Dr. NGUYEN Hoang Phuong

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To Dr. Diarmuid UaConaill

Biochemistry Laboratory

Mater Hospital

Dublin 7, Republic of Ireland   Vienna, 27 March 1994

Dear Dr. Diarmuid UaConaill

Let me introduce myself, I am the Head of Medical Informatics Group at National Center for Natural Sciences and Technologies of Vietnam. At present, I am a visiting Scientist at Medical Expert and Knowledge Systems Group, Dept for Medical Computer Sciences, University of Vienna. My main interest is Artificial Intelligence in Medicine and Medical Expert Systems.

I would like to pave a way to establish a cooperation between *Vietnamese scientists* and *scientists of MIA of your country* in *the future* in the field of **Medical Informatics.**

Please, could you consider any possibility to arange for me a short visit of 10 days at your Institution, I will offer a report in any Seminar on **Some Consultation Systems in Oriental and Integrated Medicine for Clinics and Education**. I am sending to you my CV and abstract of proposed report. During the period of my visit, we will discuss on problems of mutual interest and the future cooperation between us.

I am looking forward to receive your reply in the very soon. Please, Letter can address to my **Instutut für Medizinische Computerwissenschaften** in Vienna.

Yours sincerely,

Nguyen Hoang Phuong

CURRICULUM VITAE (Until March 1994)

CIVIL STATUS

Name:	**NGUYEN**
First name:	**Hoang Phuong**
Date of Birth:	4 April 1955
Birth place:	Hanoi, Vietnam
Sex:	Male
Marital status:	Married, 2 children
Home address:	B1, 47-48, Tap The Trung Tu, Hanoi, Vietnam, Tel. (+84)(4) 52 19 19
Employer's address:	National Center for Natural Sciences and Technologies of Vietnam, P.O.Box 626 BoHo, Hanoi, Vietnam
Present address:	Dept for Medical Computer Sciences, University of Vienna, Währinger Gürtel 18-20, A-1090 Vienna, Austria. Tel.: (+43)(1) 40400- 21612 Fax: (+43)(1) 405 29 88

PRESENT POSITION

Visitor at *Medical Expert and Knowledge-Based Systems Group*, Dept for Medical Computer Sciences, University of Vienna

EDUCATIONAL BACKGROUND

- Diplom on *applicable mathematics*, Taskent State University, Ex-UzSSR, 1974-1979
- Diplom Thesis: *Building the Packet of Applied Programmes (PAP) for Information Recognition and Classification in Class of the Algorithms for Calculation of the generated Evaluations*, Taskent State University, Ex-UzSSR, 1979
- Training Course on *Image Processing for Remote Sensing*, Robotron Company, Berlin, Ex-GDR, May-August, 1983
- Training Course on *Image Processing in Diverse Fields*, in ZKI (Zentralinstitut für Kybernetik und Informationsprozesse), Berlin, Ex-GDR, April, 1987
- Training Course on *Practical Acupuncture, Massage and Acupression*, Hospital of Traditional Medicine, Hanoi, May-August, 1990
- National Training Workshop on *Analgesic Acupuncture*, 06-26 Nov., 1991, Hanoi, Vietnam

MAIN SUBJECTS OF RESEARCH

- *Artificial Intelligence in Medicine and Medical Expert and Knowledge-Based Systems*
- *Integration of Oriental and Occidental Medicine in Diagnosis and Therapy (Drugs, Herbal Plants, Acupuncture, Massage & Acupression, Breathing Controling..)*

LANGUAGES English, German, Russian, French, Czech, Vietnamese

PROGRAMMING LANGUAGES

Prolog, Pascal, C, Fortran, PL/1, Visual Basic

PROFESSIONAL EXPERIENCES

December 1979, involved in *National Center for Scientific Research of Vietnam*, Institute of Computer Sciences and Cybernetics as scientific researcher and dealt with *Pattern Recognition Methods applied in Geological Survey and Oil Detection*. May-August, 1983: Training Course on Image Processing for Remote Sensing, Robotron, Berlin. 1986-1988: Visiting Scientist at International Laboratory on Artificial Intelligence, Institute of Technical Cybernetics, Slovak Academy of Sciences, Bratislava. April, 1987: Training Course on Image Processing in Diverse Fields, ZKI, Berlin, Ex-GDR. Sep.5-Nov.4,1990: Visitor at I.C.T.P., Trieste, Italy. 21 Feb.- 4 March 1994: Visitor at Institute of Computer Science, Czech Academy of Sciences, Prague. Jan. 1993 - now: Visitor at Dept for Medical Computer Sciences, University of Vienna. Main interest is *AI in Medicine and Development of Expert Systems integrating Occidental and Oriental Medicine*.

CONFERENCES and FELLOWSHIPS

- Participated in Conference of *Institute of Computer Science*, Hanoi, Vietnam, Oct., 1981

- Participated in IFIP Inter. Working Conference on *the System modelling and optimization*, Hanoi, Vietnam, Jan., 1983

- Participated in 1th Conference on *Mathematics* of Vietnam, Hanoi, Vietnam, 1984

- Participated in Working Conference on Complex Scientific Projects KNP-1 and KNP-2: *Knowledge and Image Processing Systems*. Commitee for New Generation Computing Systems of the Academies of Sciences. Smolence, Czechoslovakia, Nov. 24-28, 1986

- Participated in 2nd Int. Conference on *Computer Analysis and Image Processing*: CAIP'87, Sep. 2-4, 1987, Wisma, Ex-GDR

- Participated in 1st Inter. Seminar on *Artificial Intelligence and Applications*, Sep.21-25, 1987, Varna, Bulgaria

- Participated in 4th Inter. Conference on *Artificial Intelligence and Information-Control Systems of Robots*, Oct. 19-23, 1987, Smolence, Ex-Czechoslovakia

- Participated in Conference of Institute of *Computer Science*,Hanoi, Vietnam,December 1989

- Participated in 4th Conference on *Mathematics* of Vietnam, Sep.4-7, 1990, Hanoi, Vietnam

- Participated in College on *Neurophysics*, 1-19 Oct. 1990, I.T.C.P., Trieste, Italy

- Visitor at Inter. Basic Lab on *AI*, Inst. of Technical Cybernetics, SAS, Bratislava, 86-88

- Granted by Federation Schemes, *I.C.T.P.*, Trieste, Italy, Sep. 5-Nov. 4, 1990

- Lecture on *Informatics in Analgesic Acupuncture*, National Training Workshop on Analgesic Acupuncture, Nov. 6-26, 1991, Hanoi, Vietnam

- Participated in Symposium on *Some Problems of Macro-Economy and Economic Statistics*, 19-20 March, 1992, Hanoi, Vietnam

- Participated in IFIP WC: *Lessons from Learning*, Sep. 5-9, 1993, Archamps, France

- Participated in 4th Annual Meeting of *ESCTAIC*, Golgegg Castle Salzburg-Austria, Oct.6-9, 1993

REPORTS and PUBLICATIONS

1. Bach Hung Khang, Ho Tu Bao, NGUYEN HOANG PHUONG,... *First Application Results of Recognition Methods in Geological Survey.* Conf. of Inst. of Comp. Scien.&Cyber.,Hanoi, Oct., 1981

2. Bach Hung Khang, Hoang Kiem, Ho Tu Bao, NGUYEN HOANG PHUONG,... *On the Automatical Generating System of Effect Recognition Procedures. The Package RECLASS and its Applications.* In IFIP Inter. Working Conference on *the System Modelling and Optimization,* Hanoi, Jan., 1983

3. Bach Hung Khang, Luong Chi Mai, NGUYEN HOANG PHUONG,.. *On using the image processing system ROBOTRON A6471 for building an actual maps.* Report in Conf. of *Mathematics,* Hanoi, 1984.

4. NGUYEN HOANG PHUONG, V.Polak, L.Tovarek. *Operation Logic in the field of Expert System.* In Proc. of Working Conf. on Complex Scientific Projects KNP-1 and KNP-2, *Knowledge and Image Processing Systems,* Commitee for New Generation Computing Systems of the Academies of Sciences, Smolence, Ex- Czechoslovakia, Nov.24-28,1986,67-71 (North-Holland)

5. NGUYEN HOANG PHUONG, Bach Hung Khang. *An Implementation of Medical Diagnostic System using Personal Computer.* In Proc. of Inter. Conf. *PERCOM'87,* April, 1987, Sophia, Bulgaria, pp. 108

6. NGUYEN HOANG PHUONG, V.Polak, L.Tovarek. *Image Processing in OLS-personality.* In Proc. of Absts on 2nd Inter. Conf. *CAIP'87,* Sep. 2-4, 1987, Wisma, Ex-GDR, 133-134

7. NGUYEN HOANG PHUONG et al. *Knowledge Based System for Recognition of Human Emotions.* In Proc. 1nd Inter. Seminar on *Artificial Intelligence and Applications,* Sep 21-25, 1987, Varna, Bulgaria, 4 pages

8. NGUYEN HOANG PHUONG, V.Polak, L.Tovarek, V. Ilienkova. *An approach to building OLS-expert for Intelligence Services.* Report in Proc. 1nd Inter. Seminar on *Artificial Intelligence and Applications,* Sep. 21-25, 1987, Varna, Bulgaria, 4 pages

9. NGUYEN HOANG PHUONG, V.Polak, L.Tovarek. *Principles of OLS's knowledge about own programs.* In proc. of 4nd Inter. Conference on *Artificial Intelligence and Information-Control System of Robots,* Oct.19-23,1987,Smolence, Ex-Czechoslovakia,387-391

10. NGUYEN HOANG PHUONG, V.Polak. *Object-Property-Value Task of OLS-expert.* Inst. Techn. Cyb. of Slovak Acad. Sci., *Techn. Report RM-AI-48,* Bratislava, May 1987, 1-26

11. NGUYEN HOANG PHUONG. *New Generation Expert Systems - A Perspective Future of Modern Software Technology.* In Proc. of *Programming School on Image Analysis,* 21-29 May, 1988, Varna, Bulgaria, 11-14

12. NGUYEN HOANG PHUONG. *Knowledge - Based Facial Portrait Analysis in OLS-personality,* Inst. Techn. Cyb., Slovak Acad. Sci., Bratislava, *Tech. Report,* 1987, 4 pages

13. NGUYEN HOANG PHUONG. *Synthesis of Possibilities of Facial Portrait.* Accepted Report for presentation in *Conf. on AI and Applications,* Prague,10-12 March,1988, 6 pages

14. NGUYEN HOANG PHUONG, Le Dinh Long, Nguyen Van Thang. *VIMEDA-A Diagnosis and Therapy Advice System for Headache Forms by Traditional Medicine.* Rep. of Conf. of *Inst. of Computer Sciences,* Dec. 1989, Hanoi, Vietnam

15. Bach Hung Khang, NGUYEN HOANG PHUONG, Le Dinh Long, Nguyen Quang Hoa at al. *On Study of Cold-Heat Diagnostic Standardization in Traditional Vietnamese Medicine.* In Proc.of 4th *Conference of Mathematics* of Vietnam, 4-7 Sep., 1990, Hanoi, Vietnam, 111-112

16. NGUYEN HOANG PHUONG, Le Dinh Long, Nguyen Quang Hoa. *A Statistical Approach to Traditional Vietnamese Medical Diagnoses Standardization.* IC/90/404, *INTERNAL REPORT,* International Center for Theoretical Physics, MIRAMARE-TRIESTE, December 1990, 11 pages

17. NGUYEN HOANG PHUONG, Le Dinh Long, Tran Quang Minh, Nguyen Nhu Oanh, Nguyen Manh Phat. *CHROACU- A Therapy Advice System Based on Chrono-Acupuncture Using Acupuncture Method of LingGuiBaFa.* Report in Conf. of Inst. Comput. Scien., Dec.1989, Hanoi, Vietnam

18. NGUYEN HOANG PHUONG,Le Dinh Long, Tran Quang Minh, Nguyen Van Thang, Nguyen Nhu Oanh. *MASSI-A Therapy Advice System Based on Massage and Acupression,* Department for Medical Computer Sciences, University of Vienna, *Report No. MES-3/1994,* February 1994, 6 pages and appear in Proc. *of APITITE' 94* , 28 June-2 July, 1994, Brisbane, Australia.

19. NGUYEN HOANG PHUONG, Le Dinh Long, Tran Quang Minh, Nguyen Nhu Oanh, Nguyen Van Thang. CHROMASSI - A Therapy Advice System Based on Chrono-Massage and Acupression Using Method of ZiWuLiuZhu. Report in Conf. of Inst. Comput. Scien. Dec. 1989, Hanoi, Vietnam

20. NGUYEN HOANG PHUONG. *Approach to Combination of Occidental and Oriental Medicine in Diagnosis and Treatment.* Department for Medical Computer Sciences, University of Vienna, *Report No. MES-8/1993,* December 1993, 10 pages.

21. Bach Hung Khang, Pham Ngoc Khoi, NGUYEN HOANG PHUONG, Le Dinh Long: *PROLOG and EXPERT SYSTEMS,* Volum 1, *Inst. Compt. Scien.&Cyb. Press,* Sep. 1988, Hanoi, Vietnam, 268 pages

22. NGUYEN HOANG PHUONG, Tran Quang Minh, Nguyen Nhu Oanh, Pham Ngoc Khoi: *MASSI' s User Manual,* Version 1.0, Inst. Comput. Scien., Hanoi, Sep. 1989, 50 pages

23. NGUYEN HOANG PHUONG, Tran Quang Minh, Nguyen Nhu Oanh, Pham Ngoc Khoi: *ACU's User Manual,* Version 1.0, Inst. Comput. Scien., Hanoi, Sep. 1989, 52 pages

24. NGUYEN HOANG PHUONG et al. *First Study and Application Results of Informatics in Traditional Vietnamese Medicine.* In Proc.*Conf. of Inst. Comput. Scien.,* Hanoi, Dec.1989,1-2

25. NGUYEN HOANG PHUONG et al. *Development of Traditional Vietnamese Medical Knowledge Systems. In Jour of Informatics and Cybernetics,* Hanoi, Num. 4, 1991, 15-23

26. NGUYEN HOANG PHUONG, Tran Quang Minh, Nguyen Van Thang. *INSOMNIA - A Therapy Advice System Integrating Oriental and Occidental Medicine.* Report in Conf. of Center for Systems & Management Research, Hanoi, Jan., 1992

27. NGUYEN HOANG PHUONG, Tran Quang Minh, Nguyen Van Thang. INSOMNIA's. User's Manual, Version 1.0, Center for Systems & Management Research, Hanoi, Vietnam, Oct. 1990, 36 pages

28. NGUYEN HOANG PHUONG, Nguyen Thuong Xuan. *An approach to Developing a Knowledge Based System for Image Analysis of Neurosurgery.* In Proc. of Inter. *Conf on Image Processing and Remote Sensing (IPRS),* Novosibirsk, Ex-USSR, August 19-21, 1990,191-192

29. NGUYEN HOANG PHUONG, Hoang Trung Lap, Dang Huu Dao. *LES - Knowledge Based System for Land Evaluation*. Report in Conf. of Center for Systems & Management Research, Hanoi, Jan. 1992

30. NGUYEN HOANG PHUONG. *ANACU - A Computer Program for Teaching Vietnamese Analsegic Acupuncture*. Department of Medical Computer Sciences, University of Vienna, *Report No. MES-6/1993*, Decem. 1993, 26 pages. and in Absts. of *the ESCTAIC Fourth Annual Meeting*, 6-9 Oct., 1993, Goldegg Castle Salzburg, Austria, P1

31.Nguyen Thai Hung, Ly Thanh Trung, Hoang Huu Tien, Ngo Tran Anh, NGUYEN HOANG PHUONG, Nguyen Quang Truong. *Development of a Therapy Support System using Electronic Frequency Stimulations*. In Absts of Conf. of Institute of Informatics, Hanoi, 1990, 24-25

32. NGUYEN HOANG PHUONG. *Application of Artificial Intelligence in Research and Education of Acupuncture*. Jour of *Acupuncture* of Vietnam, Num. 3, 1991, pp. 28

33. NGUYEN HOANG PHUONG. *Artificial Intelligence in Economics and Management*. In Proc. of Symposium on *Some Problems of Macro-Economy and Economic Statistics*, 19-20 March 1992, Hanoi, Vietnam, 119-127

34. NGUYEN HOANG PHUONG. *Some Artificial Intelligence Applications to Learning Oriental and Integrated Medicine*. Department for Medical Computer Sciences, University of Vienna, *Report No. MES-7/1993*, December 1993, 20 pages

35. Dang Huu Dao, Hoang Van Lai, Phan Dinh Loi, NGUYEN HOANG PHUONG. *On Some Macro-Economy Development showings of Me-kong Delta*. In Proc. of *Symposiun on Some Problems of Macro-Economy and Economic Statistics*, 19-20 March 1992, Hanoi, Vietnam, 193-200

36. Mai Ha, NGUYEN HOANG PHUONG. *The Decision-Support System in Making Strategy for Science and Technology Development*, DSMFSS, Hanoi, 1992, 8 pages

37. NGUYEN HOANG PHUONG. *Some Consultation Systems in Oriental and Integrated Medicine for Clinics and Education*. Report submitted for *39 Jahrestagung der Deutshen Gesellschaft für Medizinische Informatik, Biometrie und Epidemiologie*, Dresden, 18-22 September, 1994

38. NGUYEN HOANG PHUONG, Nguyen Thuong Xuan. *The European Medicine and his relations to the Chinese Medicine in the 15 th century*. Report submitted for *IASTAM' 94*, August 19-21, 1994, Tokyo, Japan

39. NGUYEN HOANG PHUONG. *Influence of the Religions in Traditional Vietnamese Medicine*. Report submited for *IASTAM' 94*, August 19-21, 1994, Tokyo, Japan

40. NGUYEN HOANG PHUONG. *Teaching Traditional Vietnamese Medicine using Computer*. Report submitted for *IASTAM' 94*, August 19-21, 1994, Tokyo, Japan

41. NGUYEN HOANG PHUONG, Le Dinh Long, Tran Quang Minh, Nguyen Van Thang. *A Chrono-Acupuncture Based System in Teaching Vietnamese Analsegic Acupuncture*. Report submitted for *ESCTAIC 5th Annual Meeting*, Halkidiki, Greece, 25-28 September 1994

42. NGUYEN HOANG PHUONG, Le Dinh Long, Tran Quang Minh, Nguyen Nhu Oanh, Nguyen Manh Phat. *ACU - A Therapy Advice System Based on Acupuncture and Moxibustion* (to appear)

Report

Some Consultation Systems in Oriental and Integrated Medicine for Clinics and Education

Nguyen Hoang Phuong[1]

Visitor

Dept for Medical Computer Sciences

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The Oriental Medicine has a history of more than thousands years. Unlike western medicine which is based on the theories of modern bio-medical sciences. The Oriental Medicine has its own unique theory system (Yin-Yang, five elements, the meridians and collaterals system...) which is established on empirical basis of clinical practice. There are many classic works of Oriental Medicine, but, in fact, many famous doctors of Oriental Medicine in the past, for one reason or another, did not write down systematic monographs to record their valuable medical knowledge and clinical experience.

Therefore the structure of the traditional medical practices with computer techniques, especially the regards to integrating Eastern medicine into Western medical concepts using AI Techniques is the most serious problem facing us.

In this talk, I will discuss the advantages of the integration problem of Occidental and Oriental Medicine in Diagnosis and Treatment and present some consultation systems in Acupuncture, Massage and Acupression, Analsegic Acupuncture...and their potentials for the application in medical settings and classrooms.

References

Nguyen Hoang Phuong (1993). **ANACU - A Computer Program for Teaching Vietnamese Analgesic Acupuncture**. *Abstracts of ESCTAIC - Fourth Annual Meeting*, Goldegg Castle, Salzburg, Austria, 6. - 9. October 1993, P1.

Nguyen Hoang Phuong (1993). Some Artificial Intelligence Applications to Learning Oriental and Integrated Medicine. *Report No. MES-7/1993*, Department for Medical Computer Sciences, University of Vienna, Austria, 20 pages.

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Biochemistry Laboratory,
Mater Hospital,
Dublin 7,
Ireland,
22nd April 1994.

Dr. Nguyen Hoang Phuong,
Universität Wien,
Institut für Medizinische Computerwissenschaften,
A-1090 Wien, Währinger Gürtel 18-20.

Dear Dr. Nguyen,

Thank you for your letter of 27 March. The Health Care Group of the Irish Computer Society would be pleased to welcome you if you decide to visit Ireland, and would arrange for you to address the group, to see computer developments in various hospitals, and to meet with interested scientists.

I must regretfully point out, however, that the group does not have access to funds to support travel or accommodation.

If you decide to come to Ireland, please let me know the proposed dates of your visit, and I shall make the necessary arrangements.

Yours sincerely,