

Contents

Preface 前言	vii
1. The Civil War 國共內戰.....	1
1.1 My Childhood 童年.....	1
1.2 The Escape 逃出	5
1.3 Experience in Taiwan 台灣經驗	8
1.4 Remembering Father 紀念父親-陳又超	10
2. The Wisdom of Class 33 附中智慧	15
2.1 The Legacy 傳承風格	16
2.2 The Cardinal Rules for Senior Life 四老哲學	18
2.3 On Marriage 婚姻	19
2.4 On Family 家庭	27
2.5 On Aging Parents 奉養	30
2.6 On Economics 101 老本	32
2.7 On Health 老命	36
Appendix 2.1 W.F. Speech for Brian's Wedding 惠發演講	39
Appendix 2.2 Eric's Speech for Brian's Wedding 中傑的演講	42
Appendix 2.3 Suh and Hsuan Wedding Ceremony 小龍婚禮祝辭	49
3. The Voyage to America 漂洋過海	55
3.1 The Start 準備	55
3.2 Voyage to San Francisco 漂洋過海到金山	56
3.3 Summer Jobs in New York 紐約的花花世界	62
3.4 Settled Down at Lehigh 安身在里海大學	64
3.5 Looking Back 回顧	67
3.6 Joining the Elite Group 列入學術名流.....	67
4. My Lifelong Companion-Linlin 鶼鶼情深.....	69
4.1 The Romance 戀愛	69
4.2 The Wedding 婚禮	74
4.3 The Hsuan's Family 宣家	75
4.4 Linlin's Business Adventure 創業	77
4.5 The Chen's Family 陳家	81

5. Academic Career at Lehigh 教學相長	91
5.1 The Leader - Lynn S. Beedle 領導者	91
5.2 On Structural Connections 結點	93
5.3 On Beam-Columns 梁柱	96
5.4 On Limit Analysis and Soil Plasticity 極限分析與土壤塑性力學.....	98
5.5 On Concrete Plasticity 混凝土塑性力學	101
5.6 On Polymer Concrete 塑膠混凝土.....	102
5.7 On Lehigh Education 里海教育	103
Appendix 5.1 Doctoral Students-Lehigh University 里海博士生.....	105
Appendix 5.2 Publications 論文集	106
6. Academic Life at Purdue 普渡生涯	113
6.1 The Background 背景.....	113
6.2 My Students 學生.....	114
6.3 On Offshore Structural Engineering 近海結構.....	117
6.4 On Constitutive Equations 本構方程	118
6.5 On Safety of Temporary Structures 暫時結構	121
6.6 On Advanced Analysis for Frame Design 高等分析	124
6.7 On Structural Members and Frames 單元與框架	125
6.8 On Software Development Environment 軟件發展環境	127
6.9 Concluding Remarks 評論	129
Appendix 6.1 Doctoral Students-Purdue University 普大博士生	130
Appendix 6.2 Publications 論文集	131
7. My Life Story 我的一生	153
7.1 Step down as Dean 辭院長職	153
7.2 My Schooling 我的學業	154
7.3 My Career Path 我的事業	155
7.4 My Celebrity Status 我的名聲	157
7.5 My Honors and Recognitions 我的榮譽與讚譽	158
7.6 My Family 我的家庭	161
7.7 50-Year Friendship 50年的友情	166
8. Academic Contributions 學術貢獻	169
8.1 Background 背景	169
8.2 Solid Mechanics 固體力學	170
8.3 My Research at a Glance 研究一覽	172
8.3.1 Steel Connections 鋼結點	172
8.3.2 Beam-Columns 梁柱	172

8.3.3 Limit Analysis 極限分析	174
8.3.4 Soil and Concrete Plasticity 塑性力學	174
8.3.5 Advanced Analysis 高等分析	175
8.3.6 Semi-Rigid Frames 柔性框架	176
8.4 Slide Rule and Calculator Environment 計算尺	177
8.4.1 General Trend in Structural Engineering in the 1960-70's 趨勢	177
8.4.2 Contributions to Limit Analysis in Soil Mechanics 貢獻.....	179
8.5 Mainframe Computing Environment 主机	181
8.5.1 General Trend in Structural Engineering in the 1970-80's 趨勢	181
8.5.2 Contributions to Constitutive Modeling of Materials 貢獻.....	183
8.6 Desktop Computing Environment 書桌机	186
8.6.1 Current Trend in Structural Engineering 趨勢	186
8.6.2 Contributions to Advanced Analysis 貢獻	189
8.7 Future Trends in Structural Computing 前瞻	191
8.8 Rules for Good Engineering Practice 金科玉律	192
Appendix 8.1 Books and Contributed Chapters 書篇專集.....	195
9. Life in Rapidly Changing Times 生活在急變中的世界	201
9.1 High Tech and New Economy 高科技與新經濟	201
9.2 Career Flexibility in Rapidly Changing Times 事業的柔軟性	203
9.2.1 Introduction 介紹	203
9.2.2 Information Technology Age 資訊時代	205
9.2.3 Life-Long Learning 終生學習	209
9.2.4 Flexibility in Your Career Choice 彈性選擇	209
9.2.5 Concluding Remarks 總結	210
9.2.6 Summary 摘要	211
9.3 A Convocation Address 結業典禮演說.....	212
9.4 Changing Jobs - Lessons Learned 換工作的經驗談	216
9.5 How to Make an Effective Presentation 如何有效表達	219
10. My Journey in the Rise of China 我見證崛起中的中國	223
10.1 Background 背景.....	223
10.2 The Rise of China 中國崛起	224
10.3 The NIT Lecture Tour in 1981 講學之旅	226
10.4 The Journey on June 4 th 1989 六四經歷.....	232
10.5 The Culture Tour in 2004 文化之旅	236
10.6 Quotation from the President of US NAE in 2006 引述美國國家 工程院院長對中國長期科學與工程發展計劃談話的驚愕.....	240

11. My Students at a Glance 學生略述	241
11.1 Students from North America 北美學生.....	243
11.2 Students from Taiwan 台灣學生	251
11.3 Students from China 中國學生.....	266
11.4 Students from Korea 韓國學生.....	270
11.5 Students from Japan 日本學生.....	273
11.6 Student from Singapore 新加坡學生.....	277
11.7 Students from Egypt 埃及學生.....	282
11.8 Students from Thailand 泰國學生.....	283
11.9 Student from Norway 挪威學生.....	285
11.10 Student from India 印度學生.....	289
11.11 Concluding Remarks 評論.....	291
11.12 Wai-Fah Chen at a Glance 陳惠發略述.....	291
12. The Teacher D.C. Drucker 師生情誼	293
12.1 Background 背景.....	293
12.2 The Teacher 恩師.....	294
12.3 The Researcher 研究學者.....	297
12.3.1 Steel Structures 鋼結構.....	298
12.3.2 Concrete Structures 混凝土結構.....	298
12.3.3 Soil Mechanics 土壤力學.....	299
12.3.4 Limit Analysis 極限分析.....	300
12.3.5 Constitutive Modeling 本構模型.....	301
12.4 The Passing of a Giant 巨人仙去.....	301
12.5 My Tribute 追悼.....	302
13. Transforming the College 改變中的工學院	305
13.1 Background 背景.....	305
13.2 The Vision and Strategy 憧憬與戰略.....	306
13.3 The Progress 進展.....	307
13.4 The Milestones 里程碑.....	310
13.5 Management Style 管理風格.....	311
Appendix 13.1 A Conversation with Dean Chen 與陳院長的一席對話.....	314
Appendix 13.2 Engineering His Exit 離職機制.....	321
Appendix 13.3 A Letter to Faculty and Staff of the College 告別書.....	324
Appendix 13.4 UH Engineering School Rewards Faculty 報酬.....	326
Appendix 13.5 Tread Carefully with University Merit Raises 功績報酬.....	329
Appendix 13.6 UH Executive Salaries Increase 主管薪俸.....	330
Appendix 13.7 Publications 論文集.....	333

14. On Higher Education Reform in China 關於中國高等教育改革.....	337
14.1 Introduction 介紹.....	337
14.2 Rapid Development 急速發展.....	338
14.3 Bean-Counting Curriculum 填鴨式課程.....	339
14.4 From Planned Economy Thinking to Market-Driven System 從計 劃經濟到市場經濟.....	340
14.5 From Specialization to General Education 從專業到通材教育.....	340
14.6 Academic Work Plagued by Plagiarism 學術受抄襲折磨.....	341
14.7 Higher Education Reform 高教改革.....	342
14.8 Summary and Conclusions 簡述與總結.....	343
14.9 The Timing for Reform 改革時機.....	344
Appendix 14.1 An Illustrative Example on How to Build World-Class Universities in China 在中國建立世界級大學的列範....	346
Appendix 14.2 Engineering Education in Rapidly Changing Times 在急 變世界中的工程教育.....	349
15. My Adviser and I 導師與我.....	359
15.1 清華的校訓和清華的精神 The Tsinghua Spirit.....	359
15.2 清華求學和清華教我做人 The Tsinghua Education.....	362
15.2.1 清華的學習生活 The Academic Life at Tsinghua.....	362
15.2.2 清華教我如何做人 Tsinghua Tradition and Value.....	364
15.3 祖國的“大三線”建設和改革的春風 The Defensive Strategy and Reforms in China.....	367
15.3.1 祖國的“大三線”建設 The Defensive Strategy in China...	367
15.3.2 改革的春風 The Reform.....	369
15.3.3 跨出國門 Going Abroad.....	371
15.4 普渡大學校園里的清華學子 Tsinghua Students at Purdue.....	373
15.4.1 留學的艱難和我的指導教師 My Challenges and My Adviser.....	373
15.4.2 留給 Lafayette 的琴聲 Sharing Music in Lafayette.....	378
15.5 清華園裏的普渡人 The Boiler Maker at Tsinghua.....	380
15.5.1 重歸清華園 Returning to Tsinghua.....	380
15.5.2 天安門事件 The Event at Tiananmen Square.....	381
15.5.3 出任清華大學土木工程系主任 Leading the CE Department	382
15.6 教師：一個崇尚奉獻的職業 Teacher: a Sacred Profession.....	385
16. NTU and I 臺大與我.....	389
16.1 Born in the War Place 出生戰地.....	389
16.2 From Junior to Senior High School 從初中到高中.....	391

16.3 Starting to be Away from Home 揮別家鄉.....	392
16.4 Undergraduate Study at NTU 進入台大.....	393
16.5 Graduate Study at NTU 台大研究生涯.....	394
16.6 New Career at Cornell 康大歲月.....	395
16.7 Research/Teaching Career at NTU 為人師表.....	398
16.8 The KKCNN Conference 五校聯合研討會.....	401
16.9 Earthquake Engineering Research Facilities 國家地震中心.....	402
16.10 Serving as Chairman and Dean at NTU 擔任系主任, 院長.....	404
16.11 Presidential Election of NTU in 2005 台大校長選舉.....	408
16.12 Accreditation of Engineering Programs 工程教育認證.....	408
16.13 Review of Major Civil Works 重大工程履勘.....	411
16.14 Prof. W. F. Chen: A Model for Learning 學習的典範.....	414
16.15 Concern about Civil Engineering 土木工程의未來.....	415
16.16 Closing Remarks 結語與致謝.....	416
17. Kawasaki and I	419
17.1 My family and the Atomic Bomb	419
17.2 The University of Tokyo – From Medical to Engineering.....	420
17.3 Kawasaki Heavy Industries – From Shipbuilding to Civil Engineering.....	422
17.4 Heading for U. S. A. – Lehigh University.....	423
17.5 Academic Life at Lehigh University – With Prof. W. F. Chen.....	424
17.6 The Doctor of Philosophy – Struggle against Time.....	426
17.7 The Books “Theory of Beam-Columns”.....	428
17.8 Steel Structure Division.....	428
17.9 Offshore Equipment Department – Shipbuilding Division.....	429
17.10 Crushing Plant Division.....	430
17.11 Welding Research Laboratory.....	431
17.12 Opto-Engineering Laboratory – My Dream.....	433
17.13 Kanto Technical Institute – New Products by Photon Technologies.....	435
17.14 Akashi Technical Institute – Technical Support to All Products....	436
17.15 The New Industry Research Organization – Regional Innovation...	438
17.16 Still Flying Life – Do the Best and Enjoy Life!.....	440
Index	443
Index in Chinese (Chapter 15).....	449