Introduction

* What Curry-Howard Isomorphism is and why it is interesting
* History of intuitionistic logic, lambda calculus and categories
* History of the three-way-correspondence

Background

1. Intuitionistic Logic

* Syntax
* Constructive Semantics

2. Lambda Calculus

* Simply Typed Lambda Calculus
* Equational Proof System of
* Other Types

3. Categories

* Concepts of Categories
* Categorical Constructions
* Cartesian Closed Categories

Correspondence

1. Every type-derivation in leads to a proof in intuitionistic implicational logic

2. Every proof in intuitionistic propositional logic can be coded by a -term

3. The three basic problems in typed -calculus and their correspondence in logic

4. Every well-typed -term can be interpreted as a morphism in a CCC