非线性和复杂系统的理论、方法和应用

刘曾荣文选

上海大学出版社

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图书在版编目(CIP)数据

非线性和复杂系统的理论、方法和应用：刘曾荣文选／刘曾荣著. —上海：上海大学出版社，2016.5
ISBN 978-7-5671-2232-1

Ⅰ.①非… Ⅱ.①刘… Ⅲ.①非线性科学-文集 ②系统论-文集 Ⅳ.①N93-53 ②N94-53

中国版本图书馆 CIP 数据核字(2016)第 056032 号

责任编辑 王悦生
封面设计 柯国富
技术编辑 章 斐

非线性和复杂系统的理论、方法和应用
——刘曾荣文选
刘曾荣 著
上海大学出版社出版发行
(上海市上大路 99 号 邮政编码 200444)
(http://www.press.shu.edu.cn 发行热线 021-66135112)
出版人：郭纯生
*
南京展望文化发展有限公司排版
上海华业装潢印刷公司印刷 各地新华书店经销
开本 787×1092 1/16 印张 41.5 字数 1 061 千
2016 年 5 月第 1 版 2016 年 5 月第 1 次印刷
ISBN 978-7-5671-2232-1/N·004 定价：220.00 元

序　言

我是2013年10月正式退休。从1966年7月大学本科毕业算起，一共工作了47年3个月。

在工作的前期，从1966年7月到1967年12月，留在母校华东师范大学参加“文化大革命”。然后，从1967年12月到1978年10月，分配到了山西省大同市大同一中当一名中学教员。现在看来这12年是我一生中损失最大的12年，除了尽可能给所教的中学生讲授对学习有用的道理外，其他几乎没有做值得记忆的事。

自1978年考上研究生后，就一直在高校从事科研和教育工作。这35年的工作构成了我一生工作的主旋律。35年中，我先后在安徽大学、苏州大学和上海大学工作，工作的重点一直是科研工作。本书主要想为这35年的科研工作做一总结。

从我的工作经历来看，一辈子的科研工作所涉及的内容是丰富多彩的。我的工作主要是依托于我的数理基础来从事交叉研究。我曾经从事过与力学、物理、信息和生物的交叉研究。在所交叉领域都取得过一些成绩，在相关领域国际上认可杂志上发表过论文。35年实际科研工作的磨炼，既积累了一些可供参考的经验，又有一些可供借鉴的教训。我想利用此机会，做一个总结，希望能对读者有所帮助。

本书共分三个部分。第一部分是我科研工作一般性的总结，包括我从20世纪80年代以来直到2014年5月前发表的论文目录、我主持或参与的国家级的科研项目以及相关的资料。从中可以看到我是如何从一个科研的门外汉逐步成长为一个较成熟的科研工作者。第二部分是我选取的52篇代表性论文。论文的选取既要考虑我工作过的领域又要考虑到论文的意义，同时不但要考虑论文的发表时间而且要注意到尽可能多的博士生的贡献。从这部分中可以发现从事交叉研究特色，希望这个特色能对读者的研究工作有所启发。第三部分是我35年科研工作所走过的道路、科研工作的体会以及对年轻一代的期望。我殷切地希望年轻一代能实现把我国从科研大国向科研强国的转型。

最后，我要感谢我的导师许政范教授对我的培养，也要感谢在各个阶段曾经给予我帮助和鼓励的前辈和同行，他们是郝柏林院士、朱照宣教授、钱敏教授、姜礼尚教授和周哲玮教授。

刘曾荣

2015年10月

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第一部分

科研工作一般性介绍

1.1 学术论文

1.1.1 期刊论文

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