

22(4)

## Optimized Local Trigonometric Bases with Nonuniform Partitions

廉巧芳(1), 王永革(2), 燕敦验(3)

(1)北京中国科学院数学研究所; (2)北京航空航天大学应用数学系; (3)中科院研究生院信息学院北京市海淀区中关村南一条3号

收稿日期 2003-12-9 修回日期 网络版发布日期 2006-7-15 接受日期 2004-2-6

**摘要** The authors provide optimized local trigonometric bases with nonuniform partitions which efficiently compress trigonometric functions. Numerical examples demonstrate that in many cases the proposed bases provide better compression than the optimized bases with uniform partitions obtained by Matviyenko.

**关键词** [Optimized local trigonometric bases](#) [Bell functions](#) [Nonuniform partitions](#)

**分类号** [42C15](#)

## Optimized Local Trigonometric Bases with Nonuniform Partitions

Qiao Fang Lian(1), Yong Ge Wang(2), Dun Yan Yan(3)

(1)Department of Mathematics, Beijing Jiaotong University, Beijing 100044, P. R. China; (2)Department of Applied Mathematics, Beijing University of Aeronautics and Astronautics, Beijing 100083, P. R. China; (3)School of Information Science and Engineering, the Graduate School of the Chinese Academy of Sciences, Beijing 100039, P. R. China

**Abstract** The authors provide optimized local trigonometric bases with nonuniform partitions which efficiently compress trigonometric functions. Numerical examples demonstrate that in many cases the proposed bases provide better compression than the optimized bases with uniform partitions obtained by Matviyenko.

**Key words** [Optimized local trigonometric bases](#) [Bell functions](#) [Nonuniform partitions](#)

DOI: 10.1007/s10114-005-0647-9

通讯作者 廉巧芳 [qflian@mail.amss.ac.cn](mailto:qflian@mail.amss.ac.cn)

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中 包含“Optimized local trigonometric bases”的 相关文章](#)
- ▶ [本文作者相关文章](#)

- [廉巧芳](#)
- [王永革](#)
- [燕敦验](#)