CURRICULUM VITAE

1. PERSONAL:

Name: DUONG Ngoc Hai

Nationality: Vietnamese

Languages: Vietnamese (mother tongue); English; Russian and

German.

Present job: Prof., Dr.Sc.,

Vice-President, Vietnam Academy of Science and

Technology (VAST).

Personal address: 18 Hoang Quoc Viet Road, Cau-Giay, Hanoi,

Vietnam.

Phone: (84-4) 37567538; Fax: (84-4) 37912613. E-mail: dnhai@imech.ac.vn; dnhai@vast.ac.vn

2. DEGREES:

2003: Full professor.

1996: Associate professor.

1990: Dr.Sc., Russian Academy of Science (Russia).

1982: PhD, Moscow State University M.V.Lomonosov (Russia).

1979: Master, Mechanical Engineering, Moscow State University M.V.Lomonosov.

3. AREAS OF SPECIFICATION

Gas and Fluid Dynamics, Multiphase Flows, Heat-Mass Transfer Theory, Computational Fluid Dynamics.

Applications: Nuclear Safety Thermal Hydraulics, Oil-Gas Mechanics, Environment Mechanics, Flows around Moving/Flying Objects.

4. COUNTRIES OF WORK EXPERIENCES.

1983-1985: Post-doc. fellow in Moscow State University named after Lomonosov, **Russia**.

1988-1990: Visiting senior scientist, TIMMS, Russian Academy of Sciences.

1990-1992: Alexander von Humboldt fellow, Institute of Applied Thermo-Fluid Dynamics (IATF), Nuclear Research Center of Karlsruhe, **FRGermany**.

April 1992: Visiting senior scientist, Eindhoven Univ. of Technology, **The Netherlands**

Nov.1995: Visiting senior scientist, CSIRO, Inst. of Natural Resources and Environment, Melbourne, **Australia.**

March-Aug.1998: Alexander von Humboldt fellow, IATF, Nuclear Research Center of Karlsruhe, **FRGermany**.

- July 1998: Visiting scientist, Institute of Fluid Mechanics, Toulouse, **France**.
- Junly 2000-June 2001: Guest Prof., Research Laboratory for Nuclear Reactors, Tokyo Institute of Technology, **Japan**.
- 2002-present: Visiting Korea, Japan, China, Australia, USA, Russian Federation

and took part in International Conferences in a number of countries.

5. OTHER RELATED EXPERIENCE & ACTIVITIES:

4.2009 – present: Vice-President, VAST

7.2008 – 11.2009: Director of Institute of Mechanics, VAST.

2004-7.2008: Director of Dept. Application and Development Technology, VAST.

2003-present: Prof. of College of Technology, Hanoi National University.

1998-present: Deputy editor-in-Chief, Vietnam Journal of Mechanics.

1997-2003: Deputy Director, Institute of Mechanics, VAST.

1992-present: Member of Executive Committee of Vietnamese Association on Mechanics (VAM).

2003- present: Member of Executive Committee of Vietnamese Association on Nuclear Energy.

Publication list

By Duong Ngoc Hai Vietnam Academy of Science and Technology

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- 2. Khabeev N.S., Duong Ngoc Hai. Numerical Modeling Shock Waves in Vapour-Liquid Flow. In: Non-Equilibrium Processes in Single- and Two-Phase Systems, ed. V.E.Nakoryakov, Novosibirsk, Siberia Branch of Russian Academy of Sciences, Inst. of Thermal Physics, (1981).
- 3. Duong Ngoc Hai, Nigmatulin R.I., Khabeev N.S. Structure of Shock Wave in Vapour-Liquid Media. Russian Academy of Sciences, Akust. J., Vol.28, No.3, (1982).
- 4. Khabeev N.S., Duong Ngoc Hai. Wave Dynamics of Bubbly Vapour-Liquid Medium. Moscow, Lomonosov Moscow State University, No.2616, (1982).
- 5. Duong Ngoc Hai, Nigmatulin R.I., Khabeev N.S. The Structure of Shock Waves in a Liquid with Vapour Bubbles. Russian Academy of Sciences, J. Mekhanika Zhidkosti i Gaza, No.2, Vol.17, (1982) (in Russian) and Translation in English: New York, J. Fluid Dynamics, Sept. (1982).
- 6. Duong Ngoc Hai. Investigation of Wave Processes in Vapour-Liquid Media with Bubbly Structures. Moscow, Lomonosov Moscow State University, Dept. of Mathematics and Mechanics, (1982).
- 7. Duong Ngoc Hai, Nigmatulin R.I., Khabeev N.S. The Propagation of Acoustic Signal in Liquid with Vapour Bubbles. In: Physics of Acoustic and Hydrodynamic Phenomena and Opto-Acoustic, Tashkent, (1982).
- 8. Nigmatulin R.I., Khabeev N.S., Duong Ngoc Hai. Un-Steady Waves in Vapour-Liquid Media with Bubbly Structures. In: Thermal Physics and Hydrodynamics of Boiling and Condensation Processes, Riga, (1982).
- 9. Duong Ngoc Hai, Khabeev N.S. Un-Steady Processes in Boiling Flows. Novosibirsk, Siberia Branch of Russian Academy of Sciences, Inst. of Thermal Physics, No.96-83, (1983).
- 10. Duong Ngoc Hai, Nigmatulin R.I., Khabeev N.S. An Approach to the Thermal Problem for a Vapor-Liquid Medium with a Bubble Structure. Russian Academy of Sciences, J. Teplophysica Vysokix Temperatur, No.1, Vol.21, (1983) (in Russian); Translation in English: New York, J. High Temperature, July (1983).
- 11. Duong Ngoc Hai, Khabeev N.S. The Propagation of a Shock Wave and Pulses in Vapour-Liquid Media. In: Un-Steady Flows of Multiphase Systems with Physico-Chemical Transfers. Moscow, Lomonosov Moscow State University, (1983).
- 12. Duong Ngoc Hai. The Un-Steady Flow of Liquid at the Boiling Temperature. J.Mechanics, Vol.VI, No.4, (1984).
- 13. Duong Ngoc Hai, Nigmatulin R.I., Khabeev N.S. Un-Steady Waves in a Liquid Containing Vapour Bubbles. Russian Academy of Sciences, J. Mekhanika Zhidkosti i Gaza, No.5, Vol.19, (1984) (in Russian) and Translation in English: New York, J. Fluid Dynamics, March (1985).
- 14. Duong Ngoc Hai. The Mathematical Modeling Volumetrically Heating Reservoir by High-Frequency Electro-Magnetic Field. Moscow, Lomonosov Moscow State University, No.3298, (1985).

- 15. Duong Ngoc Hai, Khabeev N.S. The Evolution of Shock Waves and Finite Duration Pulses in a Liquid with Vapour Bubbles. New York, J. Fluid Mechanics, Vol.14, No.3, June (1985).
- Duong Ngoc Hai, Usmanov R. Numerical Modeling Heat and Mass Transfer Processes in a Saturated Porous Medium with a Volume Source. Moscow, Lomonosov Moscow State University, No.3305 (1986).
- 17. Duong Ngoc Hai, Nguyen Trong Hanh et al. The Technology of Extraction and Transport of High-Viscous High-Paraffin Crude Oil. Hanoi, IoM, (1987).
- 18. Duong Ngoc Hai. The Shock Waves in Mixtures of a Fluid with Gas or Vapour Bubbles. J.Mechanics, Vol.IX, No.4, (1987).
- Duong Ngoc Hai, Kutushev A.G., Nigmatulin R.I. On the Theory of the Filtration of a Liquid in Porous Medium under Bulk Heating by a High Frequency Electro-Magnetic Fields. J. PMM, No.1, Vol.51, (1987) (in Russian); Translation in English: Oxford, Pergamon Press, J. Applied Mathematics and Mechanics, March (1988), 20-28.
- 20. Duong Ngoc Hai, Musayev N.D., Nigmatulin R.I. The Self-Similar Solution of the Problems of Heat and Mass Transfer in a Saturated Porous Medium with a Volume Heat Source. J. PMM, No.6, Vol.51, 1987 (in Russian); Translation in English: Oxford, Pergamon Press, J.Applied Mathematics and Mechanics, March (1989), 749-757.
- 21. Duong Ngoc Hai, Musaev A.K., Mamytov A.M. The Amplification of Shock Wave in a Bubbly Liquid. Moscow, Lomonosov Moscow State University, No.3609, (1988).
- 22. Nigmatulin R.I., Khabeev N.S., Duong Ngoc Hai. Waves in Liquid with Vapor Bubbles. Cambridge, J. Fluid Mechanics, Vol.186, (1988).
- 23. Duong Ngoc Hai. The Steady Solution of the Heat and Mass Transfer Problem in Saturated Porous Medium with Volume Source. J.Mechanics, Vol.10, No.4, (1988).
- 24. Duong Ngoc Hai. On the Self-Similar Solution of the Un-Steady Filtration Problem of a Liquid in a Saturated Porous Medium with High Frequency Electro-Magnetic Field Source. In: Numerical Analysis, Mathematical Modeling and Its Application in Mechanics. Moscow, Lomonosov Moscow State University, (1988).
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- 27. Duong Ngoc Hai. The Numerical Method Solving the Heat and Mass Transfer Problem in a Porous Medium with Moving Boundary. J. Mech., Vol.XI, No.4, (1989).
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- 31. Nigmatulin R.I., Duong Ngoc Hai, Fedorov K.M., Kislitcin A.A. Mechanics, Heat and Mass Transfer in Saturated Porous Media. Application to Petroleum Technology. In: Convective Heat and Mass Transfer in Porous Media. Eds. S.Kakaç, B.Kilkiş, F.A.Kulacki, F.Arinç, NATO ASI Series E 196, Netherland, Kluwer Pub. Co., (1991), 939-961.
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- 37. Duong Ngoc Hai, Nguyen Van Diep, Nguyen The Duc. Numerical Modeling and Diagnose of Air Pollution. Proc. of Nat. Conf. on "Environment Protection and Sustainable Development", Hanoi, (1995).
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- 41. Duong Ngoc Hai, Dang The Ba. Filtration of the Three Phase Oil-Water-Gas in a Porous Medium. Proc. of IV-th Nat. Conf. on Gas and Hydro-Dynamics, Hanoi, (1995).
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- 45. Duong Ngoc Hai, Nguyen The Duc, Le Trinh. Wind Field over Complex Terrain and Air Quality Modeling. J. Mech., Vol.XIX, No.4, (1997), 29-38.

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- 59. Duong Ngoc Hai and Nguyen Van Tuan. Shock Adiabatic Analysis for Mixture of Liquid and Gas of Two Components. J. Mech., Vol.22, No.2, (2000), 101-110.
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- 62. Duong Ngoc Hai, Nguyen The Duc. A Three Dimensional Non-Hydrostatic Model for Turbulent Air Flow. J.Mechanics, Vol.22, No.3, (2000).
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- 66. Duong Ngoc Hai, Nguyen The Duc. Investigation of Recirculation Zone behind the Cube Obstacle for Neutral Atmospheric Boundary Layer. In: Proc. of Conf. on Gas-Fluid Mechanics and New Technology, Langco-Hue, July 2001, Hanoi 2002, Tr.130-140.
- 67. Duong Ngoc Hai et al. Modeling Three Phase Filtration Flow and Application to Bach-ho Reservoir. In: Proc. of Conf. on Gas-Fluid Mechanics and New Technology, Langco-Hue, July 2001, Hanoi 2002, tr.87-101.
- 68. Duong Ngoc Hai, Nguyen Van Tuan. Some Study Results of Shock Waves in Fluid and Two-Component Mixture. Proc. of Conf. on Engineering Mechanics, Hanoi, October 2001, 82-87.
- 69. Duong Ngoc Hai. Atomic Energy Nuclear Safety and Some Problems of Thermal Hydraulics. Proc. of Conf. on Engineering Mechanics, Hanoi, October 2001, 68-74.
- 70. Duong Ngoc Hai, Nguyen The Duc. Calculation of Wind Field and Pollutant Dispersion nearby Obstacle using Model k-ε. Proc. of Conf. on Engineering Mechanics, Hanoi, October 2001.
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- 73. Duong Ngoc Hai, Nguyen The Duc. Regression Algorithm for Problem of Finding the Optimal Manegement of Injection and Production Wells. Proc. of Conf. 20 Annivesary of JV VSP. Vungtau, November 2001.
- 74. Duong Ngoc Hai. Power Generating and Environmental Problems in Vietnam. Proc. of 1-st Asian Specialist Meeting on Small-Medium Sized LWR Development, Bangkok, November 2001.
- 75. Duong Ngoc Hai, Nguyen The Duc. Three Dimensional Non-Hydrostatic Model of Turbulent Atmospheric Boundary Layer. Proc. of The 8th Intern. Symposium on "Flow Modeling and Turbulence Measurements", Ichigaya, Tokyo, Dec. 4-6 (2001). In: Advances in Fluid Modeling and Turbulence Measurements, Singapore, World Scientific Pub. Co., 2002, 711-718.
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- 81. Duong Ngoc Hai, Nguyen The Duc. Investigation of Recirculation Zone behind the Cube Obstacle for Neutral Atmospheric Boundary Layer. Proc. of Conf. on Gas-Fluid Mechanics and New Techn., Hanoi, 2002, 130-140.
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- Mixtures of Liquid with Vapour Bubbles. Proc. of VII-th National Conf. on Mechanics, Vol. 4, NXB DH QG Hanoi, Hanoi, 2003, 165-176.
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 Flying Object Wing in the Under Sonic Air Flows.
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- 92. Hai Ngoc DUONG, Tuan Van NGUYEN. Numerical Study of Wave Interaction Processes in Liquid-Vapour Bubble Mixtures. Proceedings of "The 2nd Asia-Pacific Workshop on Marine Hydrodynamics" APHydro-2004, Busan, korea, June 21-22, 2004, pp.79-83.
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- 95. Duong Ngoc Hai, Nguyen Van Tuan. Waves Reflected by Solid Wall and Wave Interaction in Vapour Bubbly Liquids. Proc. of "The 6th International Conf. on Nuclear Thermal Hydraulic, Operation and Safety NUTHOS-6", Nara, Japan, October 2004, Paper ID. N6P016.
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- 98. Dương Ngọc Hải, Đặng Thế Ba, Hà Công Tú, Hà Ngọc Hiến. Mô phỏng dòng chảy 3 pha dầu-khínước trong via nứt . Tạp chí khoa học kỹ thuật, Học viện KTQS, Số 109 (IV-2004) pp.48-55.
- 99. Nguyễn Thế Đức, Dương Ngọc Hải. Phát triển phương pháp dự báo phân bố lượng nước bơm ép tối ưu sử dụng phần mềm tính via và thuật toán phân tích hồi quy. Tuyến tập báo cáo Hội nghị KHCN "30 năm Dầu khí Việt Nam: Cơ hội mới, thách thức mới", Hà Nội, 24-25/08/2005, Quyển 1, pp. 694-702.
- 100. Đặng Thế Ba, Dương Ngọc Hải. Mô phỏng số dòng chảy nhiều pha tới đáy giếng trong giếng khai thác gaslift gián đoạn tại các giếng mỏ Bạch Hổ. Tuyển tập báo cáo Hội nghị KHCN "30 năm Dầu khí Việt Nam: Cơ hôi mới, thách thức mới", Hà Nôi, 24-25/08/2005, Quyển 1, pp. 877-885.
- 101. Nguyễn Thế Đức, Dương Ngọc Hải. Tính toán dòng bao quanh vật thể chuyển động dựa trên lời giải của hệ phương trình Navier-Stokes không nén được. Kỷ yếu Hội thảo Toàn quốc "Cơ học và Khí cụ bay có điều khiển" Lần thứ Nhất, Hà Nội, 27/05/2005, pp.53-60.
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