UNNS-ADM-C:
Negative Space Catalog

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Abstract

This document specifies UNNS-ADM-C, the Negative Space Catalog of the UNNS Admissibility Framework. UNNS-ADM-C formalizes the treatment, classification, and preservation of inadmissible recursive structures. It establishes inadmissibility as a first-class methodological outcome and defines how such outcomes are recorded, queried, and interpreted within the UNNS admissibility system. UNNS-ADM-C introduces no admissibility criteria and performs no evaluation; it governs only the handling and meaning of failure.

1 Purpose and Scope

UNNS-ADM-C exists to preserve and formalize the *negative space* of the UNNS admissibility framework: the set of candidate structures that fail one or more UNNS-ADM axioms.

Its purposes are to:

- prevent silent exclusion of failed candidates,
- establish methodological parity between success and failure,
- map the boundary of analyzability,
- enable future reinterpretation under revised axioms.

UNNS-ADM-C applies to all entries in UNNS-ADM-B with admissibility status *inadmissible*.

2 Normative Position

UNNS-ADM-C is subordinate to UNNS-ADM and complementary to UNNS-ADM-B.

$$\text{UNNS-ADM (theory)} \rightarrow \text{UNNS-ADM-B (registry)} \rightarrow \text{UNNS-ADM-C (negative space)}$$

UNNS-ADM-C does not alter registry entries and does not override admissibility verdicts.

3 Conceptual Definition of Negative Space

Let $\mathcal{S}$ denote the space of candidate recursive structures and $\mathcal{S}_{\text{adm}} \subset \mathcal{S}$ the admissible subset defined by UNNS-ADM.

The *negative space* is defined as:

$$\mathcal{S}_{\text{neg}} = \mathcal{S} \setminus \mathcal{S}_{\text{adm}}.$$

Elements of $\mathcal{S}_{\text{neg}}$ are not pathological by default; they are simply inadmissible under the current axioms.

4 Failure as a First-Class Outcome

Inadmissibility is a meaningful structural outcome.

Failure to satisfy an admissibility axiom indicates:

- limits of generability,
- breakdowns of well-posedness,
- irreducible dependence on tuning or circularity,
- boundaries of spectral or temporal definition.

Such failures are not errors, anomalies, or exceptions. They are data.

5 Failure Classification

Each inadmissible registry entry shall be classified by its *failure profile*:

$$\mathcal{F}(s) = \{A_i : \text{failure mode}\}.$$

Failure modes may include, but are not limited to:

- A1: non-finite or non-constructive specification,
- A2: unbounded or undefined initial data,
- A3: ill-defined evolution without terminal law,
- A4: absence of a well-defined spectral measure,
- A5: operator-dependent admissibility (circularity),
- A6: outcome-targeted parameter tuning or re-encoding,
- A7: irreproducibility.

Multiple failure modes may coexist.

6 Binary and Graded Failure

UNNS-ADM-C distinguishes between:

Structural Failure

Clear violation of an admissibility axiom.

Marginal Failure

Failure occurring only under stricter thresholds, extended precision, or perturbations.

Marginal failures must be explicitly flagged and accompanied by sensitivity documentation.

7 Registry Handling

All inadmissible entries recorded in UNNS-ADM-B shall automatically belong to the UNNS-ADM-C catalog.

UNNS-ADM-C does not create new registry entries. It provides a conceptual and queryable view over existing registry records.

Superseded inadmissible entries remain part of the negative space, with full version history preserved.

8 Query Semantics

UNNS-ADM-C shall support queries that retrieve inadmissible entries by:

- failed axiom(s),
- failure type (structural or marginal),
- generator class,
- temporal window or registry version.

Querying negative space must not privilege or suppress particular failure classes.

9 Relation to Instrumental Analysis

Inadmissible structures shall not be subjected to instrumental analysis.

Any analytical artifact referencing an inadmissible entry constitutes methodological non-compliance under UNNS-ADM-A.2.

10 Reinterpretation and Axiom Evolution

UNNS-ADM-C preserves inadmissible entries to enable future reinterpretation.

If UNNS-ADM axioms are revised:

- previously inadmissible entries may become admissible,
- reinterpretation requires creation of a new registry entry,
- historical inadmissibility remains part of the record.

No retroactive reclassification is permitted.

11 Epistemic Role of Negative Space

UNNS-ADM-C defines the epistemic boundary of the UNNS framework.

Scientific understanding advances not only through structures that survive analysis, but also through those that fail in principled ways.

The shape of negative space constrains claims about universality, generality, and scope.

12 Non-Goals

UNNS-ADM-C explicitly does not:

- rehabilitate inadmissible structures,
- prioritize failure modes,
- infer physical meaning from failure,
- suggest modifications to axioms.

Such activities belong to theory revision, not catalog management.

13 Conclusion

UNNS-ADM-C establishes negative results as durable, queryable, and scientifically meaningful components of the UNNS admissibility system. By preserving failure without interpretation or erasure, it completes the methodological integrity of the UNNS-ADM framework.