Curriculum Vitae

Brief Profile:

Hello, my name is Gideon, I am a faculty member of the department of Metallurgical and Materials Engineering. Thank you for taking time to learn about me from this self-penned description, and by the way, kudos for finding this document, which to my understanding is not explicitly available. Apart from the specifics that could be found below, I do not have much else to say about me. Perhaps, except one thing. A paraphrased saying of the *great* George Bernard Shaw goes 'those who can't do, teach'. However, after few years in teaching, I find that temporal constraint, BESIDES OTHERS, allows us to choose one these two, at some expense of the other. At such crossroads, I always prefer to teaching, despite my stagnant h-index.

1. Name: Dr. -Ing Prince Gideon Kubendran Amos
2. Designation: Assistant Professor
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   National Institute of Technology, Tiruchirappalli,
   Tamil Nadu, India
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6. Field(s) of Specialization: Theoretical Metallurgy
7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	National Institute of Technology, Tiruchirappalli, Tamil Nadu, India	Oct 2020	Present

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	Karlsruhe Institute of Technology, Karlsruhe, Germany	2019	Magna Cum Laude (with Distinction)	Mechanical Engineering
Master of Technology	Indian Institute of Technology, Madras, Tamil Nādu, India & Karlsruhe Institute of Technology, Karlsruhe, Germany	2015	9.22 CGPA (out of 10)	Metallurgical and Materials Engineering
Bachelor of Engineering	Government College of Engineering, Salem, Tamil Nādu, India	2011	8.61 CGPA (out of 10)	Metallurgical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/ Institution	From	To
Start-up Coordinator	Institute Innovative Council	2021	Till date
Department (Data) Coordinator	Metallurgical and Materials Engineering	2021	Till date

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To
-	-	-	-

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
-	-	-

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/ Year)	To (Month/ Year)
2014	DAAD Scholarship	DAAD	Sep 2014	Mar 2015
2015	GraKo Fellowship	DFG Germany	Sep 2015	Sep 2017

13. Details of Academic Work

(i) Curriculum Development

- Artificial Intelligence in Materials Research (Proposed to BoS)
- Multiphase-field modelling of Materials (Proposed to BoS)

(ii) Courses taught at Postgraduate and Undergraduate levels

- Mechanical Behaviour of Materials
- Metallurgical Thermodynamics and Kinetics
- Mineral Processing and Metallurgical Analysis
- Mathematical Techniques in Material Research
- High-Temperature Materials

(iii) Projects guided at the Postgraduate level

- Identifying and Predicting key Friction Stir Welding Features using Machine Learning techniques.
- Geometrical Evolution of the Disappearing Grains during Isotropic Normal Grain Growth

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Using statistical data-mining techniques to understand the cumulative influence of geometrical and topological features on grain growth	SERB, India	Dec-2021	Dec-2023	Ongoing
Multiphase-field modelling of Asaro - Tiller - Grinfeld instability in Allen - Cahn framework	DE, INTL	Sep 2020	Sep 2022	Completed
Multiphase-field simulation of grain growth and statistical analysis using data-mining techniques	DE, INTL	Sep 2020	Sep 2022	Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award
-	-	-	-

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue
2018	Conference	International	Speaker	Materials Science and Engineering (MSE) Congress	Darmstadt, Germany
2018	International Conference on Numerical Modelling in Engineering	International	Speaker	NME-2018	Ghent, Belgium
2018	Conference	International	Speaker	Materials Science and Engineering (MSE) Congress	Darmstadt, Germany
2018	European Mechanics of Materials Conference	International	Paper presenter	EMMC16	Nantes, France
2019	Workshop on phase-field modelling	International	Paper presenter	KIT	Karlsruhe, Germany

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
Organizing Secretary	International	June 2022	Organizing Secretary	NITT
Material Science Engineering Congress	International	2020	Symposium Organiser	Darmstadt, Germany,

18. Invited Talks delivered

Topic	Date	Inviting Organization
Modelling and understanding grain growth in multiphase polycrystalline	2021	Indian Institute of Technology Madras, Chennai, India

system through Multiphase-field modelling		
Chemo-mechanical multiphase-field modelling of phase transformations	2020	Indian Institute of Technology Kharagpur, Kharagpur, India
Multicomponent Multiphase-field modelling of phase transformation	2020	Indian Institute of Technology Jammu, India,
Modelling complex curvature-driven transformations in polycrystalline system using Multiphase-field technique	2020	Institute of Mathematical Science, Chennai, India,
Coupling CALPHAD and phase-field modelling technique	2019	University of Jena, Jena, Germany,
Multiphase-field modelling of Widmanstatten ferrite evolution,	2016	Karlsruhe Institute of Technology, Karlsruhe, Germany

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
-	-	-

20. Academic Foreign Visits

Country	Duration of Visit	Programme
-	-	-

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Daubner S , **PG Kubendran Amos**, Ephraim Schoof, Santoki J, D Schneider, Britta Nestler	Multiphase-field modelling of spinodal decomposition during intercalation in an Allen-Cahn framework	Physical Review Materials	5	035406	2021	
PW Hoffrogge, A Mukherjee, ES Nani, **PG Kubendran Amos**, Wang F, D Schneider, Britta	Multiphase-field model for surface diffusion and attachment kinetics in the grand-potential framework	Physical Review Materials	103	033307	2021	

Nestler						
T Mittnacht, **PG Kubendran Amos**, D Schneider, Britta Nestler	Morphological stability of three-dimensional cementite rods in polycrystalline systems: A phase-field analysis	Journal of Material Science and Technology	77	252-268	2021	
L T Mushongera, **PG Kubendran Amos**, Ephraim Schoof, P Kumar, Britta Nestler	The non-steady-state growth of divergent pearlite in Fe-C-Mn steels: a phase-field investigation	Journal of Materials Science	55	5280-5395	2020	
PG Kubendran Amos, Britta Nestler	Grand-potential based phase-field model for systems with interstitial sites	Scientific Reports	10	22423	2020	
PG Kubendran Amos, Britta Nestler	Distinguishing interstitial and substitutional diffusion in grand-potential based phase-field model	Materialia	12	100820	2020	
R Perumal, **PG Kubendran Amos**, M Selzer, Britta Nestler	Quadrijunctions-stunted grain growth in duplex microstructure: A multiphase-field analysis	Scripta Materialia	182	16-20	2020	
PG Kubendran Amos, R Perumal , M Selzer, Britta Nestler	Multiphase-field modelling of concurrent grain growth and coarsening in complex multicomponent systems	Journal of Materials Science and Technology	45	215-229	2020	
Ephraim Schoof, **PG Kubendran Amos**, Daniel Schneider, Britta	Influence of stress-free transformation strain on the autocatalytic growth	Materialia	9	100620	2020	

Nestler	of bainite: A multiphase-field analysis					
PG Kubendran Amos, Ephraim Schoof, J Santoki, Daniel Schneider, Britta Nestler	Limitations of preserving volume in Allen-Cahn framework for microstructural analysis	Computational Materials Science	173	109388	2020	
PG Kubendran Amos, Ephraim Schoof, Daniel Schneider, Nick Streichan, Britta Nestler	Phase-field analysis of quenching and partitioning in a polycrystalline Fe-C system under constrained para-equilibrium condition	Computational Materials Science	159	281-296	2019	
PG Kubendran Amos, Avisor Bhattacharya, Britta Nestler, Kumar Ankit	Mechanisms of pearlite spheroidization: Insights from 3D phase-field simulations	Acta Materialia	161	400-411	2018	
PG Kubendran Amos, Ephraim Schoof, Daniel Schneider, Britta Nestler	On the globularization of the shapes associated with -precipitate of two-phase titanium alloys: Insights from phase-field simulations	Acta Materialia	159	51-64	2018	
PG Kubendran Amos, Ephraim Schoof, Daniel Schneider, Britta Nestler	Chemo-elastic phase-field simulation of the cooperative growth of mutually-accommodating Widmanstatten plates	Journal of alloys and compounds	767	1141-1154	2018	
LT Mushongera, **PG Kubendran Amos**, Britta Nestler, Kumar Ankit	Phase-field simulations of pearlitic divergence in Fe-C-Mn steels	Acta Materialia	150	78-87	2018	
Ramanathan	Phase-field study	Comput	147	227-	2018	

Perumal, **PG Kubendran Amos**, Michael Selzer, Britta Nestler	of the transient phenomena induced by'abnormally'large grains during 2-dimensional isotropic grain growth	ational Materials Science		237		
PG Kubendran Amos, LT Mushongera, Tobias Mittnacht, Britta Nestler	Phase-field analysis of volume-di_usion controlled shape-instabilities in metallic systems-II: Finite 3-dimensional rods	Computational Materials Science	144	374-385	2018	
PG Kubendran Amos, LT Mushongera, Britta Nestler	Phase-field analysis of volume-di_usion controlled shape-instabilities in metallic systems-I: 2-Dimensional plate-like structures	Computational Materials Science	144	363-373	2018	
Ramanathan Perumal, **PG Kubendran Amos**, Michael Selzer, Britta Nestler	Phase-field study on the formation of first-neighbour topological clusters during the isotropic grain growth	Computational Materials Science	140	209-223	2017	
Oleg Tschukin, Alexander Silberzahn, Michael Selzer, **PG Kubendran Amos**, Daniel Schneider, Britta Nestler	Concepts of modeling surface energy anisotropy in phase-field approaches	Geothermal Energy	5	19	2017	

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
R S Subramanian, Ramadev Sai Shree, **PG Kubendran**	Cellular-Automata Based Simulation of Dynamic Recrystallization	Springer publications	-	-	-	2022 (Accepted, under publi

Amos	and Statistical Analysis of Resulting Grain Growth					catio n)
PG Kubendran Amos, Ephraim Schoof, Daniel Schneider, Britta Nestler,	On the volume-di_usion governed termination-migration assisted globularization in two-phase solid-state systems: Insights from phase-field simulations	Springer publications	47-63	Numerical Modelling in Engineerin g	-	2018
Tobias Mittnacht, **PG Kubendran Amos**, Daniel Schneider, Britta Nestler	Understanding the inuence of neighbours on the spheroidization of _nite 3-dimensional rods in a lamellar arrangement: Insights from phase-field simulations,	Springer publications	290-299	Numerical Modelling in Engineerin g,	-	2018

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
P. G. Kubendran Amos	Design of light metal alloys using machine learning techniques	Springer Publications	Accepted, Under Publication	-
P. G. Kubendran Amos	Understanding the volume-diffusion governed shape-instabilities in metallic systems	KIT scientific publishing	2019	-