

# Sectionally complemented chopped lattices

George Grätzer<sup>1</sup>   Harry Lakser<sup>1</sup>   Michael Roddy<sup>2</sup>

<sup>1</sup>University of Manitoba

<sup>2</sup>Brandon University

Conference on Lattice Theory, 2006

# Outline of Part I: Background

## 1 Chopped lattices

# Outline of Part I: Background

- 1 Chopped lattices
- 2 Ideals and congruences

# Outline of Part II: Characterizing the 1960 sectional complement

## 3 What it is not

# Outline of Part II: Characterizing the 1960 sectional complement

- 3 What it is not
- 4 The characterization theorem

# Outline of Part III: The general problem

## 5 The Lakser Theorem

# Outline of Part III: The general problem

- 5 The Lakser Theorem
- 6 A small counterexample

# Outline of Part III: The general problem

- 5 The Lakser Theorem
- 6 A small counterexample
- 7 A cyclic counterexample



# Part I

## Background

# Part I

## Outline

- 1 Chopped lattices
- 2 Ideals and congruences

# Defining chopped lattices

Starting the definitions

# Ideals

Continuing the definitions

## Part II

# Characterizing the 1960 sectional complement

# Part II

## Outline

- 3 What it is not
- 4 The characterization theorem

# Not maximal, minimal, or fixed point

Counterexamples

# The main result

State the characterization theorem



## Part III

### The general problem

# Part III

## Outline

- 5 The Lakser Theorem
- 6 A small counterexample
- 7 A cyclic counterexample

# The problem

Stating the general problem and Harry's observation

# Four-element overlap

Counterexample

# Three cycle

Cyclic counterexample