

*A badly written book is only a BLUNDER.  
A bad translation of a good book is a CRIME.  
—Gilbert Highet*

# 翻译攻略

## 流程篇

README

## 方法篇

图

表

公式

代码

术语 • 人名 • 参考文献

索引 • 宣传文字

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## 准备工作

- 选择工具：Word or LaTeX。
- 确定翻译内容：由编辑完成。出于篇幅限制，可能删除附录、侧边栏、索引等，或改为网络资源。
- 统一团队风格：由译者完成。确定贯穿各章的模块的译法（如本章目标、示例、小结、代码清单）。全程同步关键术语的译法（可借助索引和术语表）。

## 翻译流程

- 完成一两章后即提交初稿，尽早排除全局性问题。
- 完成全部译稿并提交，由编辑确认质量合格与否。
- 提示：若书籍或作者主页有“勘误”，则需要译者处理。“译者注”用于添加必要的解释或指出原书错误，采用脚注形式。所有对原书的改动都要特殊标明。

## 提交内容

- 书籍相关：目录，前言，正文，封底文字，以及准备工作环节确定的其他内容（如推荐语、作者简介）。
- 译者相关：译者序，译者署名，译者分工，稿酬分配比例。译者序可自由发挥；署名形如“甲 乙 丙（等）译”，封面署主要贡献者，内封可署全部贡献者；译者分工供编辑审稿时参考；稿酬分配比例用于签署委托书。

## 后期修改

- 编辑进行文字加工的过程中会反馈细节问题，译者的所有修改需在“修订”模式下进行。
- 排版完成后，译者可审校清样 PDF，限时 1~2 周。

## 特别注意

- 出版是三审三校的瀑布式流程，交稿即意味着定稿，Word/Latex 文件不再接受更新。切忌不经沟通而继续改动原稿！
- 翻译是信达雅的无止境追求，但时间匆匆，禁不起批阅十载。一旦签订翻译合同，请信守契约！

## 技巧提示

**Word or Latex?** 文字多的用 Word，公式多的用 Latex。Latex 排版周期较长。不支持使用其他软件。

**目录层级?** 采用“第 1 章, 1.1, 1.1.1”的形式。只需翻译总目录，不译章首目录，不译图表目录。

**没有格式要求吗?** 然也。全部译稿将转换到排版软件中完成制作，译者提交的文档但求简单易读，不求五彩缤纷。

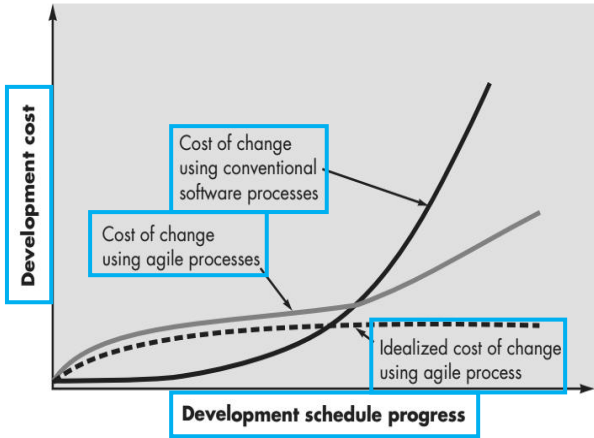
**注意:** 将原书 PDF 转 Word 可能导致文档格式混乱，请谨慎使用。

**如何修改清样?** 请纠错，勿检错。确保所有改动清晰，不留疑问。注意，清样 PDF 为加密文件，请勿外传。

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图

**FIGURE 5.1**  
Change costs as a function of time in development



Development cost	开发成本
English 2	中文 2
English 3	中文 3
.....	.....

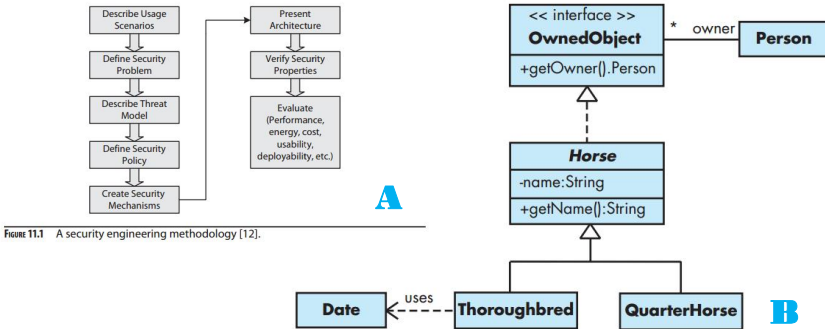
图5-1 图题的中文翻译

**翻译方法**

从原书 PDF 中截图并插入译稿，不可仅留空行示意。翻译图题和图中的说明性文字（蓝框），英文部分可简写。勿重新作图。

**编辑处理**

编辑检查译文，排版重新作图，将英文替换为中文。



**技巧提示**

- **A** 若图中文字排列整齐有规律，则可直接按位置给出译文（从左至右，从上至下），不必录入英文。
- **B** 与代码内容直接对接的图不译。
- **C** 软件截图、网页截图、地图不译。

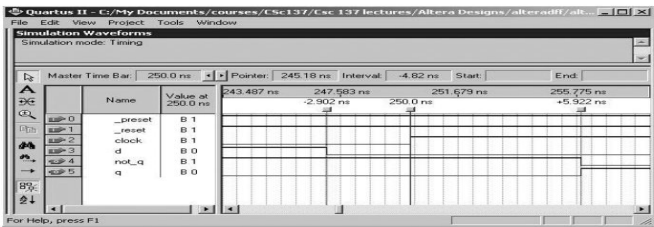


FIGURE 4.16 A D flip-flop timing diagram illustrating its normal operation with a negative hold time.

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## 表

## 翻译方法

从原书 PDF 中截图并插入译稿，不可仅留空行示意。翻译表题和表中的文字内容。勿重新作表。

## 编辑处理

编辑检查译文，排版重新制作中文表格。

Methodology	Description
Usage scenario	How to change a student's grade
Security problem	Unauthorized grade change
Threat model	Inaccurate grades
Security policy	Only the instructor who taught the course can change a student's grade.
Security mechanisms	<ol style="list-style-type: none"> <li>1. Instructor assigns a new grade for one of his or her student.</li> <li>2. Department chairperson validates the grade change.</li> <li>3. A fulltime staff (not a temporary helper) enters the new grade in the secure university database system.</li> </ol>
Architecture	Create a grade-change form with spaces allocated for student name, student ID number, course number and semester taken, reason for changing the grade, and signature spaces for instructor and chairperson. Also, a completed form is either mailed using the secure on-campus mail system or hand-delivered to student records office.
Verification	<p>Confidentiality: The grade-change forms are only handled by faculty and staff and thus remain confidential to other students.</p> <p>Integrity: The chairperson's signature authenticates a completed grade-change form.</p> <p>Availability: Depends on instructor's decision to change a student's grade.</p>
Evaluation	The cost of grade-change forms, the time required to complete and process a grade-change form, etc.

TABLE 11.1 Developing a Paper-Based Security Mechanism to Change Students' Grades

表11-1 表题的中文翻译

方法	描述
列1_1	列2_1
列1_2	列2_2
.....	.....

Properties	SHA-1	SHA-256	SHA-384	SHA-512
Size of hash value (bits)	160	256	384	512
Block size	512	512	1024	1024
Message size (plaintext or ciphertext)	$< 2^{64}$	$< 2^{64}$	$< 2^{128}$	$< 2^{128}$
Number of steps	80	64	80	80

TABLE 11.8 Properties of Secure Hash Algorithms

## 技巧提示

- 表格中的数据不需要录入。
- 对于复杂的表格，可根据需要列出必要的英文-中文对照。

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Also, a matrix that is both left and right stochastic is known as *doubly stochastic* (Problem 5.16). Note that due to this matrix constraint, we still have that

$$\begin{aligned}\sum_{k=1}^K J_k^{loc}(\boldsymbol{\theta}) &= \sum_{k=1}^K \sum_{m \in \mathcal{N}_k} c_{mk} J_m(\boldsymbol{\theta}) = \sum_{k=1}^K \sum_{m=1}^K c_{mk} J_m(\boldsymbol{\theta}) \\ &= \sum_{m=1}^K J_m(\boldsymbol{\theta}) = J(\boldsymbol{\theta}).\end{aligned}$$

That is, summing all local costs, the global one results.

Let us focus on minimizing (5.85). The gradient descent scheme results in

$$\boldsymbol{\theta}_k^{(i)} = \boldsymbol{\theta}_k^{(i-1)} + \mu_k \sum_{m \in \mathcal{N}_k} c_{mk} (\mathbf{p}_m - \sum_{s_m} \boldsymbol{\theta}_k^{(i-1)}).$$

Thus the LMS recursion for the linear DFE, in its complex-valued formulation, becomes,

$$\begin{aligned}\hat{d}_n &= \mathbf{w}_{n-1}^H \mathbf{u}_{e,n} \\ d_n &= s_{n-L+1}; \quad \text{in the training mode, or} \\ d_n &= T[\hat{d}_n]; \quad \text{in the decision directed mode,} \\ e_n &= d_n - \hat{d}_n \\ \mathbf{w}_n &= \mathbf{w}_{n-1} + \mu \mathbf{u}_{e,n} e_n^*,\end{aligned}$$

where  $T[\cdot]$  denotes the thresholding operation.

Three experiments were carried out. The first involved the distributed LMS in its adapt-then-combine (ATC) form and the second one the combine-then-adapt (CTA) version. In the third experiment, the LMS algorithm was run independently for each node, without cooperation. In all cases, the step size was chosen equal to  $\mu = 0.01$ . Figure 5.26 shows the average (over all nodes)  $\text{MSD}(n) : \frac{1}{K} \sum_{k=1}^K \|\boldsymbol{\theta}_k(n) - \boldsymbol{\theta}_o\|^2$  obtained for each one of the experiments. It is readily seen that cooperation improves the performance significantly, both in terms of convergence as well as in steady-state error floor. Moreover, as stated in Section 5.13.3, the ATC performs slightly better than the CTA version.

## 公式

### 翻译方法

**单占行的公式** (单线框): 从原书 PDF 中截图并插入译稿, 不可仅留空行示意。翻译公式中的文字说明内容 (双线框, 方法同图片)。勿重新录入公式。

**段落中的公式** (虚线框): 全部需要插入译文, 可截图或录入。

### 编辑处理

编辑检查译文, 排版录入公式及其文字说明。

### 常见问题

- 显示错误 → 字库不兼容
- 打印错误 → 图层问题 → 不可解
- 转换错误 → 可编辑性丧失 → 不可逆
- .....

### 处理建议

- 明确译者、编辑、排版的分工, 不做无用功。
- 及时发现问题, 勿拖到交稿后。

### 技巧提示

如果是团队协作, 请先统一公式处理工具及其版本, 否则由于兼容问题易导致不可预知的状况。

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## 代码

```

1  template <typename Y, typename X>
2  Y serial_sample(
3      size_t n,
4      Y table[],
5      X x
6  ) {
7      // Compute integer part of sample position
8      X i = floor(x);
9      // Look up samples at i and i+1
10     // for out of bound indices, use 0 on left and table[n-1] on right
11     Y y0 = i < X(0) ? Y(0)
12         : table[i < X(n) ? size_t(i) : n-1];
13     Y y1 = i+1 < X(0) ? Y(0)
14         : table[i+1 < X(n) ? size_t(i+1) : n-1];
15     // Linearly interpolate between samples
16     return y0+(y1-y0)*(x-i);
17 }
18
19 template <typename X, typename Y>
20 Y serial_integrate(
21     size_t n, // number of samples in table
22     Y table[], // cumulative samples
23     X a, // lower bound of function domain
24     X b, // upper bound of function domain
25     X x0, // lower bound of integral
26     X x1 // upper bound of integral
27 ) {
28     // Compute scale for covering x0 and x1 to table indices
29     X scale = X(n-1)/(b-a);
30     // Look up interpolated values of indefinite integral
31     Y y0 = serial_sample(n, table, scale*(x0-a));
32     Y y1 = serial_sample(n, table, scale*(x1-a));
33     // Compute integral
34     return y1-y0;
35 }

```

## LISTING 5.20

Serial implementation of integrated table lookup in C++. Two linearly interpolated samples of the table are taken and interpolated. Out-of-bounds indices are handled as if the original function (not the integral) is zero

## 翻译方法

从原书 PDF 中截图并插入译稿，不可仅留空行示意。勿重新录入。

翻译代码的标题（若有）。代码注释译不译均可，保持全书一致。对于“伪代码”，需要翻译其中的说明性文字。

## 编辑处理

编辑检查译文，排版提取代码并制作。

## 技巧提示

有些书中的伪代码具有统一的体例风格，团队协作时要提前约定翻译方式。

## Algorithm 6.1. [(The RLS algorithm)]

- **Initialize**
  - $\theta_{-1} = \mathbf{0}$ ; any other value is also possible.
  - $P_{-1} = \lambda^{-1}I$ ;  $\lambda > 0$  a user-defined variable.
  - Select  $\beta$ ; close to 1.
- **For**  $n = 0, 1, \dots$ , **Do**
  - $e_n = y_n - \theta_{n-1}^T \mathbf{x}_n$
  - $\mathbf{z}_n = P_{n-1} \mathbf{x}_n$
  - $K_n = \frac{\mathbf{z}_n}{\beta + \mathbf{x}_n^T \mathbf{z}_n}$
  - $\theta_n = \theta_{n-1} + K_n e_n$
  - $P_n = \beta^{-1} P_{n-1} - \beta^{-1} K_n \mathbf{z}_n^T$
- **End For**

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## 术语·人名·参考文献

A **dependency** relationship represents another connection between classes and is indicated by a dashed line (with optional arrows at the ends and with optional labels). One class depends on another if changes to the second class might require changes to the first class. An association from one class to another automatically indicates a dependency. No dashed line is needed between classes if there is already an association between them. However, for a transient relationship (i.e., a class that does not maintain any long-term connection to another class but does use that class occasionally) we should draw a dashed line from the first class to the second. For example, in Figure A1.2, the **Thoroughbred** class uses the **Date** class whenever its *getCurrentAge()* method is invoked, and so the dependency is labeled “uses.”

## 1 Essentials of Information Theory

- 1.1 Basic concepts. The Kraft inequality. **Huffman's** encoding
- 1.2 Entropy: an introduction
- 1.3 **Shannon's** first coding theorem. The entropy rate of a Markov source
- 1.4 Channels of information transmission. Decoding rules. Shannon's second coding theorem
- 1.5 Differential entropy and its properties
- 1.6 Additional problems for Chapter 1

Cooper, Edgett, and Kleinschmidt describe a wide range of product portfolio management methods, including financial analysis, scoring techniques, and visual mapping methods.

Cooper, Robert G., Scott J. Edgett, and Elko J. Kleinschmidt, *Portfolio Management for New Products*, second edition, Basic Books, New York, 2001.

Fine relates product planning and competitive strategy to the decisions of supply-chain design and strategic partnerships with suppliers.

Fine, Charles H., *Clockspeed: Winning Control in the Age of Temporary Advantage*, Perseus Books, Reading, MA, 1998.

McGrath emphasizes planning of product platforms and strategy for technology-based products.

McGrath, Michael E., *Product Strategy for High-Technology Companies*, McGraw-Hill, New York, 1995.

## 翻译方法

**术语：**原书常用斜体及黑体来突显关键词语，这些由编辑标注，译者无须处理。

译者可为重要术语或易引起歧义的译文添加英文注释。

**注意：**若全书已有关键词、术语表或索引，则加注英文的频率不宜过高。

**人名：**译不译均可，保持全书一致。建议只翻译耳熟能详的人物，其他不译。

**参考文献：**无须翻译亦无须录入。但参考文献中穿插的解释说明性文字需要翻译。

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## 索引·宣传文字

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## 翻译方法

索引：索引的标准格式如下：

- game (游戏), 7
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- A Song of Ice and Fire (冰与火之歌), 见 Game of Thrones, 577

## 注意：

- 事先与编辑确认是否翻译索引。
- 索引必须按照标准格式翻译，做到译文准确且完整。
- 不必担心页码对应关系，排版后编辑将在页边逐一标注原书页码。

宣传文字：位于封底、勒口或开篇的宣传文字需要翻译，通常包括推荐语、内容简介、书籍特色、作者简介等。编辑会在其中甄选内容作为宣传文案。

"...a groundbreaker, it presents real-life algorithms and the issues and solutions to get them to profit from the coming multi/many core evolution."

—MICHELE DELSOL, Parallel Programming Consultant and Instructor

Programming is now parallel programming. Multicore processors are now standard, and all developers need to learn the fundamentals of parallel algorithm design. However, much as structured programming revolutionized traditional serial programming decades ago, a new kind of structured programming, based on patterns, is relevant to parallel programming today.

This book explains how to design and implement maintainable and efficient parallel programs using a pattern-based approach. It presents both theory and practice, drawing on multiple programming models in detailed, concrete examples that will help you learn and apply efficient patterns in your applications.

Most of the many included examples use two of the most popular and cutting-edge programming models for parallel programming

in C++: Threading Building Blocks and Cilk Plus. These portable programming models enable easy integration into existing applications, preserve investments in existing code, and speed the development of parallel applications. In short, this book:

- Offers structure and insight that you can apply to a variety of parallel programming models
- Develops a composable, structured, scalable, and machine-independent approach to parallel computing
- Includes detailed examples in both Cilk Plus and the latest Threading Building Blocks, which support a wide variety of computers



**Michael McCool**  
Software Architect, Intel Corporation and Adjunct Associate Professor, University of Waterloo



**Arch D. Robison**  
Architect of Threading Building Blocks, Intel Corporation



**James Reinders**  
Senior Engineer, Intel Corporation