

- Books

1. Chapter “Numerical Methods for Ordinary Differential Equations” in Applied Mathematics Handbook (in Japanese), Asakura, 2013.
2. D. Furihata and T. Matsuo, “Discrete Variational Derivative Method A Structure-Preserving Numerical Method for Partial Differential Equations”, Chapman and Hall/CRC press, 2010.
3. Chapter “Numerical Methods for Partial Differential Equations” in Modern Mathematics Encyclopedia, 2nd ed. (in Japanese), Maruzen, 2009.
4. As a translator, Chapter “Initial Value Problems” in Computational Science and Engineering, (in Japanese), Kindaikagaku, 2017.

- Refereed journal papers

1. Yuto Miyatake, David Cohen, Daisuke Furihata and Takayasu Matsuo, Geometric numerical integrators for Hunter–Saxton-like equations, *Japan J. Indust. Appl. Math.*, **34**(Issue 2, 2017 August), pp.441–472. DOI: 10.1007/s13160-017-0252-1
2. Hiroki Kojima, Takayasu Matsuo and Daisuke Furihata, Some Discrete Inequalities for Central-Difference Type Operators, *Mathematics of Computation*, **86**(306), (2017 July), pp.1719–1739. DOI: 10.1090/mcom/3154.
3. Daisuke Furihata, Shun Sato and Takayasu Matsuo, A novel discrete variational derivative method using “average-difference methods,” *JSIAM Letters*, **8**(2016 Dec. 19), pp.81–84. DOI:10.14495/jsiaml.8.81
4. Shun Sato, Takayasu Matsuo, Hideyuki Suzuki and Daisuke Furihata, A Lyapunov-type Theorem for Dissipative Numerical Integrators with Adaptive Time-stepping, *SIAM Journal on Numerical Analysis*, **53**(6), (2015 July 8th), pp.2505–2518, DOI: 10.1137/140996719
5. Shun Sato, Takayasu Matsuo, and Daisuke Furihata, An analysis on the asymptotic behavior of multistep linearly implicit schemes for the Duffing equation, *JSIAM Letters*, **7**(2015 May 28), pp.45–48, DOI: 10.14495/jsiaml.7.45
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7. Daisuke Furihata, Takayasu Matsuo, Discrete variational derivative method –Structure-preserving numerical methods for PDEs– (written in Japanese), *Sugaku*, **66**(2014), pp.135–156.
8. Takayasu Matsuo, and Daisuke Furihata, A stabilization of multistep linearly implicit schemes for dissipative systems, *J. Comput. Appl. Math.*, **264**(2014), pp. 38-48, DOI: 10.1016/j.cam.2013.12.028
9. Yuro Miyatake, Takayasu Matsuo and Daisuke Furihata, Invariants-preserving integration of the modified Camassa-Holm equation, *Japan Journal of Industrial and Applied Mathematics*, **28**(2011), pp.351-381.
10. Yuto Miyatake, Takayasu Matsuo and Daisuke Furihata, Conservative finite difference schemes for the modified Camassa-Holm equation, *JSIAM Letters*, **3**(2011), pp.37-40.

11. Satoshi Koide and Daisuke Furihata, Nonlinear and linear conservative finite difference schemes for the regularized long wave equation, *Japan J. Indust. Appl. Math.*, **26**(2009 Feb.), No.1, pp.15-40.
12. Daisuke Furihata and Takayasu Matsuo, A Stable, Convergent, Conservative and Linear Finite Difference Scheme for the Cahn-Hilliard Equation, *Japan J. Indust. Appl. Math.*, **20**(2003 Feb.), No.1, 65–85.
13. Takayasu Matsuo, Masaaki Sugihara, Daisuke Furihata and Masatake Mori, Spatially accurate conservative or dissipative finite difference schemes derived by the discrete variational method, *Japan J. Indust. Appl. Math.*, **19**(2002 Oct.), No.3, 311–330.
14. Daisuke Furihata, Finite difference schemes for nonlinear wave equation that inherit energy conservation property, *J. Comput. Appl. Math.*, **134**(2001 Sep.), Issue 1-2, 35–57.
15. Takayasu Matsuo and Daisuke Furihata, Dissipative or Conservative Finite Difference Schemes for Complex-Valued Nonlinear Partial Differential Equations, *J. Comput. Phys.*, **171**(2001 Aug.), No. 2, 425–447.
16. Daisuke Furihata, A Stable and Conservative Finite Difference Scheme for the Cahn-Hilliard Equation, *Numer. Math.*, **87**(2001 Feb.), No.4, 675–699.
17. Daisuke Furihata, Finite difference schemes for  $\frac{\partial u}{\partial t} = \left(\frac{\partial}{\partial x}\right)^\alpha \frac{\delta G}{\delta u}$  that inherit energy conservation or dissipation property, *J. Comput. Phys.*, **156**(1999), 181–205.
18. Daisuke Furihata and Masatake Mori, General Design of Finite Difference Schemes for Partial Differential Equations based on Discrete Variational Calculus, (in Japanese) *Japan Soc. Indust. Appl. Math.*, **8**(1998), 317–340.
19. Daisuke Furihata and Masatake Mori, A Stable Finite Difference Scheme for the Cahn-Hilliard Equation Based on a Lyapunov Functional, *Z. angew. Math. Mech.*, **76**(1996) S1, 405–406.
20. Daisuke Furihata, Tomonori Onda and M. Mori, Numerical Analysis of Cahn-Hilliard equation by Finite Difference Method, (in Japanese) *Japan Soc. Indust. Appl. Math.*, **3**(1993), 217–228.