



# Quick on the Draw

## Crime-Busting with a Mathematical Twist

<b>AUTHOR</b>	ALAIN HERTZ
<b>COLLECTION</b>	—
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### SUMMARY

A theft and a hold-up, an impostor trying to collect an inheritance, the disappearance of a lab mouse worth several hundred thousand dollars, and a number of other cases: these are the investigations led by Maurice Manori, a police inspector known for being quick on the draw. He owes his reputation to his highly effective—but very unconventional—methods. His secret weapon? Graph theory. In search of the truth, Inspector Manori draws graphs that will introduce you to the ins and outs of a mathematical discipline with countless handy applications.

Bad guys take note: Manori is watching, and he's quick on the draw!

### TARGET AUDIENCE

This novel provides the layperson with an excellent breakdown of a science that's not very well known, using it to model a wide range of everyday situations. Thanks to its fun approach, it's great for both Sudoku and logic puzzle lovers and for math and science students and teachers.

### AUTHOR

**Alain Hertz** has a lot in common with Inspector Manori. He studied in Switzerland, he lives in Montreal, and above all, he's been immersed in graphs for some 25 years. He holds a doctorate in science from École Polytechnique Fédérale de Lausanne. An internationally renowned researcher, he has more than 150 publications to his credit, most of them dealing with graph theory. He applies the science mainly to the fields of schedule-building and logistics system optimization. After conducting research in Jerusalem and Lausanne, he moved to Montreal in 2001, where he is a professor in the Department of Mathematics and Industrial Engineering at Polytechnique Montréal. His mission is to convey his passion for graphs by promoting them all over the world, especially by making them interesting and accessible to everyone.



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### Table of contents

#### Prologue

#### CHAPTER I

##### Respecting the rules

In which Manori introduces his friend and colleague Courtel to the basics of graph theory, and uses it to show how the COPS conference organizers won't be able to create the work groups they have in mind for their "unsolved cases" sessions.

#### CHAPTER II

##### The villas of the Bellevue

In which Manori catches Courtel in a Marseillais-style exaggeration, and also solves a problem with the hotel villas' water, gas and electricity lines.

#### CHAPTER III

##### The case of the missing files

In which Manori attends an "unsolved cases" session with his police colleagues, and helps finger the culprit in a complicated case that starts with a murder and ends with the mysterious theft of a stack of files from a high-security police archives.

#### CHAPTER IV

##### The case of the hidden inheritance

In which Manori helps a colleague by using graph theory to tackle a case of inheritance fraud, proving that an anonymous caller can't possibly have put his hands on a paranoid millionaire's fortune... and showing the real inheritors how they can.

#### CHAPTER V

##### The unhappy employee

In which the ever-friendly Manori uses a magic card trick to help an unhappy hotel maid find her smile again by getting a fairer set of job responsibilities.

#### CHAPTER VI

##### The case of the runaway mouse

In which Manori helps find a very expensive mouse that escaped from Courtel's lab back home... and makes Courtel look like a genius in the process.

#### CHAPTER VII

##### The case of the hooded man

In which Manori identifies a hooded man who committed a robbery while on break from his prison sentence, impressing his colleagues in another "unsolved cases" session.

#### CHAPTER VIII

##### The getaway car

In which Manori helps Courtel solve a puzzle and avoid looking stupid in front of his daughter, and then finds a way to give the entire Courtel family an extra couple hours of sleep.

#### CHAPTER IX

##### The Sudoku apprentice

In which Manori helps a young Sudoku player solve a couple of challenging puzzles on the flight home from the COPS conference.

#### Author's notes

#### Bibliographic references

#### Acknowledgements

#### Book's website (may be accessed through

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#### Polytechnique

C.P. 6079, Succ. Centre-ville  
Montréal (Québec) Canada  
H3C 3A7

Tél. 514 340 3286

Télééc. 514 340 5882

Courriel [pip@polymtl.ca](mailto:pip@polymtl.ca)

[www.pressespoly.ca](http://www.pressespoly.ca)

