Abstract

This bibliography records publications of C. William Gear.

Title word cross-reference

A [Gea73d], m [Gea74c], s [CG87a, CG87b, CG87c, CG89a, CG89b].

-dimensiona [Gea74c], -stable [Gea73d].

-Step [CG87a, CG87b, CG87c, CG89a, CG89b].

1 [Gea78h], 13-15 [Cra87], 1975 [GDL75], 1977 [Ric77], 1979 [SGW79], 1981 [Wat82], 1982 [KR83], 1983 [Gea84b], 1987 [BGR87, Cra87].

2 [Gea64a].

407 [Gea71b, Nik73].

56 [Gea65c].

60th [PSA +97, Ske97].

9th [Wat82].

acceleration [LSGK15a]. Accuracy [JG89, ZGKK90]. accurate [LG05, LG07].

ACM [Cra87, Gea71b]. Across [Gea88d, XG90, Gea93, GX93]. Adams [Gea80g]. address [Gea64a]. agent [LSGK15a, LSGK15b]. agent-based
Aided
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April
Architectures
Articulated
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conducted
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Conference
[Cra87, GV87a, GV87b, KR83, Wat82, Fre80].
Confl icts [Gea77b]. Conjugate
[CG87a, CG89a]. Connected [Gea88c].
Consistent [LPG87, LPG91], constrained
[ZVG+12]. Constraint [KG03c, GK05].
Constraint-Defined [GK03c, GK05]. Constraints
[GP82c, Gea87b, GP83b, GLG85, Gea89a].
continuous [KEB+07]. Control
[Gea82c, Gea74a]. Convergence
[GW74, GW73, ZGKK09]. Corp [Gea65c].
COSERS [Ard80].
D [Gea65c]. D2 [Gea71b]. DAEs
[CG95, Gea87b, Gea89a, GGL85, Kei89].
Data [DTG+16]. Data-Driven [DTG+16].
December [GDL75]. Deciding
[LPG03, LPGK07]. Dedicated [Ske97].
Dedication [PSA+97]. Defined
[KG03c, GK05, GCK15]. derivatives
[Gea73c, Gea74b]. Descriptions
[BWL+17]. Detection
[GCK15, Gea80i, Gea82e]. Development
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Gea81b, GP82a, GP82b, GP82c, GP83a,
Gea84a, GP84, G084, Gea86a, Gea86c,
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[DEGR88]. Emphasis
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[GBRG+17]. Engineering
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[AGK+11, CGLK03, CGLK04, Gea80h,
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LPGK07, LSGK15b, Gea77a, Gea88a, GCDK04, ZGKK09, ZVG+12].
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REFERENCES

Summer [FGH62]. Supercomputers [GS89]. Surface [HG77a, HG77b, HG80]. Sweden [KR83]. Symbiosis [GS90, GS87]. Symmetric [CG87c, CG89b]. Symmetries [KEB+07]. Symplectic [SG92]. Symposium [CG87a, CG87c, Hau84, Hin74, LPG87, Gea69a, Gea69e, Gea70b, KG79a, KG79b]. System [CG87a, Gea65c, Hau84, Hin74, LPG87, Gea66a, Gea69a, Gea70b, KG79a, KG79b, system-level [KG80, KG81]]. Systems [CG87c, DTG+96, GP82b, GP84, GKK205, Gea69b, Gea69b, GP82a, GP83a, GKH04, GG10].


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References

Aslam:1989:AIO


Artstein:2011:ACD

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REFERENCES


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REFERENCES


Gear:2004:MDC


Gear:2015:MDP


Gear:1975:PSM


Gear:1960:SSI


Gear:1963:AI


Gear:1963:SSB


Gear:1964:OAF

REFERENCES


REFERENCES


REFERENCES


Charles W. Gear. *FORTRAN and WATFIV language manual*, volume L1 of *Introduction to


REFERENCES


REFERENCES


REFERENCES


REFERENCES

DOE/ER/25026-22), Department of Computer Science, University of Illinois at Urbana-Champaign, Urbana, IL, USA, July 1988. 7 pp.


REFERENCES


REFERENCES


[GK03a] C. W. Gear and Ioannis G. Kevrekidis. Projective methods for stiff differential equations: Problems with gaps in

**Gear:2003:TPM**


**Gear:2004:CPF**


**Gear:2005:PSM**


**Gear:2002:CIB**


C. W. Gear, J. M. Ortega, B. Parlett, J. R. Rice, M. Schultz, L. F. Shampine, and

Gear:1982:DAS


Gear:1982:OMS


Gear:1982:SIO


Gear:1983:DAS


Gear:1983:SIO


Gear:1984:OMS


Gear:1981:ISL

C. W. Gear and Y. Saad. Iterative solution of linear equations in ODE codes. Report UIUCDCS-R-81-1054, Department of Computer Science,
University of Illinois at Urbana-Champaign, Urbana, IL, USA, January 1981. 33 pp.


[GV87b] C. W. Gear and R. G. Voigt, editors. *Selected Papers from the
REFERENCES


[GW89] C. W. Gear and Dian Han Wang. Real-time integration formulas with off-step inputs and their

**Gear:1993:PAT**


**Haigh:2005:ICW**


**Haug:1984:CAA**


**Hamlin:1977:RSHa**


**Hamlin:1977:RSHb**


**Hinmarsh:1974:GOD**


**Holiday:2019:MLP**

Alexander Holiday, Mahdi Kooshkbaghi, Juan M. Bello-Rivas, C. William Gear, Antonios Zagaris, and Ioannis G. Kevrekidis.

Juang:1989:AIW


Jamshidi:2014:TVR


Keiper:1989:GBM


Keiper:1991:AGB


Kevrekidis:2002:EFC


Nash:1990:HSC


Nikolai:1973:CAD


Parslow:1969:CGT


Petzold:1997:DCW


Rice:1979:NCN


Rice:1977:MSI


Rice:1974:MSP


[Setayeshgar:2005:ACI]


[Skeel:1979:SMN]


[Skeel:1997:DCW]


[Watson:1982:NAP]


[Willoughby:1973:BRN]


[Xuhai:1990:PPM]

REFERENCES
