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Abstract. This is an example of ALEA's LaTeXstyle available at ALEA's website. Compile it preferentially using `pdflatex`. Compile bibliography using `bibtex` (to find bibliographical entries, MathSciNet database may be useful). Make reference to equations using `\eqref{}` and make references to theorem, lemmas, etc., using `\ref{}`. **Do not use** `\left...\right`. **Do not use** the environment `\begin{eqnarray}...\end{eqnarray}` and prefer instead the environments `\begin{align}...\end{align}` or `\begin{align*}...\end{align*}` or `\begin{multline}...\end{multline}` or `\begin{multline*}...\end{multline*}`. Environments with * must be used when there is no reference to it along the text.

1. Introduction

In this latex style the `\cite` command creates citations using the name of the author and the date of publishing, for example Scott (1900). We can also group citations as Scott (1900, 1903); Huntington and Whittemore (1901). If the citation is between parentheses, use the command `\citealp` to avoid the double parentheses (for example Finzi, 1950). It is very important to attach the file *.bib* with all references (see `example.bib`).

To create graphics, include images preferentially in `Tikz` (see Figure 1.1) or png (see Figure 2.2), but other formats may be also accepted.

Tagged and untagged formulas are presented in the next section, where we illustrate the use of the commands `\section`, `\subsections`, and environments as `\begin{theorem}...\end{theorem}`.

Theorems, lemmas, propositions etc. should be referred as Theorem 2.2 for instance, and sections as Section 2 for example.

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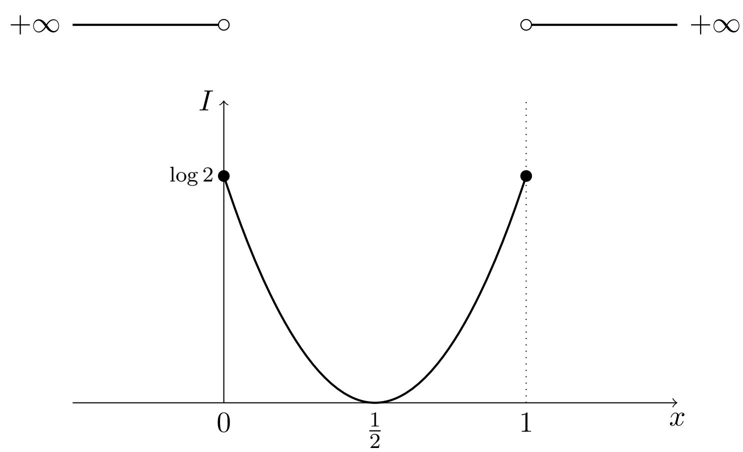

FIGURE 1.1. Rate function $I : \mathbb{R} \to [0, \infty]$

2. Statements

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The infinitesimal generator $\big(A_L f\big)(n)$ is equal to

$$\frac{A}{L^a}\Big[f(n_{\delta(-)} + n_{-L}, 0, n_{-L+1}, \dots, n_{\delta(+)}) - f(n)\Big] \tag{2.1}$$

$$+ \frac{B}{L^b}\Big[f(n_{\delta(-)}, \dots, n_{L-1}, 0, n_{\delta(+)} + n_L) - f(n)\Big]$$

$$+ \sum_{j=-L}^{L} \frac{1}{n_j + n_{j+1} + 1} \sum_{q=0}^{n_j+n_{j+1}} \Big[f(n_{\delta(-)}, n_{-L}, \dots, n_{i-1}, q, n_i + n_{i+1} - q, \dots, n_{\delta(+)}) - f(n)\Big], \tag{2.2}$$

cras et lacus elit, et accumsan velit. Morbi sed nunc sit amet ipsum dapibus blandit et id est. Suspendisse nec justo sapien, vel ullamcorper risus. In hac habitasse platea dictumst. Duis gravida tempor aliquam. Sed in nisi sit amet lectus ultricies luctus eu quis nisl. Morbi nec sollicitudin metus. Aliquam pellentesque, ligula id auctor tincidunt, magna nisi adipiscing ligula, at egestas sapien metus ut felis. Phasellus porttitor commodo massa, pharetra congue diam dapibus pellentesque. In vitae mauris odio, euismod luctus turpis. Nam at mi nunc, vitae fringilla tellus. Vivamus tincidunt gravida imperdiet. Donec mauris arcu, rutrum sed semper sit amet, tempus sit amet nibh. Nulla vehicula pharetra lorem a pharetra. Etiam et metus mauris, nec ultrices ipsum. Nullam interdum pulvinar consequat. Phasellus varius turpis eros. Duis quis erat eu eros tristique ultricies. Mauris dignissim egestas fermentum. Donec quis nisi non velit vestibulum lacinia (c.f. Figure 2.2).

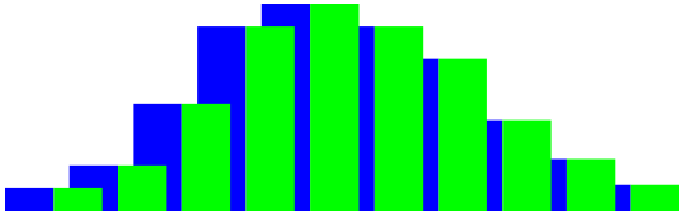

FIGURE 2.2. Some distribution

2.1. *Alea jacta est.* Fusce id eros vel lorem iaculis vulputate. Mauris imperdiet massa nulla, et dapibus tortor. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Mauris dictum consequat dui, ut consequat ligula convallis ut. Phasellus nisl magna, venenatis eget pharetra ac, commodo eu odio. Mauris porta pharetra metus. Nulla molestie porta erat, in tincidunt sem consequat ut. Morbi mollis facilisis imperdiet. Nunc vulputate, urna at rhoncus ullamcorper, lectus lectus facilisis massa, id condimentum est ipsum sed dolor. Sed accumsan ligula quis urna ornare ut euismod nisi venenatis. Morbi nulla nibh, tincidunt sit amet dignissim a, rhoncus a nibh.

Lemma 2.1. *Pellentesque nibh turpis, $\Omega \neq \varnothing$, Vivamus vitae massa a lorem eleifend dignissim eget eu orci. Nunc vel:*

$$\mathbb{P}(X_{n+1} = x \,|\, \mathcal{G}_n) \;=\; \frac{e^{\beta\, c_n(X_n,x)}}{\sum_{y\sim X_n} e^{\beta\, c_n(X_n,y)}}\,.$$

Proof: Sed a elit quis enim tincidunt dignissim vitae eget erat. Quisque tempus ante semper dolor scelerisque mollis. Nulla libero odio, vulputate non iaculis a, placerat at justo. Praesent luctus eleifend purus vel elementum. Nulla enim ligula, sagittis ut pretium a, scelerisque ut eros.

$$\begin{aligned} |F| \;&\lesssim \Big(\mathbb{P}_0\big[X_{s_2 n^2} = -1\big] + \mathbb{P}_0\big[X_{s_2 n^2} = 0\big]\Big) \\ &\quad\times \left(\frac{1}{((s_1-s_2)n^2)^2} + \Big|K_{(s_1-s_2)n^2}(0) - K_{(s_1-s_2)n^2}(1)\Big|\right) \\ &\lesssim \frac{1}{\sqrt{s_2}} \cdot \frac{1}{(s_1-s_2)^{3/2} n^4}\,. \end{aligned} \tag{2.3}$$

Sed auctor justo id elit volutpat bibendum. In aliquet dui vel mi consectetur dictum. Vestibulum vel lectus ut lacus porttitor bibendum sit amet nec erat (2.3). Fusce nec elit ante, sit amet ullamcorper nisl. Sed a tellus sed augue molestie accumsan.

$$\sum_{k=0}^{n} \binom{n}{k} a^k (1-a)^{n-k} \;=\; 1\,.$$

Praesent nisi erat, sollicitudin eu lacinia quis, tempus eu velit. Nulla magna erat, rhoncus eu suscipit et, rutrum vitae turpis. Vivamus sed neque leo. Donec id felis ut est viverra. □

Theorem 2.2. *Lorem ipsum dolor sit amet $\gamma \in \mathbb{R}$, consectetur adipiscing elit $j \in \mathbb{Z}_+$, $\tau \in \mathbb{Z}$. Pellentesque nibh turpis, sagittis ac scelerisque et, rhoncus et enim. Nunc vel:*

$$\lim_{n\to\infty} \frac{1}{a_n} \log\Big(\int_X e^{a_n F(x)}\, P_n(dx)\Big) \;=\; \sup_{x\in X} \Big\{F(x) - I(x)\Big\}. \tag{2.4}$$

Proof: By Lemma 2.1, aenean consequat, urna in congue viverra, enim nunc suscipit lorem (2.4). □

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