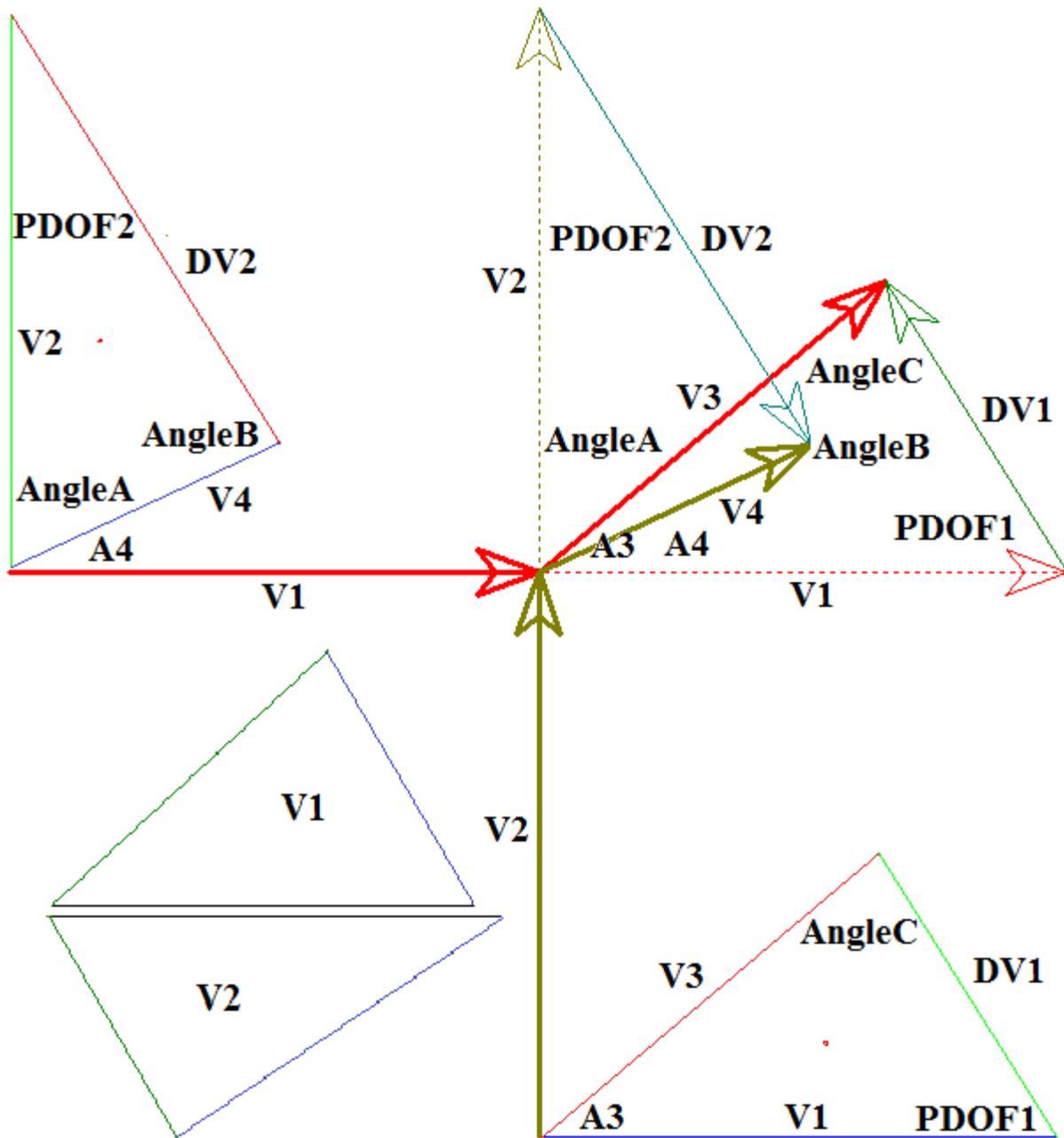# Vectors (EDR-Momentum)

Triangulating Momentum

Angular Collision Alternative to V3 & V4 Requirement of Linear Momentum

George M. Bonnett, JD

Vectors (EDR-Momentum):Triangulating Momentum
Angular Collision Alternative to V3 & V4 Requirement of Linear Momentum

Intended primarily as a tutorial for the law enforcement officer, physicist, engineer, or other professional trained in accident investigation and reconstruction, this work offers outsiders a unique glimpse into the highly technical and sometimes mysterious world of these professionals.

Unlike *Anatomy of the Collision*, the author's comprehensive work on problem solving in accident reconstruction, this work is a focused guide for using data from the Event Data Recorder of one of the vehicles in a collision in conjunction with the other vehicle's approach and departure angle, information normally obtained from the scene, photographs, scale diagrams, or other physical evidence. This data is then used to solve for additional information, including the pre and post impact speeds and supplemental angular information, some of which could be obtained using Linear Momentum.

Basic Geometry and Trigonometry are used in a step-by-step approach to reach solutions that cannot be obtained using Conservation of Linear Momentum alone for lack of information.

Four different methodologies are used in demonstrating the accuracy of this new approach, from simple triangles through final proof using Linear Momentum and Vector Sum Analysis.

While both relatively simple and stunningly elegant, there is also a danger lurking within the deceptive simplicity. The danger is exposed in a way that will make it almost impossible to forget.

George M. Bonnett is an attorney, an expert in the field of accident reconstruction, and the author and designer of the REC-TEC Professional accident reconstruction program. He is a Vietnam veteran, serving as a Captain and Marine Corps Aviator with 135 combat missions. He is also a retired veteran of the New Orleans Police Department.

He has taught courses on the REC-TEC program for Louisiana State Police, Kansas Highway Patrol, Missouri Highway Patrol, South Carolina Highway Patrol, the Highway Traffic Safety Program at Michigan State University, and the Traffic Institute for Police Services in Pennsylvania. He was an adjunct instructor with TEEX at Texas A&M and at Michigan State University – Highway Traffic Safety Program. He has been a presenter at Institute of Police Technology and Management (IPTM), International Association of Accident Reconstruction Specialists (IAARS), Texas Association of Accident Reconstruction Specialists (TAARS), Forensic Accident Reconstructionists of Oregon (FARO), the Institute of Traffic Accident Investigators (ITAI) and the Australian & South Pacific Association of Collision Investigators (ASPACI).

Mr. Bonnett currently resides in Florida with his wife Dominique. He continues to actively develop and improve the REC-TEC computer program as well as teaching both public and private courses on REC-TEC and consulting on cases involving accident reconstruction.