

I-ADOPT

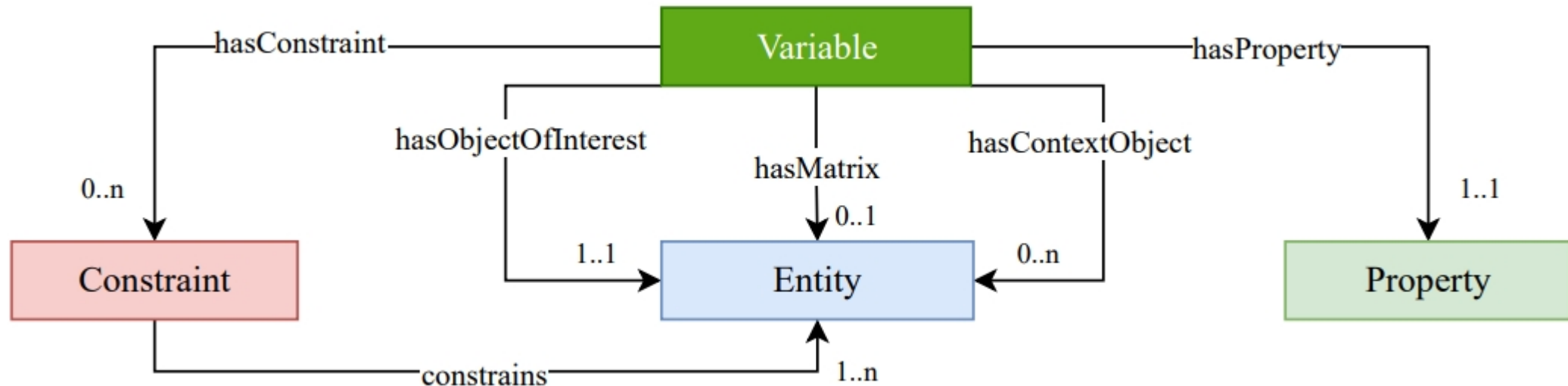
InteroperAble Descriptions of Observable Property Terminology

RDA (Research Data Alliance) WG

B Cecconi

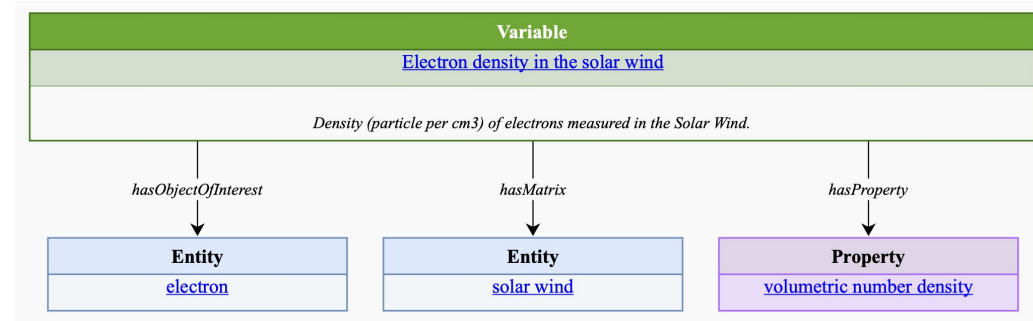
I-ADOPT in a nutshell

- <https://i-adopt.github.io/ontology/index.html> : a lightweight ontology primarily designed to facilitate interoperability between existing variable description models (including ontologies, taxonomy, and structured controlled vocabularies).



2024 I-ADOPT Challenge

- Example from *space physics*:



```
@prefix ex: <http://example.org/iadopt/challenge/> .
@prefix iop: <https://w3id.org/iadopt/ont/> .
@prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .
```

```
ex:C1 a iop:Variable ;
  rdfs:label "Electron density in the solar wind" ;
  rdfs:comment "Density (particle per cm3) of electrons measured in the Solar Wind." ;
  ex:issue "https://github.com/i-adopt/examples/issues/18" ;
  iop:hasMatrix ex:C1_Matrix0 ;
  iop:hasObjectOfInterest ex:C1_0oI0 ;
  iop:hasProperty ex:C1_Prop0 .
```

```
ex:C1_Matrix0 a iop:Entity ;
  rdfs:label "solar wind" ;
  owl:sameAs <https://www.ivoa.net/rdf/uat#solar-wind> .
```

```
ex:C1_0oI0 a iop:Entity ;
  rdfs:label "electron" ;
  owl:sameAs <https://www.ivoa.net/rdf/ucd#phys.electron> .
```

```
ex:C1_Prop0 a iop:Property ;
  rdfs:label "volumetric number density" ;
  owl:sameAs <http://sweetontology.net/propCount/NumberDensity> .
```

Other example

- Example from *astronomy catalogue (III/121)*

```
• @prefix ex: <http://example.org/iadopt/challenge/> .
  @prefix iop: <https://w3id.org/iadopt/ont/> .
  @prefix rdfs: <http://www.w3.org/2000/01/rdf-schema#> .

ex:C1 a iop:Variable ;
    rdfs:label "Stellar Abundance" ;
    rdfs:comment "Abundance of an atomic element observed in a star." ;
    iop:hasMatrix ex:C1_Matrix0 ;
    iop:hasObjectOfInterest ex:C1_OoI0 ;
    iop:hasProperty ex:C1_Prop0 .

ex:C1_Matrix0 a iop:Entity ;
    rdfs:label "star" ;
    owl:sameAs <https://www.ivoa.net/rdf/object-type#star> .

ex:C1_OoI0 a iop:Entity ;
    rdfs:label "atomic element" ;
    owl:sameAs <http://sweetontology.net/matrElement/Element> .

ex:C1_Prop0 a iop:Property ;
    rdfs:label "abundance" ;
    owl:sameAs <https://www.ivoa.net/rdf/ucd#atmol.abundance> .
```

Interacting with I-ADOPT team

- Team lead = Barbara Magagna (GoFair foundation)
- They are willing to get feedback from other communities.