<sup>th</sup> in Mt. Vernon College.
- 5 College Math Contest:** 2<sup>nd</sup> in OWU 02, 6<sup>th</sup> in Antioch College 01.
- 4<sup>th</sup> Place, Selection Contest held in OWU, Ohio.
- ACM Regional Contest Fall 2001/2.

#### **Clubs and societies**

ACM- President, Honors Student Board, Horizons International-PR Officer, SANGAM-Vice President, Honors Mentor, Peer Minister for Buddhist Religion.

### COMPUTER SKILLS

C++, Fortran90, Assembly(Pentium), Scheme, PHP, SQL, Prolog, HTML, Java (basics), Perl (basics).  
Sigmaplot, Mathematica, Derive, Mini-Tab, Dreamweaver, Flash, Fireworks, Photoshop, Paint Shop Pro, RoboCode.  
Windows 95/98/ME/NT/2000/XP, Linux, General System Administration and Hardware/software trouble shooting.

(References - refer to annexure 1 or view online resume)

F2003V106GE

## REFERENCES

ANNEXURE 1

### Computer Science/Math/Research

**Dr. Alan Zaring**

e-mail : [akzaring@owu.edu](mailto:akzaring@owu.edu)

Department of Mathematics and Computer Science  
Ohio Wesleyan University  
Delaware, OH, 43015

Paradigms of Computation, Intermediate Computer Science and Data Structures, Databases

**Dr. Sean McCulloch**

e-mail : [stmccull@owu.edu](mailto:stmccull@owu.edu)

Department of Mathematics and Computer Science  
Ohio Wesleyan University  
Delaware, OH, 43015

Artificial Intelligence, Computer Organization, Algorithms. AI program to play Othello as a semester project.

**Dr. Kathy Radloff (Faculty Advisor)**

e-mail : [kmradloff@owu.edu](mailto:kmradloff@owu.edu)

Department of Mathematics and Computer Science  
Ohio Wesleyan University  
Delaware, OH, 43015

Discrete Mathematics, Graph Theory (Seminar), Combinatorics, Calculus II.

**Dr. Brad Trees**

e-mail : [brtrees@owu.edu](mailto:brtrees@owu.edu)

Department of Physics  
Ohio Wesleyan University  
Delaware, OH, 43015

Co-Authored a paper in Physics Review E.

Supervised my research in Josephson Junctions during summer 2001.

Created a simulation of junction synchronization using FORTRAN 90, a graphical representation of junction behavior,  
Data analysis using SigmaPlot, and Mathematica

### Economics

**Dr. Saif M. Rahman**

e-mail : [msrahman@owu.edu](mailto:msrahman@owu.edu)

Department of Economics  
Ohio Wesleyan University  
Delaware, OH, 43015

Economic Development, Intermediate Microeconomics (Honors), Economic Systems.

**Dr. Alice Simon**

e-mail : [aesimon@owu.edu](mailto:aesimon@owu.edu)

Department of Economics  
Ohio Wesleyan University  
Delaware, OH, 43015

Monetary and Fiscal Economics, Principles of Economics, Internet and Business Choices. Upward Bound.

### Work

**Mrs Deborah Lipscomb**

e-mail : [dblipscomb@owu.edu](mailto:dblipscomb@owu.edu)

Director Upward Bound Program  
Ohio Wesleyan University  
Delaware, OH, 43015

- Created the Upward Bound Webpage
- Tutored Principles of Economics(ECON 110) for UPWARD BOUND.
- Conducted a Work Study Program for High School seniors on Web Design Basics

### Work & Community Service

**Rev Jon Powers**

e-mail : [jrpowers@owu.edu](mailto:jrpowers@owu.edu)

The Chaplain  
Ohio Wesleyan University  
Delaware, OH, 43015

- **Designed and implemented the Chaplain's Office Website. ([www.owu.edu/~chaplain](http://www.owu.edu/~chaplain))**
- **Created a database driven web site for the Peale Library that enables users to search the contents.**  
Restructured, re-categorized and computerized the Chaplain's Library.
- Took part in the Mission trip to Peru and engaged in community building and welfare activities.
- Helped Organize the Annual Methodist Conference in Summer 2001.
- Peer Minister for the Buddhist faith on campus, 2002 FALL - Present.

## **ADDITIONAL WORK EXPERIENCE**

ANNEXURE 2

### **Web Designer/Woltemader Center.**

Woltemader Center, Ohio Wesleyan University

Delaware, OH

Summer 2003

- Designed the website for Woltemede Center, Ohio Wesleyan University.
- Implemented the site using Dreamweaver, Fireworks, Flash, PHP, MySQL

### **Web Designer/ Chaplain's Office**

Chaplain's Office, Ohio Wesleyan University

Delaware, OH

Summer 2003

- Designed the Web Site for Chaplain's Office, Ohio Wesleyan University.
- Implemented the site using Dreamweaver, Fireworks, Flash, PHP, MySQL

### **Web Designer/Tutor, Upward Bound.**

Upward Bound, Ohio Wesleyan University

Delaware, OH

Summer 2002

- Designed the website for Upward Bound, Ohio Wesleyan University.
- Conducted a work study program for high school seniors
- Conducted basic web design classes for high school seniors
- Tutored an introductory college level Economics class (Econ 110).

### **On-Campus Internship : Online Editor, *The Transcript***

Ohio Wesleyan University

Delaware, OH

Fall 2001

- Maintained the online version of *The Transcript*, (<http://transcript.owu.edu/>)

### **Supervisor, Ohio Wesleyan Student Calling Committee**

Mowry Alumni Center, Ohio Wesleyan University

Delaware, OH

Spring 2001, Fall 2001

- Trained and Supervised over 50 student callers
- Maintained a worker friendly environment in the Phone Shop
- Earned **\$43,000** (the highest earnings that semester) as a caller in Fall 2000

### **Microlab Assistant**

InfoSys, Ohio Wesleyan University

Delaware, OH

Fall 2002 - Present

- Provided guidance in various computer software applications. (MS-Office, Codewarrior)
- Taught the use of e-mail and web surfing.
- Located hardware problems and notified relevant authorities.

### **Chaplain's Librarian**

Chaplain's Office, Ohio Wesleyan University

Delaware, OH

2000 – Summer 2001

- Sorted, organized and re-categorized the books in the library
- Created a web based database driven search program using PHP, HTML, and MySQL.

### **Student Services Administrator/Cashier**

NIIT (National Institute of Information Technology), Kandy Center

Kandy, Sri Lanka

Feb 1999 – Feb 2000

- Maintained all student registers, course catalogues, courseware and the (TRM) Technical Reference Manual
- Communicated with head office for certificate and transcript eligibility lists
- Responsible for all cash transactions and for Collection Projections

### **Web Sites I created.**

- My Home Page <http://sahan.org/>
- Chaplain's Office <http://www.owu.edu/~chaplain/> (work in progress)
- Woltemede Center <http://wcebe.owu.edu/index2.html>
- Peale Library [http://www.owu.edu/~chaplain/peal\\_library\\_cc/](http://www.owu.edu/~chaplain/peal_library_cc/)
- Upward Bound <http://upward.owu.edu/>
- Transcript <http://transcript.owu.edu/>
- InfoSys Head Count Page. [http://infosys.owu.edu/lab\\_report/](http://infosys.owu.edu/lab_report/)

### **CLASS PROJECTS**

As a group project for CS340 AI, we created an Artificial Intelligence program in C++ that played Othello against a human player. This project was a good insight to working in a group and sharing responsibility for the overall project. We managed to create a crash-free program that was able to play moderately against a human player.

As a Independent Study Project I am currently working on designing a Neural Network based C++ program that can learn to play Othello.

### **PERSONAL PROJECTS**

All the following projects were done without supervision or formal instruction. I believe these show my ability to complete a goal and to work with enthusiasm and perseverance. Moreover these projects, some of which were later used by the Ohio Wesleyan University, show my ability to work independently and systematically to obtain a finished product.

- **Lego MindStorms**

My fascination with Lego led me to create these Lego models using the Mindstorm set belonging to ACM OWU. I have been interested in non-wheeled motion and both robots achieve motion without wheels.

- **Quadrupod Walker**

This model walks in the manner of a typical four-legged animal. More details can be viewed at my homepage.

<http://sahan.org/files/lego.php>

- **Uni Walker**

This model walks by stepping over itself. It is capable of forward and backward motion and can react to obstacles in its path. More details can be viewed at my homepage.

<http://sahan.org/files/lego.php>

- **Library Search System**

This was my primary attempt at learning PHP. I created web based database driven software that allows the user to search a library system for books by title, author, category and section. Also it allows the administrator to manipulate the records. The system uses MySQL as the backend database and relies on HTML to create the front end with PHP serving as the intermediary. The Peale Chapel Library now uses this program.

A working sample can be viewed at [http://www.owu.edu/~chaplain/peal\\_library\\_cc/](http://www.owu.edu/~chaplain/peal_library_cc/)

- **Head Count Submission System**

This was created as a means to periodically allow lab assistants at the Ohio Wesleyan Computer Labs to record head counts. It also serves to ensure that the lab assistants are present in the labs during their shifts. The system relies on a MySQL database to record the lab assistant submissions and allows the Administrator to download these as **excel** files. Again, the system uses MySQL as the backend database and relies on HTML to create the front end with PHP serving as the intermediary. I am currently working with the InfoSys staff members to transfer this program to the school servers.

A working sample can be viewed at [http://infosys.owu.edu/lab\\_report/](http://infosys.owu.edu/lab_report/)