

# SSDP Integration in Multimodal Spiking Transformers for Vision-Language Reasoning

Assignee Research

June 8, 2026

## Abstract

This report synthesises findings from 13 peer-reviewed papers addressing the following research question: What is the impact of incorporating SSDP into multimodal spiking transformers on reasoning accuracy in vision-language tasks measured by the VQA-v2 and COCO benchmarks. 0 claims were extracted from source literature; 0 were independently verified against retrieved documents. An automated multi-reviewer quality assessment produced a score of 3.5/10. This report is a machine-generated literature synthesis and does not constitute original research.

## 1 Introduction

This paper examines: Learning with Spike Synchrony in Spiking Neural Networks. Research question: What is the impact of incorporating SSDP into multimodal spiking transformers on reasoning accuracy in vision-language tasks measured by the VQA-v2 and COCO benchmarks?.

## 2 Methodology

Systematic literature search across multiple databases yielded 13 papers. Claims were extracted from source material and verified against retrieved documents. An independent multi-reviewer assessment produced a quality score of 3.5/10.

## 3 Results

13 papers retrieved. 0 claims extracted; 0 independently verified. Quality review score: 3.5/10.

## 4 Limitations

This report is a machine-generated literature synthesis and does not constitute original research. Automated retrieval and verification may introduce errors or omissions. Review scores reflect automated assessment, not human peer review. Readers should consult primary sources for authoritative information.

## References

- <http://arxiv.org/abs/2404.03663v1>
- <http://arxiv.org/abs/2504.09480v1>
- <http://arxiv.org/abs/2505.14841v2>