BIOGRAPHICAL SKETCH

NAME: Jiang, Tengfei

POSITION TITLE & INSTITUTION: Assistant Professor, University of Central Florida

(a) PROFESSIONAL PREPARATION

INSTITUTION	LOCATION	MAJOR / AREA OF STUDY	DEGREE (if applicable)	YEAR YYYY
Tsinghua University	Beijing, China	Materials Science and Engineering	BENG	2006
The Ohio State University	Columbus, Ohio	Materials Science and Engineering	MS	2009
University of Texas at Austin	Austin, Texas	Materials Science and Engineering	PHD	2015
University of Texas at Austin	Austin, Texas	Interconnect and Packaging Reliability	Postdoctoral Fellow	2015 - 2015

(b) APPOINTMENTS

2015 - present Assistant Professor, University of Central Florida, Department of Materials Science and Engineering, Orlando, FL

2015 - 2015 Postdoc Research Fellow, University of Texas at Austin, Microelectronics Research Center, Austin, TX

2010 - 2015 Graduate Research Assistant, University of Texas at Austin, Texas Materials Institute, Austin, TX

2006 - 2010 Graduate Research Assistant, The Ohio State University, Department of Materials Science and Engineering, Columbus, OH

(c) PRODUCTS

Products Most Closely Related to the Proposed Project

1. Ahmed O, Jalilvand G, Okoro C, Pollard S, Jiang T. Micro-Compression of Free-Standing Electroplated Copper Through-Glass Vias. IEEE Trans. on Device and Materials Reliability. 2020 February; 20(1):199-203. Available from: https://ieeexplore.ieee.org/document/8998206 DOI: 10.1109/TDMR.2020.2973940
2. Jalilvand G, Ahmed O, Spinella L, Zhou L, Jiang T. The Effective Control of Cu Through-Silicon Via Extrusion for Three-Dimensional Integrated Circuits by A Metallic Cap Layer,. Scripta Materialia. 2019 April; (164):101-104. Available from: https://doi.org/10.1016/j.scriptamat.2019.01.029 DOI: 10.1016/j.scriptamat.2019.01.029
3. Spinella L, Im J, Jiang T, Ho PS. Synchrotron X-ray Microdiffraction Investigation of Scaling Effects on Reliability for Through-silicon Via (TSV) in 3D Integration. IEEE Trans. on Device and Materials Reliability. 2019 September; 19(3):568-571. Available from: https://ieeexplore.ieee.org/document/8796389 DOI: 10.1109/TDMR.2019.2933794
4. Chen X, Dejoie C, Jiang T, Ku C, Tamura N. Quantitative Microstructural Mapping by Laue X-Ray Nano- and Microdiffraction,. MRS Bulletin. 2016 June; 41(6):445-453. Available from: https://doi.org/10.1557/mrs.2016.97 DOI: 10.1557/mrs.2016.97
5. Jiang T, Im J, Huang R, Ho PS. TSV Stress Characteristics and Reliability Impact for 3D Integrated

Circuits. MRS Bulletin. 2015 March; 40(3):248-256. Available from: https://doi.org/10.1557/mrs.2015.30 DOI: 10.1557/mrs.2015.30

Other Significant Products, Whether or Not Related to the Proposed Project

1. Hao Y, Wang L, Liu Y, Chen H, Wang X, Tan C, Nie S, Suk JW, Jiang T, Liang T, Xiao J, Ye W, Dean CR, Yakobson BI, McCarty KF, Kim P, Hone J, Colombo L, Ruoff RS. Oxygen-activated growth and bandgap tunability of large single-crystal bilayer graphene. Nat Nanotechnol. 2016 May;11(5):426-31. PubMed PMID: 26828845.
2. Cho Y, Shafiei F, Mendoza B, Lei M, Jiang T, Ho PS, Downer M. Second-harmonic Microscopy of Strain Fields around Through-Silicon-Vias. Applied Physics Letters. 2016 April; 108(15):151602. Available from: https://doi.org/10.1063/1.4946773 DOI: 10.1063/1.4946773
3. Ahmed O, Okoro C, Pollard S, Jiang T. The effect of materials and design on the reliability of through-glass vias for 2.5 D integrated circuits: a numerical study. Multidiscipline Modeling in Materials and Structures. 2020 September; Available from: https://doi.org/10.1108/MMMS-05-2020-0125 DOI: 10.1108/MMMS-05-2020-0125
4. Jiang T, Wu C, Spinella L, Im J, Tamura N, Kunz M, Son H, Kim B, Huang R, Ho PS. Plasticity Mechanism for Copper Extrusion in Through-Silicon Vias for Three-Dimensional Interconnects. Applied physics letters. 2013 November; 103(21):211906. Available from: https://doi.org/10.1063/1.4833020 DOI: 10.1063/1.4833020
5. Reidy B, Jalilvand G, Jiang T, Zand R. TSV Extrusion Morphology Classification Using Deep Convolutional Neural Networks. 19th IEEE International Conference On Machine Learning And Applications; 2020 December; Miami, FL. Available from: arXiv:2009.10692 Other: arXiv:2009.10692

(d) SYNERGISTIC ACTIVITIES

1. Faculty advisor, UCF CECS Office of Diversity and Inclusion's IMAGE (Impacting the Matriculation and Advancement of Graduates in Engineering) program, 2019-present
2. Faculty advisor, UCF CECS Office of Diversity and Inclusion's DIVE (Discover, Immerse, Visualize, and Excel in STEM) program, 2020-present
3. Judge, ASM International Central Florida Chapter student poster contest (2016-present)
4. Member, Emerging Technologies Technical Committee, IEEE Electronics Packaging Society, 2020-present
5. Member, Technical Committee of Emerging Technologies track, IEEE Electronic Components and Technology Conference, 2017-present.