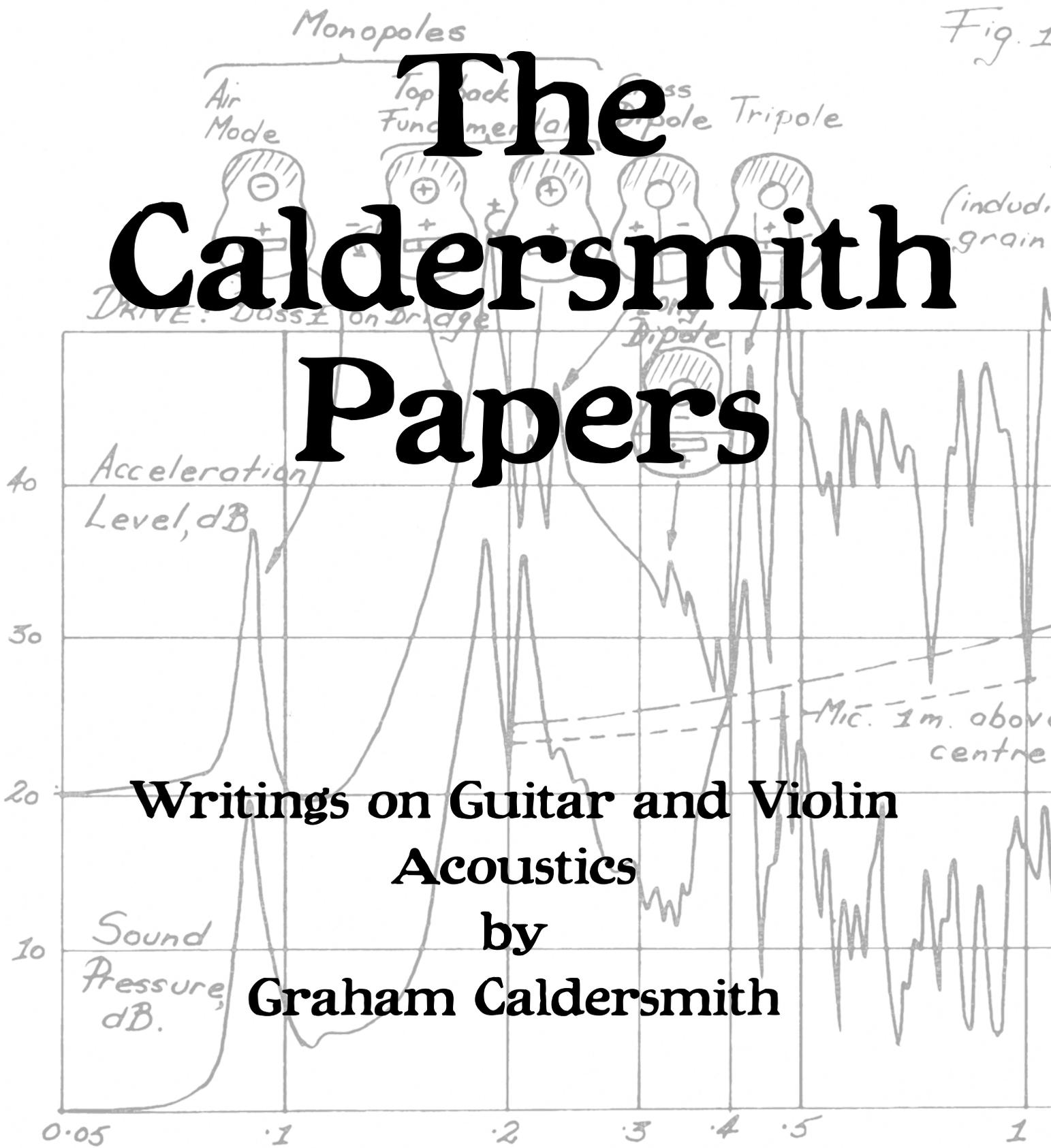


# The Caldersmith Papers

Writings on Guitar and Violin  
Acoustics  
by  
Graham Caldersmith



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The text and illustrations for the republished articles have been assembled from a variety of sources. Sometimes the original publishers had the text as digital files, which made it a relatively simple process. Others required OCR software applied to scanned originals where they were available or PDF files of the original, which can be of variable quality, while a few required retyping the entire text. Many thanks to Kevin Bradley for his forensic proof-reading and Angela MacPherson for her proof-reading and ongoing encouragement and assistance.

Graham McDonald  
MusicBooks Press  
April 2022

# GRAHAM CALDERSMITH

26 NOVEMBER, 1943 - 5 OCTOBER 2019

## AN INTRODUCTION

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Graham Caldersmith was born on the North Shore of Sydney, NSW, and with a science degree became a high school science teacher in 1967. He had built a guitar while still in high school, played music in folk clubs while experimenting with making more guitars.

He moved to Canberra in 1971 to study astrophysics (literally 'rocket science') at the Australian National University and this in turn led to the study of music acoustics with renowned acoustician Neville Fletcher. His guitar building activities expanded to include violin family instruments and his research embraced the study of both types of stringed instruments.

Inspired by the idea of the bowed string quartet and the expanded family of these instruments developed by Carleen Hutchins of the Catgut Acoustical Society (CAS), Graham developed the idea of a family of classical guitars including a bass, a baritone and a treble, tuned a fourth above a standard guitar. More than 30 years later Guitar Trek, a Canberra based quartet using these guitar family instruments are still performing and recording both arranged classical repertoire and newly commissioned works.

Graham was awarded a Churchill Fellowship in 1982, which enabled him to spend some weeks in the US and attend the Catgut Acoustical Society's conference in DeKalb, IL where he made contact with Carleen Hutchins and many of the other researchers of the CAS.



*Graham Caldersmith (l), Colin McJannett and Tom Rummery, early 1970s*

The Fellowship also allowed him to attend the 1982 annual convention of the Guild of American Luthiers (GAL), held that year in Estes Park, CO. Over the next couple of decades he contributed 13 articles to the *CAS Newsletter/Journal* and 11 articles for the GAL's *American Lutherie* and its predecessors. In addition he had articles published in academic acoustics journals in America, Europe and Australia, most of which are republished in this book. Exceptions are two articles Graham co-published with Prof. Thomas D Rossing. We have not been able to contact Prof. Rossing to seek permission to republish, so they have regrettably been excluded.

Graham became a full-time luthier in 1980, basing himself in Canberra until the mid-90s when he and his then wife, Marlies Nordhof, moved to the small town of Kendall on the NSW mid-north coast, where they built a luthier's dream house with an extensive workshop on the ground floor and living quarters above. Following a marriage breakup, and finding a new partner, Angela MacPherson, he moved 40km inland to the mountain village of Comboyne in 2006.



*In the workshop at Comboyne, NSW, 2011*

The many articles he wrote on music instrument acoustics for both an academic and a lay audience have contributed to a broader understanding of how stringed instruments work. He was a great believer in that knowing how the sound is being produced can help to build better instruments. In addition he was a great proponent of using Australian timbers, especially King Billy pine (*athrotaxis selaginoides*) for soundboards and Tasmanian blackwood (*acacia melanoxylon*) for bodies and necks.



*Graham at the GAL convention in Takoma, WA in 1998*

Over his career he made over 200 guitars (mostly classical), 116 violins, 60 violas and 38 cellos. He was fascinated by Greg Smallman's development of lattice-braced classical guitars and did whatever he could to promote Smallman's ideas and the growth of the 'Australian School' of classical guitar building. He took much inspiration from Smallman's work and developed his own guitars following on from Smallman's innovations.

Graham was always part of his local community's activities. He was a founder and ongoing sponsor of the Kendall National Violin Competition, donating a violin made from Australian timbers as first prize for 18 years. He enthusiastically took part in amateur theatricals, had a passion for (at times, very) vulgar bush poetry and joined the local volunteer bush fire brigade when he moved to Comboyne as well as being a long time supporter of Sustainable Population Australia.



*In full flight as bush poet Megafluff McSquirter*

In recognition of his work he was awarded an Order of Australia Medal in 2016 for his services to Australian musical instrument making. He died in 2019 after a long struggle with multiple myeloma, a blood cancer which he suspected was the result of exposure to lacquers and thinners over many years. He is missed by his friends and the wider musical community in Australia and around the world.



*With Angela at Government House in Sydney after being presented with his Order of Australia Medal*



*Graham meeting some buffalo in the USA during his Churchill Fellowship trip in 1982*