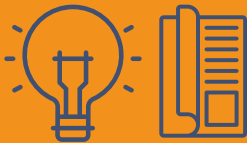# Computational Thinking

Irene Lee

BEST KNOWN FOR

Examining the application of computational thinking in the classroom and the co-creation of the 'Use-Modify-Create' Framework

In Brief

Irene Lee is a research scientist at MIT, more specifically at the Scheller Teacher Education program. Along with 7 other authors, she wrote 'Computational Thinking for Youth in Practice' which looked at the practical application of Computational Thinking and introduced the Use-Modify-Create' Framework. She went on to investigate , the implementation of computational thinking across a year group and also investigated multi-disciplinary approach. Her work builds on earlier work by Jeanette Wing. More recently Irene has been involved in looking at the integration of AI into the computing classroom.

Important Literature Links

Lee, I., Martin, F., Denner, J., Coulter, B., Allan, W., Erickson, J., Malyn-Smith, J. and Werner, L. (2011). Computational thinking for youth in practice. ACM Inroads. [online] 2(1), p.32. doi:https://doi.org/10.1145/1929887.1929902.

Lee, I., Grover, S., Martin, F., Pillai, S. and Malyn-Smith, J. (2019). Computational Thinking from a Disciplinary Perspective: Integrating Computational Thinking in K-12 Science, Technology, Engineering, and Mathematics Education. Journal of Science Education and Technology, 29(1), pp.1–8. doi:https://doi.org/10.1007/s10956-019-09803-w.

Lee, I., Martin, F. and Apone, K. (2014). Integrating computational thinking across the K- 8 curriculum. ACM Inroads, 5(4), pp.64–71. doi:https://doi.org/10.1145/2684721.2684736.