Contents

| Preface V |
|------------------------------|
| Acknowledgments VII |
| About the book —— XIII |
| About the authors —— XV |
| List of figures —— XVII |
| List of tables —— XIX |
| Chapter 1 |
| Metal cutting processes —— 1 |
| Learning problem 1 —— 1 |
| Learning solution 1 —— 1 |
| Learning problem 2 —— 2 |
| Learning solution 2 — 3 |

| 0, | |
|----------------------------|---|
| Learning solution 1 —— 1 | |
| Learning problem 2 —— 2 | |
| Learning solution 2 —— 3 | |
| Learning problem 3 — 3 | |
| Learning solution 3 —— 4 | |
| Learning problem 4 —— 5 | |
| Learning solution 4 —— 5 | |
| Learning problem 5 — 6 | |
| Learning solution 5 — 6 | |
| Learning problem 6 — 7 | |
| Learning solution 6 — 8 | |
| Learning problem 7 —— 9 | |
| Learning solution 7 — 9 | |
| Learning problem 8 —— 10 | |
| Learning solution 8 —— 10 | |
| Learning problem 9 —— 11 | |
| Learning solution 9 —— 11 | |
| Learning problem 10 12 | 2 |
| Learning solution 10 —— 13 | ŝ |
| Learning problem 11 —— 14 | ŀ |
| Learning solution 11 — 14 | ŀ |
| Learning problem 12 —— 16 | ś |
| Learning solution 12 — 16 | Ś |
| Learning problem 13 —— 17 | , |

Learning solution 13 — 17



Learning problem 14 — 18
Learning solution 14 — 19
Learning problem 15 — 20
Learning solution 15 — 20
Learning problem 16 — 21
Learning solution 16 — 21
Learning problem 17 — 22
Learning solution 17 — 23
Learning problem 18 — 24
Learning solution 18 — 24
Learning solution 19 — 26
Learning problem 20 — 27
Learning solution 20 — 27

Chapter 2

Metal cutting analysis — 29

Learning problem 21 --- 29 Learning solution 21 --- 29 Learning problem 22 --- 30 Learning solution 22 --- 30 Learning problem 23 --- 32 Learning solution 23 --- 32 Learning problem 24 --- 33 Learning solution 24 — 33 Learning problem 25 --- 35 Learning solution 25 — 35 Learning problem 26 - 36 Learning solution 26 — 36 Learning problem 27 --- 37 Learning solution 27 --- 37 Learning problem 28 --- 38 Learning solution 28 — 39 Learning problem 29 --- 40 Learning solution 29 — 40 Learning problem 30 - 42 Learning solution 30 --- 42 Learning problem 31 — 43 Learning solution 31 --- 43 Learning problem 32 --- 44 Learning solution 32 --- 45 Learning problem 33 — 46

| Learning solution 33 — 46 |
|-----------------------------------|
| Learning problem 34 —— 47 |
| Learning solution 34 —— 47 |
| Learning problem 35 —— 48 |
| Learning solution 35 — 49 |
| Learning problem 36 — 50 |
| Learning solution 36 — 50 |
| Learning problem 37 — 51 |
| Learning solution 37 — 51 |
| Learning problem 38 —— 52 |
| Learning solution 38 —— 53 |
| Learning problem 39 — 54 |
| Learning solution 39 — 54 |
| Learning problem 40 —— 55 |
| Learning solution 40 — 55 |

Chapter 3

| Learning problem 41 — 57 |
|----------------------------|
| Learning solution 41 —— 57 |
| Learning problem 42 58 |
| Learning solution 42 58 |
| Learning problem 43 — 59 |
| Learning solution 43 — 60 |
| Learning problem 44 — 60 |
| Learning solution 44 —— 61 |
| Learning problem 45 — 62 |
| Learning solution 45 62 |
| Learning problem 46 — 63 |
| Learning solution 46 — 63 |
| Learning problem 47 —— 64 |
| Learning solution 47 65 |
| Learning problem 48 — 66 |
| Learning solution 48 — 66 |
| Learning problem 49 — 67 |
| Learning solution 49 67 |

Learning problem 50 — 68 Learning solution 50 — 68

Metal cutting optimization — 57

Chapter 4

Metal cutting performance responses — 71

Learning problem 51 — 71 Learning solution 51 --- 71 Learning problem 52 — 72 Learning solution 52 — 72 Learning problem 53 --- 73 Learning solution 53 -- 74 Learning problem 54 --- 74 Learning solution 54 —— 75 Learning problem 55 --- 76 Learning solution 55 -- 76 Learning problem 56 --- 77 Learning solution 56 -- 77 Learning problem 57 --- 78 Learning solution 57 — 79 Learning problem 58 --- 80 Learning solution 58 -- 80 Learning problem 59 -- 81 Learning solution 59 --- 82 Learning problem 60 -- 82 Learning solution 60 --- 83 Learning problem 61 --- 84 Learning solution 61 --- 84 Learning problem 62 -- 85

Learning solution 62 — 85

References ---- 87

Index ---- 93