Methodological Guarantees of the UNNS Admissibility Framework

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Abstract

The UNNS Admissibility Framework (UNNS-ADM) is a normative methodology designed to prevent circular validation, post hoc parameter tuning, and silent exclusion of failure in recursive and computational structure analysis. This paper summarizes the methodological guarantees provided by UNNS-ADM and explains how they are enforced independently of analytical or computational implementations.

1 Motivation

Computational and recursive research programs face a persistent methodological risk: structures are often judged only after analysis, allowing admissibility criteria to drift toward observed outcomes. This undermines falsifiability and blurs the boundary between discovery and construction.

UNNS-ADM addresses this problem by separating admissibility from observability and enforcing this separation structurally.

2 Core Principle

The central principle of UNNS-ADM is:

Admissibility must be established independently of, and prior to, instrumental analysis.

Admissibility answers the question: *"Is this structure meaningful to analyze at all?"*
It does not answer: *"What does this structure produce?"*

3 Structural Guarantees

UNNS-ADM provides the following guarantees.

G1: Non-Circular Validation

Admissibility criteria (A1–A7) are defined without reference to downstream properties. Parameters may be discovered empirically, but no property may be claimed as a discovery if it was encoded in the search objective.

This prevents the "we found what we searched for" failure mode.

G2: Temporal Precedence

Admissibility documentation must predate instrumental analysis. Post hoc justifications are mechanically rejected.

This enforces genuine prediction rather than retrospective explanation.

G3: Failure Preservation

Structures that fail admissibility are preserved in a negative space catalog. Failure is treated as informative rather than exceptional.

This prevents survivorship bias and enables boundary mapping of analyzability.

G4: Immutability and Auditability

All admissibility records are immutable, versioned, and auditable. Corrections require superseding entries rather than modification.

This guarantees historical integrity.

G5: Implementation Independence

Admissibility semantics are independent of computational realization. Technical systems enforce rules mechanically but possess no interpretive authority.

This prevents tooling from becoming theory.

4 Relation to Analysis

UNNS-ADM does not evaluate scientific merit, correctness, or significance. It governs only whether a structure may be legitimately subjected to analysis.

Analytical success does not retroactively justify admissibility.

5 Scope and Limitations

UNNS-ADM does not guarantee:

- that admissible structures are physically meaningful,

- that analyses will converge or succeed,

- that results correspond to external reality.

It guarantees only methodological cleanliness.

6 Conclusion

UNNS-ADM establishes a clear, enforceable boundary between admissibility, instrumentation, and interpretation. By treating failure as data and enforcing temporal and categorical separation, it restores falsifiability and rigor to recursive and computational research programs.

The framework is intentionally conservative: it restricts what may be claimed in order to preserve what may be trusted.