

# Early Classification on Temporal Sequences

Jian Pei  
Simon Fraser University, Canada  
jpei@cs.sfu.ca  
<http://www.cs.sfu.ca/~jpei/>

## Summary

Early classification of temporal sequences has applications in, for example, health informatics, intrusion detection, anomaly detection, and scientific and engineering sequence data monitoring. In early classification, instead of optimizing accuracy, our goal is to produce classification as early as possible provided that the accuracy meets some expectation. In this talk, I will advocate early classification as an exciting and challenging research problem, which has not been systematically studied in the literature. I will discuss several interesting formulations of the problem, which provide complimentary features possibly desirable in different application scenarios. I will also review some of our recent progress on this aspect.

## Bibliography

Jian Pei is currently an Associate Professor of Computing Science and the Associate Director (Research and Industry Relations) at the School of Computing Science, Simon Fraser University, Canada. His research interests can be summarized as developing effective and efficient data analysis techniques for novel data intensive applications. Particularly, he is currently interested in various techniques of data mining, Web search, information retrieval, data warehousing, online analytical processing, and database systems, as well as their applications in social networks, health-informatics, business and bioinformatics. His research has been supported extensively by government funding agencies and industry partners. He has published prolifically in refereed journals and conferences, has regularly served in the organization committees and the program committees of many international conferences and workshops, and has been a reviewer for the leading academic journals in his fields. He is an associate editor of several journals such as ACM Transactions on Knowledge Discovery from Data (TKDD) and IEEE Transactions of Knowledge and Data Engineering (TKDE). He is a senior member of the Association for Computing Machinery (ACM) and the Institute of Electrical and Electronics Engineers (IEEE). He is the recipient of the British Columbia Innovation Council 2005 Young Innovator Award, an NSERC 2008 Discovery Accelerator Supplements Award (100 awards cross the whole country, 10 in computer science), an IBM Faculty Award (2006), a KDD Best Application Paper Award (2008), a PAKDD Most Influential Paper Award (2009), and an IEEE Outstanding Paper Award (2007).