Researcher : Bobby Minola Ginting

E-mail : bobbyminola-g@hiroshima-u.ac.jp

ResearcherID : AEM-3196-2022

ORCID : 0000-0001-7825-5052

Scopus ID : 57193545398

Bibliography

Dr. Bobby Minola Ginting received his doctoral degree in 2019 from Technical University of Munich, Germany focusing on parallel computing for computational hydraulics. He was a DAAD (German Academic Exchange Service) scholarship awardee within 2015 – 2019. In 2020, Dr. Ginting was appointed as an assistant professor at Parahyangan Catholic University, Indonesia. From 2010 – 2022, he was also working as an engineer for several coastal, river, and hydropower projects. Dr. Ginting was elected Best Paper Award of International Conference on Civil and Environmental Engineering 2022. His main research interest is to develop efficient parallel code for shallow water simulations. Currently, Dr. Ginting is working on a research project "An Integrated High-performance Model for Simulations of Sediment Transport in Coastal Waves and Wave-induced Currents (InterHiPerSed)" under the FY2023 Phoenix Postdoctoral Fellowships for Research at Hiroshima University.

Self-introduction

I am interested in computational hydraulics (river and coastal engineering), turbulence modeling, and high-performance computing.

Academic Degrees

Doctoral : Technical University of Munich, Germany (2015 – 2019)
Master : Bandung Institute of Technology, Indonesia (2010 – 2011)
Bachelor : Bandung Institute of Technology, Indonesia (2006 – 2010)

Major Professional Backgrounds

- Phoenix Postdoctoral Research Fellow at Graduate School of Advanced Science and Engineering, Hiroshima University, Japan
- Assistant professor at Department of Civil Engineering, Parahyangan Catholic University, Indonesia

Research Fields

- Computational hydraulics
- Turbulence modeling
- High-performance computing

Affiliated Academic Societies

- Indonesian Association of Hydraulic Engineers (Himpunan Ahli Teknik Hidraulik Indonesia)
- The Institution of Engineers Indonesia (Persatuan Insinyur Indonesia)

Academic Papers

Journals	
17	R.A. Tartandyo, **B.M. Ginting**, J. Zulfan, Scale effects investigation in physical modeling of recirculating shallow flow using Large Eddy Simulation Technique, Journal of Applied Fluid Mechanics, Vol. 17(1), 2024, pp. 43–59. DOI: 10.47176/JAFM.17.1.1980.
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13	D. Yudianto, F. Wiguna, **B.M. Ginting**, A. Wicaksono, X. Yuebo, Establishing a simple-yet-effective approach of early warning system for storm-induced earth-filled dam-break cases in data-sparse region, Journal of the Civil Engineering Forum, Vol. 9(2), 2023, pp. 151–160. DOI: 10.22146/jcef.6126.
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10	F. Wiguna, D. Yudianto, **B.M. Ginting**, Albert Wicaksono, A new approach to estimate the potential assets loss due to dam-break event in Indonesia, Journal of Infrastructure & Facility Asset Management, Vol. 4(1), 2022, pp. 1–12. DOI: 10.12962/jifam.v4i1.14287.
9	P. Lidyana, **B.M. Ginting**, D. Yudianto, Numerical simulation for 1D wave propagation by solving the shallow water equations using the Preissmann implicit scheme, Journal of the Civil Engineering Forum, Vol. 8(2), 2022, pp. 205–216. DOI: 10.22146/jcef.3872.
8	D. Yudianto, **B.M. Ginting**, S. Sanjaya, S.R. Rusli, A. Wicaksono, A framework of dam-break hazard risk mapping for a data-sparse region in Indonesia, ISPRS International Journal of Geo-information, Vol. 10(3), 2020, pp. 110. DOI: 10.3390/ijgi10030110
7	**B.M. Ginting**, H. Ginting, Extension of artificial viscosity technique for solving 2D non-hydrostatic shallow water equations, European Journal of Mechanics B/Fluids, Vol. 80, 2020, pp. 92–111. DOI: 10.1016/j.euromechflu.2019.12.002.
6	**B.M. Ginting**, H. Ginting, Hybrid artificial viscosity–central-upwind scheme for recirculating turbulent shallow water flows, Journal of Hydraulic Engineering (ASCE), Vol. 145(12), 2019, pp. 1–17. DOI: 10.1061/(ASCE)HY.1943-7900.0001639.

5	**B.M. Ginting**, R.-P. Mundani, Comparison of shallow water solvers: applications for dam-break and tsunami cases with reordering strategy for efficient vectorization on modern hardware, Water, Vol. 11(4), 2019, pp. 639. DOI: 10.3390/w11040639.
4	**B.M. Ginting**, Central-upwind scheme for 2D turbulent shallow flows using high-resolution meshes with scalable wall functions, Computers & Fluids, Vol. 179, 2019, pp. 394–421. DOI: 10.1016/j.compfluid.2018.11.014.
3	**B.M. Ginting**, R.-P. Mundani, Parallel flood simulations for wet-dry problems using dynamic load balancing concept, Journal of Computing in Civil Engineering (ASCE), Vol. 33(3), 2019, pp. 1–18. DOI: 10.1061/(ASCE)CP.1943-5487.0000823.
2	**B.M. Ginting**, A two-dimensional artificial viscosity technique for modelling discontinuity in shallow water flows, Applied Mathematical Modelling, Vol. 45, 2017, pp. 653–683. DOI: 10.1016/j.apm.2017.01.013.
1	**B.M. Ginting**, D. Harlan, A. Taufik, H. Ginting, Optimization of reservoir operation using linear program, case study of Riam Jerawi reservoir, Indonesia, International Journal of River Basin Management, Vol. 157(2), 2017, pp. 187–198. DOI: 10.1080/15715124.2017.1298604.

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3	**B.M. Ginting**, D. Yudianto, A. Wicaksono, Tapping the Potential of Shallow Water Model for Wave Simulations, Lecture Notes in Civil Engineering, Springer, Singapore, Vol. 132, 2021. DOI: 10.1007/978-981-33-6311-3_24
2	**B.M. Ginting**, P.K Bhola, C. Ertl, R.-P. Mundani, M. Disse, E. Rank, Hybrid-parallel simulations and visualisations of real flood and tsunami events using unstructured meshes on high-performance cluster systems, In: Gourbesville P., Caignaert G. (eds), Advances in Hydroinformatics, Springer Water, 2020, DOI: 10.1007/978-981-15-5436-0_67.
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17	**B.M. Ginting**, Artificial viscosity technique for direct runoff calculation, E3S Web of Conferences, 2023, 429 02005. DOI: 10.1051/e3sconf/202342902005.
16	J. Zulfan, **B.M. Ginting**, M. N. Hidayat, Effects of sluice gate operation on sediment flushing in Bekasi weir using a 1D numerical model, E3S Web of Conferences, 2023, 429 02006. DOI: 10.1051/e3sconf/202342902006.
15	J. Zulfan, **B.M. Ginting**, R. Rimawan, Assessment of reservoir sedimentation and mitigation measures using 2D hydrodynamic modeling: Case study of Pandanduri Reservoir, Indonesia, IOP Conference Series: Earth and Environmental Science, 2023, 1135 012018. DOI: 10.1088/1755-1315/1135/1/012018.
14	J. Zulfan, **B.M. Ginting**, M.N. Hidayat, R. Rimawan, Finding the optimum groin layout for the Konaweha river banks protection via 2D numerical modeling, IOP Conference Series: Earth and Environmental Science, 2021, 930 012031. DOI: 10.1088/1755-1315/930/1/012031.
13	J. Zulfan, **B.M. Ginting**, Investigation of spillway rating curve via theoretical formula, laboratory experiment, and 3D numerical modeling: A case study of the Riam Kiwa Dam, Indonesia, IOP Conference Series: Earth and Environmental Science, 2021, 930 012030. DOI: 10.1088/1755-1315/930/1/012030.
12	**B.M. Ginting**, D. Yudianto, Willy, A.H. Ginting, Finding an optimum grid size for numerical simulations of dam-break flow using open-access digital elevation models, IOP Conference Series: Earth and Environmental Science, 2021, 832 012058. DOI: 10.1088/1755-1315/832/1/012058.

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10	**B.M. Ginting**, R.-P. Mundani, E. Rank, Parallel simulations of shallow water solvers for modelling overland flows, In: G. La Loggia et al. (eds). EPiC Series in Engineering, Vol. 3, 2018, pp. 788 – 799. DOI: 10.29007/wdn8.
9	D. Harlan, H. Achiari, A. Rojali, **B.M. Ginting**, The tsunami simulation around Flores island and Sipora island using finite volume model, In: Asia-Pacific International Congress on Engineering & Natural Sciences, Singapore, 2014, pp. 82 – 89. ISBN: 978-986-89298-2-1.
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6	D.K. Natakusumah, M.S.B. Kusuma, M.R. Ramadhan, **B.M. Ginting**, Numerical simulation of river flood and dam break problems by cell centered finite volume scheme, International Seminar on Water Related Disaster Solutions, Yogyakarta, Himpunan Ahli Teknik Hidraulik Indonesia, 2013, pp. 209 – 220, ISBN: 978-979-988-5-5-0.
5	**B.M. Ginting**, P.L. Hadi, Study of sedimentation problem and selection of barge size regarding the cost efficiency to support the coal mining transportation on Segah River, East Kalimantan, The Second International Conference on Sustainable Infrastructure and Built Environment, Institut Teknologi Bandung, Bandung, 2013, pp. 288 – 306. ISBN: 978-979-98278-4-5.
4	**B.M. Ginting**, D.K. Natakusumah, D. Harlan, H. Ginting, Application of finite volume cell centered method with wet and dry treatment in hydrodynamic flow modelling, In: The Second International Conference on Port, Coastal, and Offshore Engineering, Institut Teknologi Bandung, Bandung, 2012. ISBN: 978-979-96161-2-8.
3	M.S.B. Kusuma, D.K. Natakusumah, D. Harlan, **B.M. Ginting**, Application of finite volume method in modeling the flood propagation generated by dam-break on the non-uniformly building layout, The Third International Conference on Construction Industry, Padang, 2012, pp. 29 – 42. ISSN: 2252-7729.
2	**B.M. Ginting**, D.K. Natakusumah, M.S.B. Kusuma, D. Harlan, 2D modeling of flood propagation due to dam-break events using finite volume method (*Pemodelan 2 dimensi propagasi aliran banjir akibat keruntuhan bendungan dengan metode volume hingga – in Indonesian*), Konferensi Nasional Pasca Sarjana Teknik Sipil, Institut Teknologi Bandung, Bandung, 2011. ISSN: 2098-3051.
1	D. Harlan, H. Achiari, **B.M. Ginting**, A. Aldebaran, Application of FVCOM model to modeling tsunami wave in Sipora Island, Mentawai (*Penerapan model FVCOM untuk pemodelan gelombang tsunami di Pulau Sipora, Kepulauan Mentawai – in Indonesian*), Pertemuan Ilmiah Tahunan XXVII, Ambon, Himpunan Ahli Teknik Hidraulik Indonesia, 2011, pp. 223 – 231, ISBN: 978-979-17093-5-4.

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