

Suggested outlook topics for the Clifford algebra course

(the reference lists are sketchy; please check with Lars or Douglas for more exact ones)

Graph theory / discrete geometry

Lars' old lecture notes and additional notes
Stacy Staples etc.
arXiv: 0810.3322

Coxeter groups / conformal algebra / crystal structures

Hestenes etc.

Dirac operators / differential geometry / index theorems

Spin geometry
Avramidi: math-ph/0502001

Classical mechanics

Hestenes books/papers
GA for physicists

Hypercomplex analysis, Cauchy-kernels etc.

Lounesto
Gilbert-Murray

Supersymmetry / SUSYQM (modern mathematical physics)

Witten etc.

Projective / conformal geometry

GA for physicists

Division algebras / exceptional Lie algebras & groups

Baez
Lounesto
Exceptional Lie algebras book
Killing spinors paper
Bär

Generalized Clifford algebras / “quantum” deformations

Santhanam etc.

Kostant Dirac operator / Fierz identities

Brink: hep-th/0403211

Infinite-dimensional CA / Hilbert space CA

Delanghe
Plymen – de la Harpe

The Standard Model in STA

GA for physicists
Hestenes: arXiv: 0807.0060
Baylis etc.

Lie groups as spin groups

GA for physicists
Doran-Lasenby etc.

General Relativity with STA

GA for physicists
Doran-Lasenby-Gull
Hestenes

Robotics with GA

Conference references

Computer vision with GA

Conference references