

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

SCHEDULE 13G

Under the Securities Exchange Act of 1934
(Amendment No.)*

Fluidigm Corporation

(Name of Issuer)

Common Stock

(Title of Class of Securities)

34385P108

(CUSIP Number)

December 31, 2011

(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1. Names of Reporting Persons
Versant Venture Capital I, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

- (a)
- (b) (1)

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware, United States of America

5. Sole Voting Power
961,349 (2)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
0

7. Sole Dispositive Power
961,349 (2)

8. Shared Dispositive Power
0

9. Aggregate Amount Beneficially Owned by Each Reporting Person
961,349 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)
-
11. Percent of Class Represented by Amount in Row 9
4.75% (3)
-
12. Type of Reporting Person (See Instructions)
PN
-

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.
- (2) VVI-LLC serves as the general partner of VVC- I and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC-I. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
- (3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
Versant Side Fund I, L.P.
-
2. Check the Appropriate Box if a Member of a Group (See Instructions)
- (a)
- (b) (1)
-

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware, United States of America

5. Sole Voting Power
20,017 (2)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
0

7. Sole Dispositive Power
20,017 (2)

8. Shared Dispositive Power
0

9. Aggregate Amount Beneficially Owned by Each Reporting Person
20,017 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row 9
0.10% (3)

12. Type of Reporting Person (See Instructions)
PN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.
- (2) VVI-LLC serves as the general partner of VSF-I and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VSF-I. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
- (3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
Versant Affiliates Fund I-A, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o

(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware, United States of America

5. Sole Voting Power
17,696 (2)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
0

7. Sole Dispositive Power
17,696 (2)

8. Shared Dispositive Power
0

9. Aggregate Amount Beneficially Owned by Each Reporting Person
17,696 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o

11. Percent of Class Represented by Amount in Row 9
0.09% (3)

12. Type of Reporting Person (See Instructions)
PN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.
- (2) VVI-LLC serves as the general partner of VAF-I-A and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VAF-I-A. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
- (3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
Versant Affiliates Fund I-B, L.P.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware, United States of America

5. Sole Voting Power
51,878 (2)

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
0

7. Sole Dispositive Power
51,878 (2)

8. Shared Dispositive Power
0

9. Aggregate Amount Beneficially Owned by Each Reporting Person
51,878 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o

11. Percent of Class Represented by Amount in Row 9
0.26% (3)

12. Type of Reporting Person (See Instructions)
PN

(1) This Schedule 13G is filed by Versant Venture Capital I, L.P. ("VVC- I"), Versant Side Fund I, L.P. ("VSF-I), Versant Affiliates Fund I-A, L.P. ("VAF-I-A"), Versant Affiliates Fund I-B, L.P. ("VAF-I-B"), Versant Ventures I, LLC ("VVI-LLC"), Brian G. Atwood ("BGA"), Samuel D. Colella ("SDC"), Ross A. Jaffe ("RAJ"), William J. Link ("WJL"), Donald B. Milder ("DBM") Barbara N. Lubash ("BNL") and Rebecca B. Robertson ("RBR") (collectively, the "Versant Entities"). The Versant Entities expressly disclaim status as a "group" for purposes of this Schedule 13G.

(2) VVI-LLC serves as the general partner of VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ, WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.

(3) This percentage is calculated based upon 20,243,627 shares of the Issuer's common stock outstanding as of October 31, 2011 as set forth in the Issuer's most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
Versant Ventures I, LLC

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
Delaware, United States of America

5. Sole Voting Power
0

Number of Shares Beneficially Owned by Each Reporting Person With:

6. Shared Voting Power
1,050,940 (2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
OO

(1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.

(2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.

(3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
BRIAN G. ATWOOD

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
United States of America

Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
	6.	Shared Voting Power 1,050,940 (2)
	7.	Sole Dispositive Power 0
	8.	Shared Dispositive Power 1,050,940 (2)
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,050,940 (2)	
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="checkbox"/>	
11.	Percent of Class Represented by Amount in Row 9 5.19% (3)	
12.	Type of Reporting Person (See Instructions) IN	

(1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.

(2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.

(3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1.	Names of Reporting Persons SAMUEL D. COLELLA	
2.	Check the Appropriate Box if a Member of a Group (See Instructions)	
	(a)	<input type="checkbox"/>
	(b)	<input checked="" type="checkbox"/> (1)
3.	SEC Use Only	
4.	Citizenship or Place of Organization United States of America	

Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 29,340 (2)
	6.	Shared Voting Power 1,050,940 (3)

7.	Sole Dispositive Power 29,340 (2)
8.	Shared Dispositive Power 1,050,940 (3)
9.	Aggregate Amount Beneficially Owned by Each Reporting Person 1,080,280 (2)(3)
10.	Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) <input type="radio"/>
11.	Percent of Class Represented by Amount in Row 9 5.34% (4)
12.	Type of Reporting Person (See Instructions) IN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. ("VVC- I"), Versant Side Fund I, L.P. ("VSF-I), Versant Affiliates Fund I-A, L.P. ("VAF-I-A"), Versant Affiliates Fund I-B, L.P. ("VAF-I-B"), Versant Ventures I, LLC ("VVI-LLC"), Brian G. Atwood ("BGA"), Samuel D. Colella ("SDC"), Ross A. Jaffe ("RAJ"), William J. Link ("WJL"), Donald B. Milder ("DBM") Barbara N. Lubash ("BNL") and Rebecca B. Robertson ("RBR") (collectively, the "Versant Entities"). The Versant Entities expressly disclaim status as a "group" for purposes of this Schedule 13G.
- (2) Includes options to acquire 29,340 shares of Common Stock held directly by SDC for the benefit of VVI-LLC.
- (3) (3) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; (iv) 51,878 shares held by VAF-I-B; and (v) options to acquire 29,340 shares of Common Stock held directly by SDC for the benefit of VVI-LLC. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
- (4) This percentage is calculated based upon 20,243,627 shares of the Issuer's common stock outstanding as of October 31, 2011 as set forth in the Issuer's most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1.	Names of Reporting Persons ROSS A. JAFFE, M.D.
2.	Check the Appropriate Box if a Member of a Group (See Instructions) (a) <input type="radio"/> (b) <input checked="" type="radio"/> (1)
3.	SEC Use Only
4.	Citizenship or Place of Organization United States of America

Number of Shares Beneficially Owned by Each Reporting Person With:	5.	Sole Voting Power 0
	6.	Shared Voting Power 1,050,940 (2)
	7.	Sole Dispositive Power 0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
IN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. ("VVC- I"), Versant Side Fund I, L.P. ("VSF-I), Versant Affiliates Fund I-A, L.P. ("VAF-I-A"), Versant Affiliates Fund I-B, L.P. ("VAF-I-B"), Versant Ventures I, LLC ("VVI-LLC"), Brian G. Atwood ("BGA"), Samuel D. Colella ("SDC"), Ross A. Jaffe ("RAJ"), William J. Link ("WJL"), Donald B. Milder ("DBM") Barbara N. Lubash ("BNL") and Rebecca B. Robertson ("RBR") (collectively, the "Versant Entities"). The Versant Entities expressly disclaim status as a "group" for purposes of this Schedule 13G.
- (2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
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1. Names of Reporting Persons
WILLIAM J. LINK, Ph.D.

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a)

(b) (1)

3. SEC Use Only

4. Citizenship or Place of Organization
United States of America

5. Sole Voting Power
0

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
1,050,940 (2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions)

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
IN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. ("VVC- I"), Versant Side Fund I, L.P. ("VSF-I), Versant Affiliates Fund I-A, L.P. ("VAF-I-A"), Versant Affiliates Fund I-B, L.P. ("VAF-I-B"), Versant Ventures I, LLC ("VVI-LLC"), Brian G. Atwood ("BGA"), Samuel D. Colella ("SDC"), Ross A. Jaffe ("RAJ"), William J. Link ("WJL"), Donald B. Milder ("DBM") Barbara N. Lubash ("BNL") and Rebecca B. Robertson ("RBR") (collectively, the "Versant Entities"). The Versant Entities expressly disclaim status as a "group" for purposes of this Schedule 13G.
- (2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
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10

1. Names of Reporting Persons
DONALD B. MILDER

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
United States of America

5. Sole Voting Power
0

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
1,050,940 (2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
IN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.
- (2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.
- (3) This percentage is calculated based upon 20,243,627 shares of the Issuer’s common stock outstanding as of October 31, 2011 as set forth in the Issuer’s most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

1. Names of Reporting Persons
REBECCA B. ROBERTSON

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) 0
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
United States of America

5. Sole Voting Power
0

Number of Shares Beneficially Owned by Each Reporting Person With:

6. Shared Voting Power
1,050,940 (2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) 0

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
IN

- (1) This Schedule 13G is filed by Versant Venture Capital I, L.P. (“VVC- I”), Versant Side Fund I, L.P. (“VSF-I), Versant Affiliates Fund I-A, L.P. (“VAF-I-A”), Versant Affiliates Fund I-B, L.P. (“VAF-I-B”), Versant Ventures I, LLC (“VVI-LLC”), Brian G. Atwood (“BGA”), Samuel D. Colella (“SDC”), Ross A. Jaffe (“RAJ”), William J. Link (“WJL”), Donald B. Milder (“DBM”) Barbara N. Lubash (“BNL”) and Rebecca B. Robertson (“RBR”) (collectively, the “Versant Entities”). The Versant Entities expressly disclaim status as a “group” for purposes of this Schedule 13G.

- (2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I,

VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.

- (3) This percentage is calculated based upon 20,243,627 shares of the Issuer's common stock outstanding as of October 31, 2011 as set forth in the Issuer's most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

12

1. Names of Reporting Persons
BARBARA N. LUBASH

2. Check the Appropriate Box if a Member of a Group (See Instructions)

(a) o
(b) x (1)

3. SEC Use Only

4. Citizenship or Place of Organization
United States of America

5. Sole Voting Power
0

Number of
Shares
Beneficially
Owned by
Each
Reporting
Person With:

6. Shared Voting Power
1,050,940 (2)

7. Sole Dispositive Power
0

8. Shared Dispositive Power
1,050,940 (2)

9. Aggregate Amount Beneficially Owned by Each Reporting Person
1,050,940 (2)

10. Check if the Aggregate Amount in Row (9) Excludes Certain Shares (See Instructions) o

11. Percent of Class Represented by Amount in Row 9
5.19% (3)

12. Type of Reporting Person (See Instructions)
IN

(1) This Schedule 13G is filed by Versant Venture Capital I, L.P. ("VVC- I"), Versant Side Fund I, L.P. ("VSF-I), Versant Affiliates Fund I-A, L.P. ("VAF-I-A"), Versant Affiliates Fund I-B, L.P. ("VAF-I-B"), Versant Ventures I, LLC ("VVI-LLC"), Brian G. Atwood ("BGA"), Samuel D. Colella ("SDC"), Ross A. Jaffe ("RAJ"), William J. Link ("WJL"), Donald B. Milder ("DBM") Barbara N. Lubash ("BNL") and Rebecca B. Robertson ("RBR") (collectively, the "Versant Entities"). The Versant Entities expressly disclaim status as a "group" for purposes of this Schedule 13G.

(2) Includes: (i) 961,349 shares held by VVC-I; (ii) 20,017 shares held by VSF-1; (iii) 17,696 shares held by VAF-I-A; and (iv) 51,878 shares held by VAF-I-B. VVI-LLC serves as the general partner of VVC- I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ , WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC and share voting and dispositive power over the shares held by VVC- I, VSF-I, VAF-I-A and VAF-I-B. The information with respect to the ownership of the Common Stock of the Issuer by the persons filing this statement on Schedule 13G is provided as of December 31, 2011.

(3) This percentage is calculated based upon 20,243,627 shares of the Issuer's common stock outstanding as of October 31, 2011 as set forth in the Issuer's most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

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Item 1(a).	Name of Issuer: FLUIDIGM CORPORATION																																																
Item 1(b).	Address of Issuer's Principal Executive Offices 7000 Shoreline Court, Suite 100 South San Francisco, California 94080																																																
Item 2(a).	Name of Person Filing: Versant Venture Capital I, L.P. ("VVC-I") Versant Side Fund I, L.P. ("VSF-I") Versant Affiliates Fund I-A, L.P. ("VAF-I-A") Versant Affiliates Fund I-B, L.P. ("VAF-I-B") Versant Ventures I, LLC ("VVI-LLC") Brian G. Atwood ("BGA") Samuel D. Colella ("SDC") Ross A. Jaffe ("RAJ") William J. Link ("WJL") Donald B. Milder ("DBM") Rebecca B. Robertson ("RBR") Barbara N. Lubash ("BNL")																																																
Item 2(b).	Address of Principal Business Office or, if none, Residence: Versant Ventures 3000 Sand Hill Road, #4-210 Menlo Park, CA 94025																																																
Item 2(c).	Citizenship: <table border="0"> <tr> <td>Entities:</td> <td>VVC-I</td> <td>-</td> <td>Delaware, United States of America</td> </tr> <tr> <td></td> <td>VSF-1</td> <td>-</td> <td>Delaware, United States of America</td> </tr> <tr> <td></td> <td>VAF-1-A</td> <td>-</td> <td>Delaware, United States of America</td> </tr> <tr> <td></td> <td>VAF-1-B</td> <td>-</td> <td>Delaware, United States of America</td> </tr> <tr> <td></td> <td>VVI-LLC</td> <td>-</td> <td>Delaware, United States of America</td> </tr> <tr> <td>Individuals:</td> <td>BGA</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>SDC</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>RAJ</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>WJL</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>DBM</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>BNL</td> <td>-</td> <td>United States of America</td> </tr> <tr> <td></td> <td>RBR</td> <td>-</td> <td>United States of America</td> </tr> </table>	Entities:	VVC-I	-	Delaware, United States of America		VSF-1	-	Delaware, United States of America		VAF-1-A	-	Delaware, United States of America		VAF-1-B	-	Delaware, United States of America		VVI-LLC	-	Delaware, United States of America	Individuals:	BGA	-	United States of America		SDC	-	United States of America		RAJ	-	United States of America		WJL	-	United States of America		DBM	-	United States of America		BNL	-	United States of America		RBR	-	United States of America
Entities:	VVC-I	-	Delaware, United States of America																																														
	VSF-1	-	Delaware, United States of America																																														
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	RBR	-	United States of America																																														
Item 2(d).	Title of Class of Securities: Common Stock																																																
Item 2(e).	CUSIP Number: 34385P108																																																

Item 3. If this statement is filed pursuant to §§240.13d-1(b), or 240.13d-2(b) or (c), check whether the person filing is a:
Not Applicable

Item 4. Ownership

Provide the following information regarding the aggregate number and percentage of the class of securities of the issuer identified in Item 1.

Versant Entities	Shares Held Directly	Sole Voting Power	Shared Voting Power	Sole Dispositive Power	Shared Dispositive Power	Beneficial Ownership	Percentage of Class (2)
VVC-1	961,349	961,349	0	961,349	0	961,349	4.75%
VSF-1	20,017	20,017	0	20,017	0	20,017	0.10%
VAF-I-A	17,696	17,696	0	17,696	0	17,696	0.09%
VAF-I-B	51,878	51,878	0	51,878	0	51,878	0.26%
VVI-LLC	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
BGA	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
SDC	29,340	29,340	1,050,940	29,340	1,050,940	1,080,280	5.34%
RAJ	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
WJL	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
DBM	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
BNL	0	0	1,050,940	0	1,050,940	1,050,940	5.19%
RBR	0	0	1,050,940	0	1,050,940	1,050,940	5.19%

- (1) VVI-LLC serves as the general partner of VVC-I, VSF-I, VAF-I-A, and VAF-I-B and owns no securities of the Issuer directly. BGA, SDC, RAJ, WJL, DBM, BNL and RBR are directors and/or members of VVI-LLC. None of BGA, SDC, RAJ, WJL, DBM, BNL and RBR owns no securities of the Issuer directly except as otherwise set forth above.
- (2) This percentage is calculated based upon 20,243,627 shares of the Issuer's common stock outstanding as of October 31, 2011 as set forth in the Issuer's most recent 10-Q filed with the Securities and Exchange Commissions on November 14, 2011.

Item 5. Ownership of 5 Percent or Less of a Class

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than 5 percent of the class of securities, check the following o.

Item 6. Ownership of More than 5 Percent on Behalf of Another Person

See Items 2(a) and 4.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person.

Not applicable

Item 8. Identification and Classification of Members of the Group

Not applicable

Item 9. Notice of Dissolution of a Group

Not applicable

Item 10. Certification

Not applicable

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: February 10, 2012

Versant Affiliates Fund I-A, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Affiliates Fund I-B, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Side Fund I, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Venture Capital I, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Ventures I, LLC

By: /s/ Robin L. Praeger
Authorized Representative

/s/ Robin L. Praeger as attorney in fact
Brian G. Atwood

/s/ Robin L. Praeger as attorney in fact
Samuel D. Colella

/s/ Robin L. Praeger as attorney in fact
Ross A. Jaffe

/s/ Robin L. Praeger as attorney in fact
William J. Link

/s/ Robin L. Praeger as attorney in fact
Donald B. Milder

/s/ Robin L. Praeger as attorney in fact
Rebecca B. Robertson

/s/ Robin L. Praeger as attorney in fact
Barbara N. Lubash

**EXHIBIT A
JOINT FILING STATEMENT**

We, the undersigned, hereby express our agreement that the attached Schedule 13G (or any amendments thereto) related to the Common Stock of Fluidigm Corporation is filed on behalf of each of us.

Dated: February 10, 2012

Versant Affiliates Fund I-A, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Affiliates Fund I-B, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Side Fund I, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Venture Capital I, L.P.

By: Versant Ventures I, LLC
Its: General Partner

By: /s/ Robin L. Praeger
Authorized Representative

Versant Ventures I, LLC

By: /s/ Robin L. Praeger
Authorized Representative

/s/ Robin L. Praeger as attorney in fact
Brian G. Atwood

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Rebecca B. Robertson

/s/ Robin L. Praeger as attorney in fact
Barbara N. Lubash
