ETH
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Title of Master Thesis

Subtitle of Master Thesis

Master Thesis
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Muster Student

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Professor: Prof. Dr. Armin Wittneben

Abstract

Here comes the abstract...

Preface

This Master Thesis is part of the graduate study at the Department of Information Technology and Electrical Engineering (D-ITET) at the Swiss Federal Institute of Technology (ETH) Zurich.

The author certifies that this Master Thesis, and the research to which it refers, are the product of the author's own work, and that any ideas or quotations from the work of other people, published or otherwise, are fully acknowledged in accordance with the standard referring practices of the discipline.

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Introduction

1.1 Motivation

Bla bla bla...

Include references: [1] and [2–4].

I want to reference this [5].

1.1.1 Mathematics

An important formula is

$$f(z) = a(x, y) + \mathrm{i} \cdot b(x, y).$$

A numbered formula that can be referenced (1.1) is

$$\frac{df}{dz} = \lim_{z \to z_0} \frac{f(z) - f(z_0)}{z - z_0} = \lim_{\Delta z \to 0} \frac{f(z_0 + \Delta z) - f(z_0)}{\Delta z}. \tag{1.1}$$

1.1.2 Tables and Figures

Table 1.1 shows interesting numbers.

Value type	Node 1	Node 2
Value 1	1	2
Value 2	3	4

Table 1.1: Values for nodes.

Algorithm 1 summarizes a iterative gradient search.

Some results are plotted in Fig. 1.1.

Algorithm 1: Steepest Ascent

1: `Given:` a starting point $\mathbf{z}[0]$, randomly chosen
2: `Repeat:`
3: $m \leftarrow m + 1$
4: `Search direction:` $\boldsymbol{\Delta}[m] = \nabla_{\mathbf{z}^*} f(\mathbf{z}[m])$
5: `Update:` $\mathbf{z}[m+1] = \mathbf{z}[m] + \mu \cdot \boldsymbol{\Delta}[m]$
6: `Until:` stopping criterion is satisfied
7: `Return:` $\mathbf{z}[m+1] \approx \mathbf{z}_{\text{opt}}$

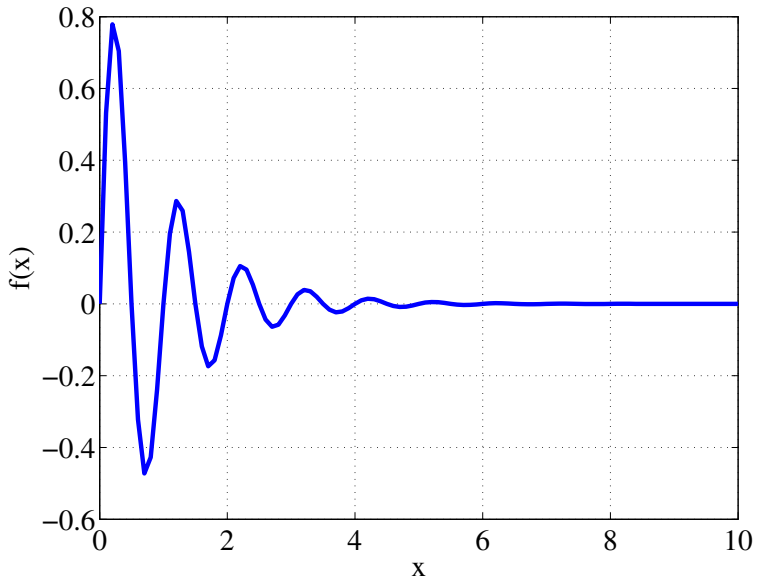

Figure 1.1: A signal.

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