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Dr. Mohammad A. Badri is an expert in computational fluid dynamics (CFD), Modeling of Environmental Contaminants and Renewable Energies. He directs hydrodynamics teams in some major projects absorbed funds from various industries. He develops systems which currently some of them are in successful operation within industries cited. Dr. Badri is a member of Scientific Industrial organization (SCI), Editorial Board of Journal of water resources & ocean science and editorial boards of several journals such as Petroleum science & engineering, Horizon Research Publishing, World Academic Publishing, Energy Efficiency, Open Fuels & Energy Science, Bentham Science Publishers, Industrial Robot.

EDUCATION

Ph. D. Mechanical Engineering (2009), Isfahan University of Technology (IUT), Isfahan, IRAN.

M. Sc. Mechanical Engineering (1993), IUT, Isfahan, IRAN.

B. Sc. Mechanical Engineering (1985), IUT, Isfahan, IRAN.

PROFESSIONAL EXPERIENCE

- Directing the hydrodynamics teams resulted to absorb some major projects and fund from various off-shores and sub-sea industries.
- Developing systems which currently some of them are in successful operation within industries leaded to mass product.
- Publishing about 100 scientific papers.
- Conducting of many graduated students.
- Consulting the Scientific Town of Isfahan leading to activate over 200 Business Innovation Centers (BICs).
- Consulting some related industries towards their sustainability.

AREAS OF SPECIALIZATION AND INTEREST

- Modeling of Environmental Contaminants
- Computational Fluid Dynamics (CFD)
- Renewable Energies

SELECTED PUBLICATIONS

(over 40 journal and 60 conference proceedings)

- Nikpour A. H., Moghim M. N., **Badri M. A.,** Experimental Study on Trapezoidal Floating Breakwaters, China Ocean Eng., 2019, Volume 33, No. 1, pp 103-113.
- Hakimzadeh H.**, Badri M. A.,** Torabi Azad M., Azarsina F., Ezam M., Effects of marine condition on the speed and fuel consumption of a fully – loaded VLCC, Trans RINA, Vol 160, Part A4, Intl. J. Maritime Eng, J. ISSN: 1740-0716, 1479-8751, pp 299-310, 2018.

- **Badri, M. A.,** Sedaghat, A., Application of Genetic Algorithm & Analytic Hierarchy Process to Generate an Oil Spill Risk Map, J. of Aquaculture & Marine Biology, Vol. 6, Issue 1, pp. 1-6, Jul. 2017.
- **Badri, M. A.,** Faghihi Fard, M., Numerical Simulation of Oil Pollution due to Optimum Pattern of Turbulent Flow and Effect of Wind & Tide, Research in Marine Sciences, Vol. 2, Issue 2, pp. 67-77, 2017.
- **Badri, M. A.,** Faghihi Fard, M., Simulation of Oil Pollution in the Persian Gulf near Assaluyeh Oil Terminal, Marine Pollution Bulletin, Vol. 105, pp. 143-149, Nov. 2016.
- Fakhari, A., Mostashfi, A., **Badri, M. A.,** Design and Manufacturing of a Novel High Voltage Power Transmission Lines Inspection Robot (LinBot), ICRMM 2016, France. Published in: Intl. J. of Mechanical and Mechatronics Eng., Vol. 3, No, 5, 2016.
- Akbarzadeh, P., Molana, P., **Badri, M. A.,** Determining resistance coefficient for series 60 vessels using numerical and experimental modeling, Ships and offshore Structures, Taylor & Francis, Ref.: Ms. No. SAOS.563R2, Vol. 114, No. 1-2, pp. 17-34, Nov. 2015.
- Zamani, A. R., **Badri, M. A.,** Wave energy estimation using a statistical analysis and wave buoy data near southern Caspian Sea, J. of China Ocean Eng., Vol. 29, No. 2, pp., 2015.
- Ahmad Sedaghat, **Badri, M. A.,** Mohsen Saghafian and Iman Samani, An Innovative Treadmill-Magnus Wind Propulsion System for Naval Ships, Recent patents on Eng., Vol. 8, No. 2, Spring. 2014.
- **Badri, M. A.,** Applying Genetic Algorithm to minimize the oil spill damage and optimize the location of the cleaning vessels, Indian J. of Geo-Marine Sciences, Vol. 43(1), No. 4, pp. 1-10, Apr. 2014.
- Ahmadi-Baloutaki, Sedaghat, A., Saghafian, M., **Badri, M. A.,** A computational study on robust prediction of transition point over NACA0012 aerofoil surfaces from laminar to turbulent flows, Intl. J. of Theoretical & Applied Mechanics, Vol. 3, Issue (4), 2013.
- Sedaghat, A., **Badri, M. A.,** Numerical study on flow separation control over NACA0015 aerofoil using electromagnetic fields, Intl. J. of Theoretical & Applied Mechanics, Vol. 3, Issue (4), pp. 1-7, 2013.
- Ahmadi-Baloutaki, Sedaghat, A., Saghafian, M., **Badri, M. A.,** Control of Transition over Aerofoil Surfaces using Active Suction**,** Intl. J. of Flow Control, Vol. 5, No. 3&4, pp. 187-200, Sep. / Dec. 2013.
- Mostashfi, A., Fakhari, A., **Badri, M. A.,** A Novel Design of Inspection Robot for High Voltage Power Lines, Industrial Robot-Manuscript ID IR 04-2013-343, Vol. 4, Issue 2, pp. 166-175, 2013.
- **Badri, M. A.,** Using Weibull probability distribution to calibrate prevailing wind applying in oil spill simulation, J. of mechanical eng., Vol. 13, No. 1, pp. 5-22, March 2012.
- **Badri, M. A.**, Wilders, P., Flow estimation for the Persian Gulf using a Kelvin wave expansion, Indian J. of Marine Sciences, Vol. 41, No.3, pp. 249-258, 2011.
- **Badri, M. A.**, Azimian, A.R., Oil Spill Model by Flow Estimation and a Probability Wind Distribution, LAMBERT Academic Publishing (LAP), March 2011.
- **Badri, M. A.**, "Combining of a probability wind field and a hydrodynamic model to prepare a risk map investigating environmental contaminants, Tabriz J. of mechanical eng., Vol. 39, pp. 165-181, March, 2011.
- **Badri, M. A.**, Azimian, A.R., An oil spill model based on the Kelvin wave theory and artificial wind field for the Persian Gulf, Indian J. of Marine Sci., Vol. 39, No. 2, pp. 165-181, 2010.
- **Badri, M. A.**, Combination of wind field and a hydrodynamic model to investigate environmental contaminants providing a risk map, The 9th International Conference on Coasts, Ports and Marine Structures (ICOPMAS 2010), Tehran, Iran, 29 Nov.-1 Dec. 2010.
- **Badri, M. A.**, Wilders, P., Flow estimation for the Persian Gulf using a Kelvin wave expansion, Technical Report ISSSN 1389-6520, Department of applied mathematical analysis, Delft, 2628 CD, June 2009.